FERRARI 488 GT3

USER MANUAL

Table of Contents

CLICK TO VIEW A SECTION

GENERAL INFORMATION

ADVANCED SETUP OPTIONS

DEAR iRACING USER,

Congratulations on your purchase of the Ferrari 488 GT3! 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!

The Ferrari 488 GT3 race car is powered by a twin-turbo, 3.9L, V8 engine that produces over 550 horsepower. Raced in multiple series around the world including the IMSA Weathertech Series, Blancpain GT and Endurance and Pirelli World Challenge.

This classic mid-engine car from Ferrari is known for incredibly well balanced handling, superb brakes and raw power – nothing else sounds quite like a Ferrari V8 engine at full throttle.

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

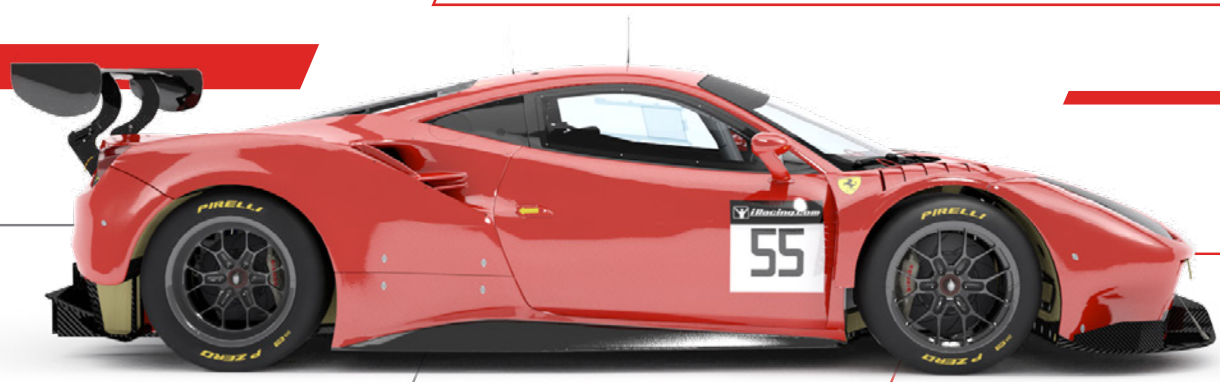
DOUBLE WISHBONE FRONT SUSPENSION
MULTI-LINK REAR SUSPENSION

LENGTH	WIDTH	WHEELBASE	DRY WEIGHT	WET WEIGHT WITH DRIVER
4633mm 182.4in	**2045mm** 80.5in	**2713mm** 106.8in	**1283kg** 2829lbs	**1406kg** 3100lbs

POWER UNIT

TWIN-TURBO 90° V8

DISPLACEMENT	RPM LIMIT	TORQUE	POWER
3.9Liters 238.1CID	**7700RPM**	**425lb-ft** 576Nm	**500bhp** 373kW



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.

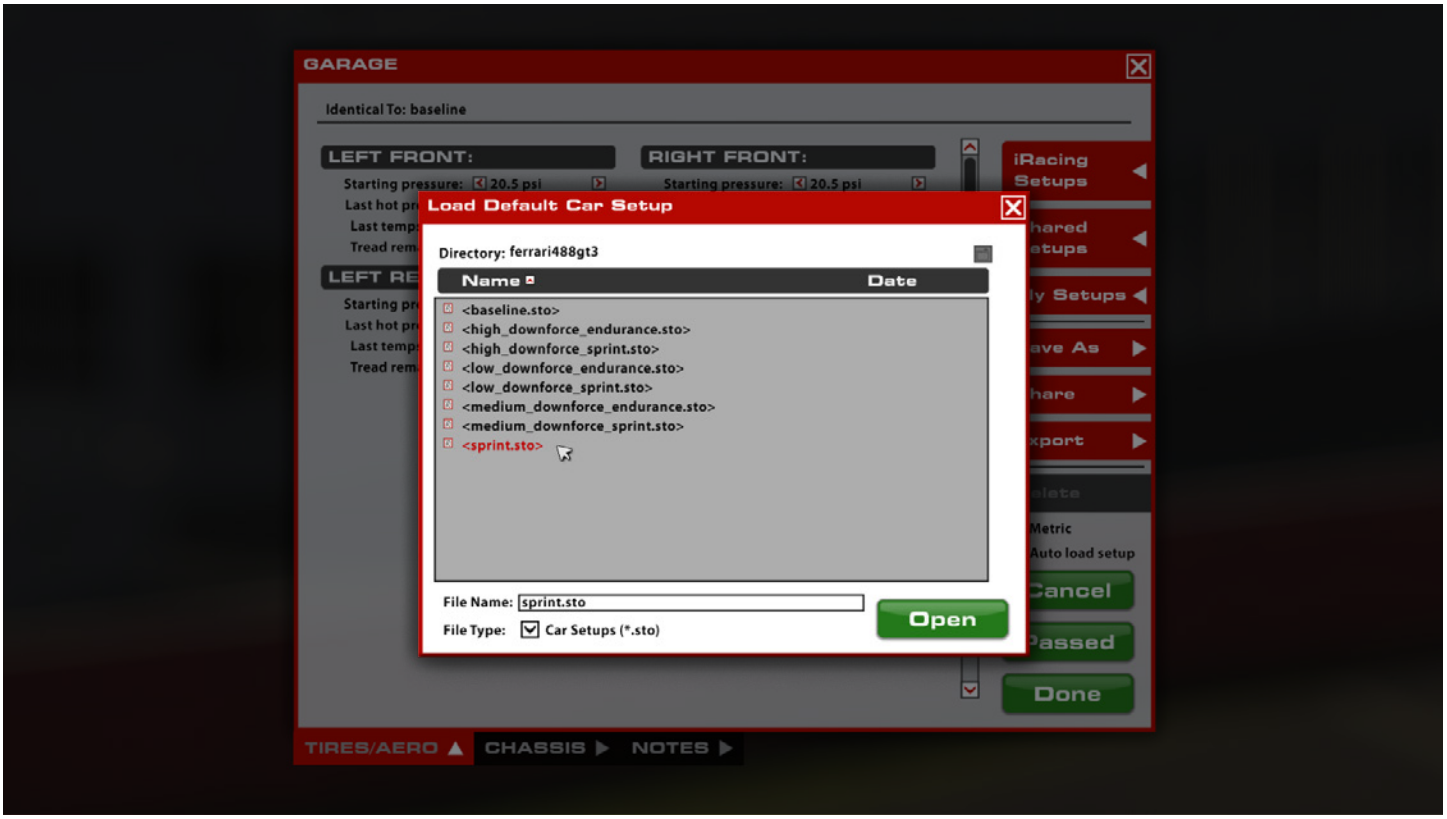
GETTING STARTED

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. However 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 red. This is at approximately 7100rpm.

LOADING AN iRACING SETUP



Upon loading into a session, the car will automatically load the iRacing Baseline setup [baseline.sto]. If you would prefer one of iRacing's pre-built setups that suit various conditions, you may load it by clicking Garage > iRacing Setups > and then selecting the setup to suit your needs.

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 dash display in this car is non-adjustable and features a single page to display critical vehicle information.

LIGHTING INDICATORS

LEFT OF SHIFT LIGHT CLUSTER

PINK LIGHTS Wheel lockup indicators for the left side, one is mild, two is severe

RIGHT OF SHIFT LIGHT CLUSTER

PINK LIGHTS Wheel lockup indicators for the right side, one is mild, two is severe

LEFT LIGHT STACK

ALT	Low battery voltage warning light
LIGHTS	vehicle external lights on/off indicator
SPARE LH	Indicates if the spare LH is being used in the real car
LH IND.	Indicates if the LH indicator is illuminated

RIGHT LIGHT STACK

FUEL	Low fuel pressure warning indicator, illuminates under 5 Bar (72.5 psi)
OIL	Low oil pressure warning indicator
SPARE RH	Indicates if the spare RH is being used in the real car
RH IND.	Indicates if the RH indicator is illuminated

DASH CONFIGURATION

TOP ROW

D2	Selected dashboard page (non-adjustable)
RPM METER	Engine RPM displayed as a bar graphic

SECOND ROW

T WAT	Engine water temperature (°C or °F)
T GBX	Gearbox oil temperature (°C or °F)
LG RED BOX	Currently selected gear
LAPTIME	Current lap time

THIRD ROW

P FUEL	Fuel pressure (Bar or psi)
P GBX	Gearbox oil pressure (Bar or psi)
DIFF	Difference to best lap time

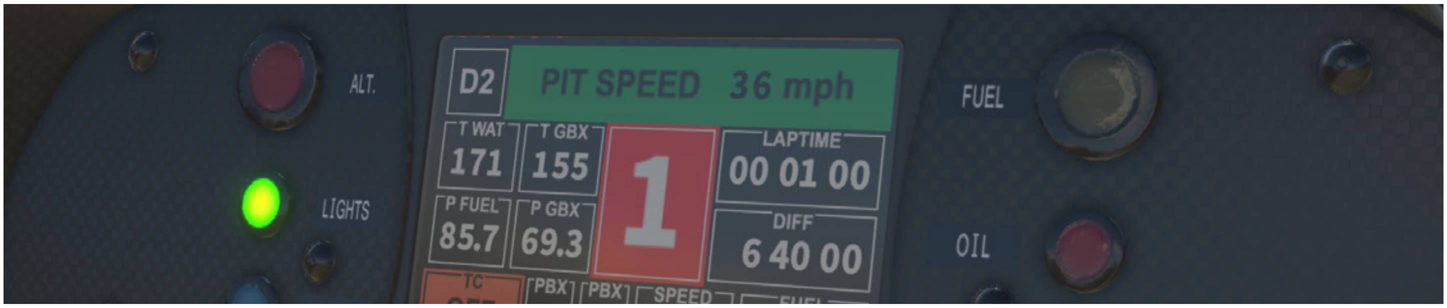
FOURTH ROW

TC 1	Current traction control 1 setting (combined with TC2 for GT3 spec.)
TC 2	Current traction control 2 setting (combined with TC1 for GT3 spec.)
PBX	PBX mode, for managing failures in the real car, non-adjustable
PBX	PBX mode, for managing failures in the real car, non-adjustable
SPEED	Road speed (km/h or mph)
FUEL	Remaining fuel (Litres or US Gallons)

FIFTH ROW

MIX	Current engine map setting
PED	Current throttle map setting
REC	Recovery mode for managing failures in the real car, non-adjustable
ABS	Current ABS setting
BRK F	Applied brake pressure to the front calipers (Bar or dapsi)
BRK R	Applied brake pressure to the rear calipers (Bar or dapsi)
BAL	Current forward brake bias as %

PIT LIMITER



When the pit limiter is active a large green box that includes the current road speed will display across the top of the dashboard while the left and right indicator lights will also illuminate.

SHIFT LIGHTS

1 GREEN	6350 rpm
2 GREEN	6550 rpm
3 GREEN	6750 rpm
4 GREEN	6850 rpm
1 YELLOW	6950 rpm
ALL RED	7100 rpm

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)

COLD AIR 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.

HOT AIR 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.

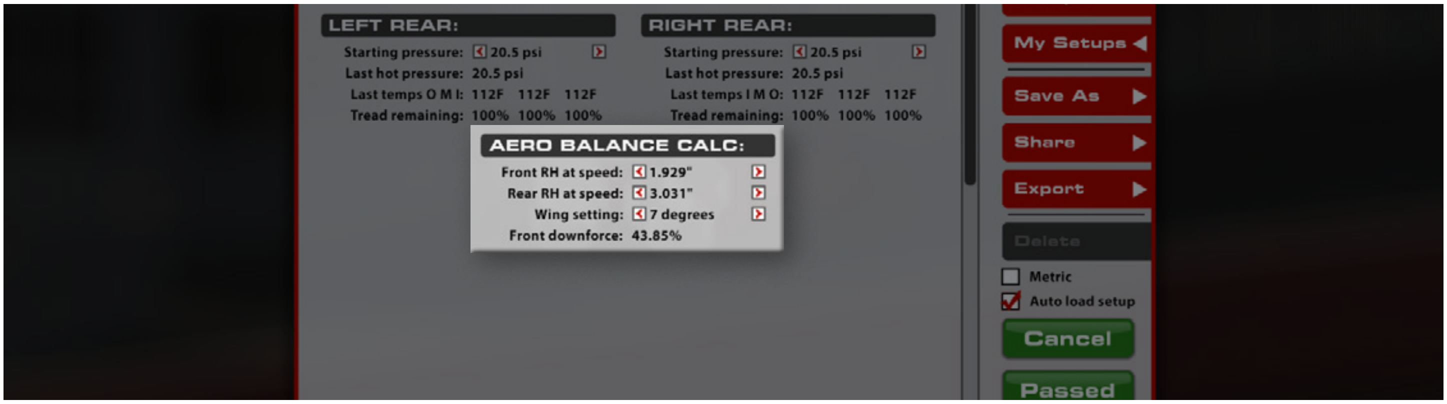
TIRE TEMPERATURES

Tire carcass temperatures, measured via Pyrometer, 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 to 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.

AERO CALCULATOR



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. This calculator is a reference tool ONLY.

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.

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

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. 10 ARB blade options are available ranging from 1 (softest) to 10 (stiffest).

ARB OUTER DIAMETER

The ARB (Anti-Roll Bar) size influences the stiffness of the front suspension in roll, such as when navigating a corner. Increasing the ARB size will increase the roll stiffness of the front suspension, resulting in less body roll but increasing mechanical understeer. This can also, in some cases, lead to a more responsive steering feel from the driver. Conversely, reducing the ARB size will soften the suspension in roll, increasing body roll but decreasing mechanical understeer. This can result in a less-responsive feel from the steering, but grip across the front axle will increase. Along with this, the effects of softening or stiffening the ARB in relation to aerodynamics should also be considered, smaller and hence softer ARB's will result in more body roll which will decrease control of the aero platform in high speed corners and potentially lead to a loss in aero efficiency. 3 configurations of ARB diameter are available and range from small (softest) to large (stiffest).

TOE-IN

Toe is the angle of the wheel, looking from vertical, relative to the chassis centerline. Toe-in is when the front of the wheels are closer to the centerline while Toe-out is when the front of the wheels are farther from the centerline than the rear of the tires. On the front end, Toe will alter how quickly the tires respond to steering inputs and influence how stable the car is in a straight line. Toe-out settings (negative garage value) will increase turn-in response and make the car less stable in a straight line, while Toe-in (positive garage value) will increase straight-line stability while making initial steering response more sluggish.

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. 7 Different master cylinder options are available ranging from 15.9 mm / 0.626" (highest line pressure) to 23.8 mm / 0.937" (lowest line pressure).

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. 7 Different master cylinder options are available ranging from 15.9 mm / 0.626" (highest line pressure) to 23.8 mm / 0.937" (lowest line pressure).

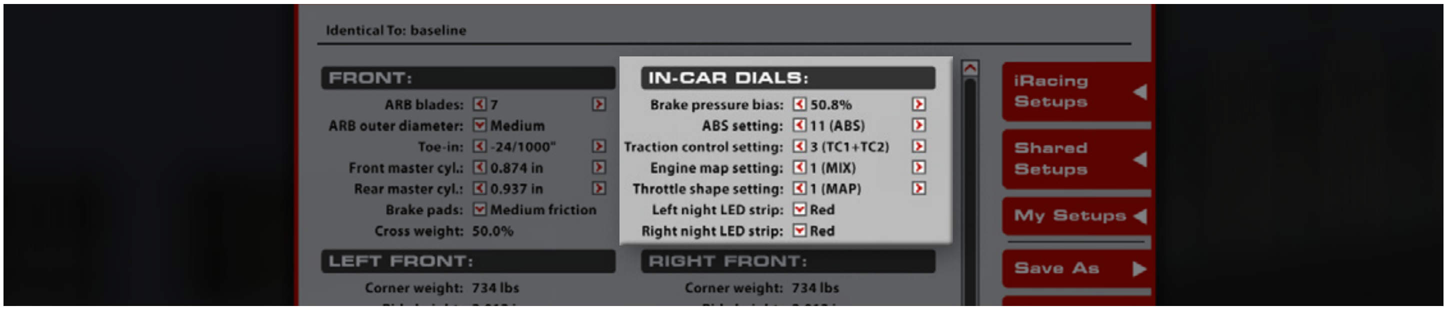
BRAKE PADS

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.

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 lock up 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. 6 positions are available. Settings 1-5 range from least intervention/sensitivity (position 1) through to highest intervention/sensitivity (position 5). Position 6 disables the traction control completely. Position 3 is the recommended baseline setting. 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. 6 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 6 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. Positions 2-5 are hybrids of the position 1 and 6 throttle mapping styles.

ENGINE MAP SETTING

The fuel map on which the car is currently running. Position 1 is the base map and produces maximum power but the most fuel usage. Positions 2 through 11 are for fuel saving under green flag conditions and will reduce engine power output correspondingly. The higher the number the better the fuel economy but the lower the power output. Position 12 is for saving fuel under safety car conditions and is not recommended for normal usage.

ABS SETTING

The current ABS map the car is running. 12 positions are available but only 10 maps exist. Position 1 has the least intervention/support while position 10 has the most support. Position 11 is the same as position 10 and position 12 disables the ABS completely. Position 2 is the recommended baseline setting. More intervention reduces the possibility of and the duration of lockups during braking but can result in longer braking distances if the system is set overly aggressive for the amount of available grip.

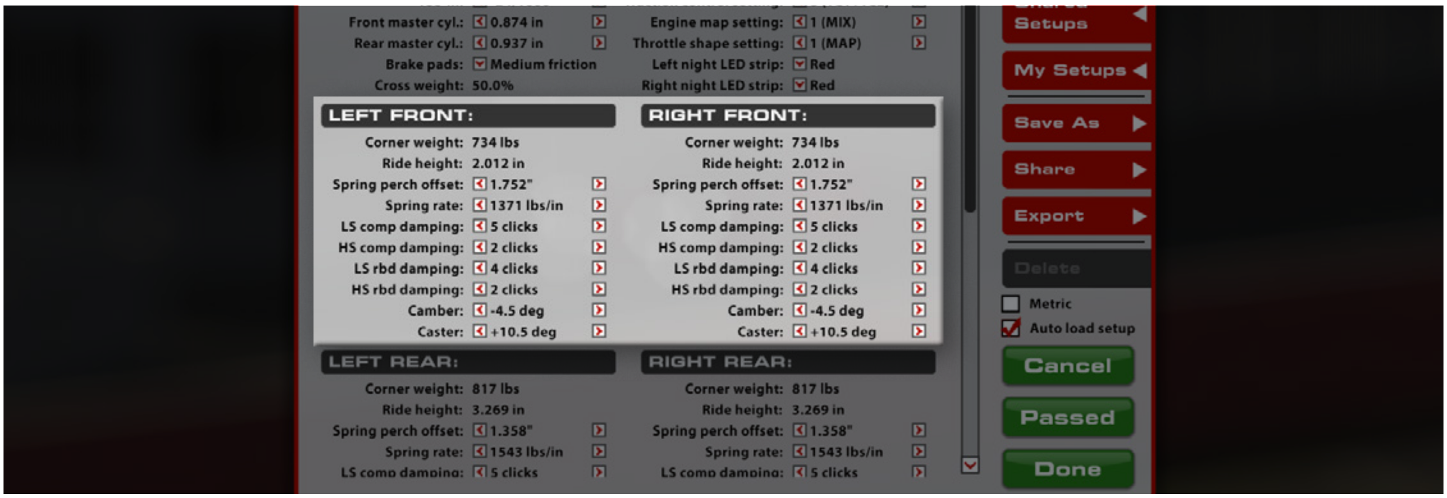
LEFT NIGHT LED STRIP

Changes the colour of the light strip on the left side of the car. 7 options are available: Blue, Purple, Red, Yellow, Orange, Green and Off.

RIGHT NIGHT LED STRIP

Changes the colour of the light strip on the right side of the car. 7 options are available: Blue, Purple, Red, Yellow, Orange, Green and Off.

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.

FRONT 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. Minimum legal front ride height is 50.0 mm.

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 SELECTED/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. 6 options for spring rate are available ranging from 180 N/mm (1029 lbs/in) to 330 N/mm (1886 lbs/in) in 30 N/mm (172 lbs/in) steps. Spring perch offsets must be adjusted to return the car to the prior static ride heights after any spring rate change.

LS COMP DAMPING

Low speed compression affects how resistant the shock is to comprecion (reduction in length) when the shock is moving at relatively low speeds, usually in chassis movements as a result of driver input (steering, braking, & throttle) and cornering forces. In this case 0 is minimum damping (least resistance to compression) while 11 is maximum damping (most resistance to compression). Increasing the low speed compression damping will result in a faster transfer of weight to this corner of the car during transient movements such as braking and direction change with increased damping usually providing an increase in turn-in response but a reduction in overall grip in the context of front dampers.

HS COMP DAMPING

High speed compression affects the shock's behavior in high speed travel, usually attributed to curb strikes and bumps in the track's surface. Higher compression values will cause the suspension to be stiffer in these situations, while lower values will allow the suspension to absorb these bumps better but may hurt the aerodynamic platform around the track. At smoother tracks more high speed compression damping will typically increase performance while at rougher tracks or ones with aggressive kerbs less high speed compression damping can result in an increase in mechanical grip at the expense of platform control. 11 is maximum damping while 0 is minimum damping.

LS RBD DAMPING

Low speed rebound damping controls the stiffness of the shock while extending at lower speeds, typically during body movement as a result of driver inputs. Higher rebound values will resist expansion of the shock, lower values will allow the shock to extend faster. Higher rebound values can better control aerodynamic attitude but can result in the wheel being unloaded when the suspension can't expand enough to maintain proper contact with the track. When tuning for handling, higher front low speed rebound can increase on-throttle mechanical understeer (but reduce nose lift) while lower values will maintain front end grip longer, helping to reduce understeer, but will allow more splitter lift. Excessive front rebound can lead to unwanted oscillations due to the wheel bouncing off of the track surface instead of staying in contact. 11 is maximum damping (most resistant to extension) while 0 is minimum damping (least resistance to extension).

HS RBD DAMPING:

High-speed rebound adjusts the shock in extension over bumps and curb strikes. Higher values will reduce how quickly the shock will expand, while lower values will allow the shock to extend more easily. Despite not having as much of an effect on handling in result to driver inputs, High-speed rebound can produce similar results in terms of aerodynamic control and uncontrolled oscillations if set improperly. 11 is maximum damping while 0 is minimum damping.

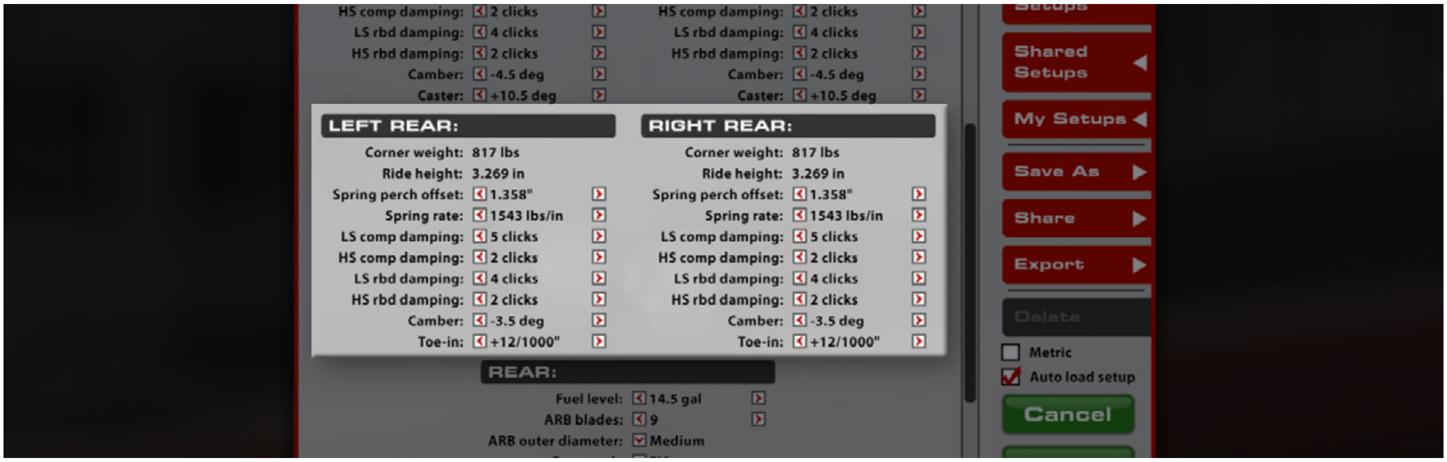
CAMBER

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.

CASTER

Caster is the vertical angle of the steering axis relative to the side view of the chassis. Positive caster angle is where the steering axis is leaned rearwards from this viewpoint, the more caster the larger the total trail of the contact patch behind the steering axis. More caster angle will result in the mechanical trail being a larger proportion of the felt steering weight relative to the tires pneumatic trail. This will result in a heavier overall steering feel but a possible loss in felt feedback from the tire. Increasing caster angle will also have secondary effects such as an increase in dynamic camber when turning the wheel through large steering angles which can be beneficial in chicances or hairpins. As well as this the more caster angle the greater the jacking effect during cornering which will result in lifting the inside front wheel while lowering the outside front wheel. This jacking effect will also result in the unloading and potentially lifting of the inside rear wheel which can aid in rotation around tight corners.

REAR CORNERS



REAR 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. Minimum legal rear ride height is 50.0 mm while maximum legal rear ride height is 90.0 mm.

SPRING SELECTED/SPRING RATE

Similar to at 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. 6 options for spring rate are available ranging from 190 N/mm (1086 lbs/in) to 310 N/mm (1771 lbs/in). The first portion of the range from 190 N/mm (1086 lbs/in) to 250 N/mm (1429 lbs/in) is in 30 N/mm (172 lbs/in) steps for coarse adjustment while the next 2 rates are stepped in 15 N/mm (86 lbs/in) steps for fine adjustment. Spring perch offsets must be adjusted to return the car to the prior static ride heights after any spring rate change.

COMPRESSION DAMPING

The compression damping setting is a paired adjustment controlling both the low and high speed damping characteristics of the damper with identical ranges to those of the front dampers. Increasing the compression damping will result in a faster transfer of weight to this corner of the car during transient movements such as accelerating and direction change with increased damping usually providing an increase in response but a reduction in overall grip especially at corner exit traction in the context of rear dampers. Excessively stiff compression damping can cause very poor traction on rough tracks as it can result in large tire load variation and a reduction in overall grip.

REBOUND DAMPING

The rebound damping setting is a paired adjustment controlling both the low and high speed damping characteristics of the damper with identical ranges to those of the front dampers. Increasing rebound damping will slow down the rate at which the damper extends in both low and high speed situations. As at the front, high rebound stiffness will result in improved platform control for aerodynamic performance and overall chassis response but it is important to avoid situations where the shock is too slow in rebounding as this will result in the tire losing complete contact with the track surface. This can be particularly detrimental during braking events and during the initial turn-in phase though an increase in rebound stiffness can help to 'slow down' the change in pitch of the car as the brakes are applied, potentially increasing braking stability.

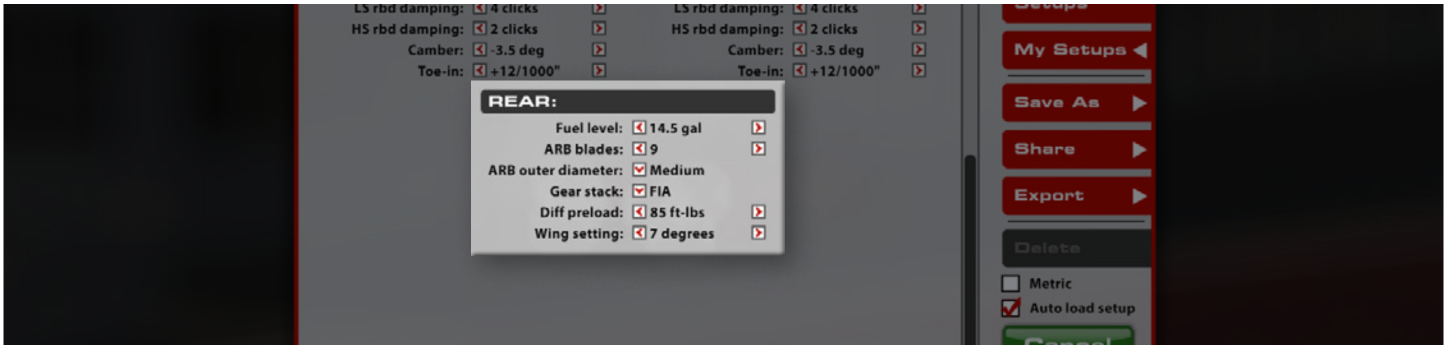
CAMBER

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. Generally, it is advised to keep the left and right toe values equal to prevent crabbing or asymmetric handling behaviour however, heavily asymmetric tracks such as Lime Rock Park may see a benefit in performance from running asymmetric configurations of rear toe and other setup parameters.

REAR



FUEL LEVEL

The amount of fuel in the fuel tank. Tank capacity is 110 L (29.1 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. 10 ARB blade options are available ranging from 1 (softest) to 10 (stiffest).

ARB OUTER DIAMETER

The ARB (Anti-Roll Bar) size influences the stiffness of the rear suspension in roll, such as when navigating a corner. Increasing the ARB size will increase the roll stiffness of the rear suspension, resulting in less body roll but increasing mechanical oversteer. This can also cause the car "take a set" more quickly at initial turn-in. Conversely, reducing the ARB size will soften the suspension in roll, increasing body roll but decreasing mechanical oversteer. This can result in a less-responsive feel from the rear especially in transient movements, but grip across the rear axle will increase. 3 configurations of ARB diameter are available and range from small (softest) to large (stiffest).

GEAR STACK

Four options of gear stack are available for selection depending upon track type. The FiA stack is suitable for almost all track types and should be treated as the baseline. IMSA Daytona and IMSA Short provide two alternative options which are targeted for tracks with longer and shorter straightaways respectively. The Ferrari Challenge gear stack is an alternate option which emulates 2nd thru 7th of the 488 Challenge gearbox and is not commonly recommended, though it may be useful on street circuits due to its tight spacing of the lower gears.

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.