LIGIER JS P320

USER MANUAL

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Dear iRacing User,

Ligier's latest design to compete under global LMP3 regulations, the Ligier JS P320 launched in the summer of 2019. The JS P320 succeeded the JS P3 that had been running since 2015, scoring hundreds of wins and multiple championships across global and international series. It represented major changes from its predecessor in bodywork and suspension, and added traction control and a new, more powerful Nissan V8 engine as part of a new generation of LMP3 regulations.

In its first two seasons as a part of the top-level IMSA WeatherTech SportsCar Championship, Ligier entries dominated the LMP3 class. Riley Motorsports finished first and third in the standings in 2021, led by driver's champion Gar Robinson, while the CORE Autosport duo of Colin Braun and Jon Bennett finished second in that inaugural season before winning the title in 2022. For 2024 and beyond, the JS P320 and all other LMP3s will compete exclusively in the IMSA VP Racing SportsCar Challenge, where it will be the faster car in multi-class racing exclusively alongside GT4 cars.

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

LIGIER

CHASSIS

DOUBLE WISHBONE WITH PUSHROD-ACTUATED INBOARD SPRINGS.

LENGTH	WIDTH	WHEELBASE	DRY WEIGHT	WET WEIGHT WITH DRIVER
4605 mm	**1900 mm**	**2860 mm**	**950 kg**	**1115 kg**
181 in	75 in	112 in	2094 lbs	2458 lbs

POWER UNIT

NATURALLY ASPIRATED NISSAN V8

DISPLACEMENT	TORQUE	POWER	RPM LIMIT
5.6 Liters	**402 lb-ft**	**460 bhp**	**7000**
341 cid	545 Nm	343 kW	

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 and Traction Control settings. While this is not mandatory, this will allow you to make quick changes to the brake bias and traction control systems to suit your driving style and track conditions while out on track.

Once you load into the car, getting started is as easy as pressing the clutch and pulling the "upshift" paddle to put it into gear, and hitting the accelerator pedal while releasing the clutch. The Ligier JS P320 does not require manual clutch operation to shift in either direction.

Upshifting is recommended when the shift lights on the dashboard are all fully illuminated, around 6600rpm.

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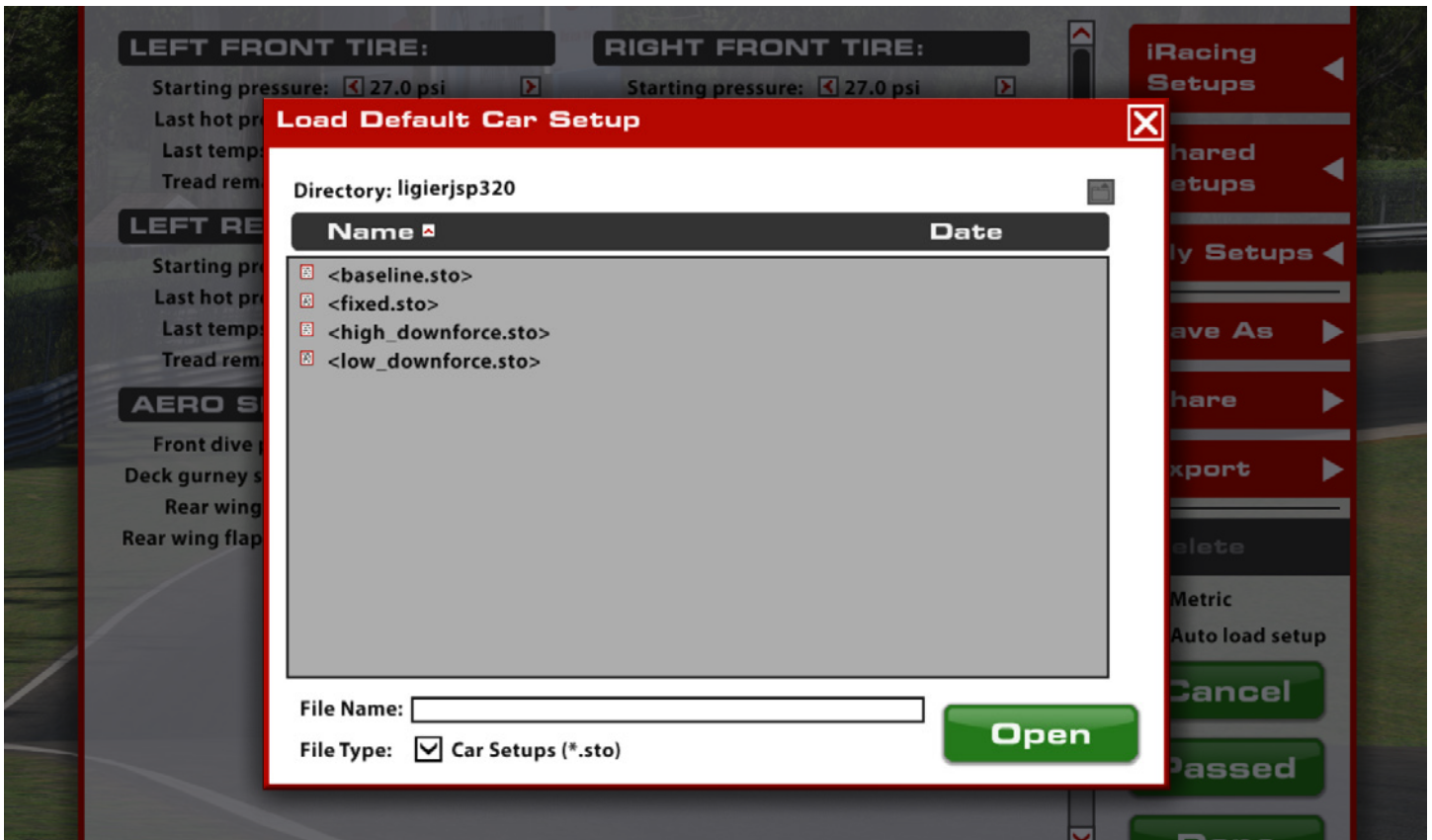
Upon loading into a session, the car will automatically load the iRacing Baseline setup [baseline.sto]. If you would prefer one of iRacing's pre-built setups that suit various conditions, you may load it by clicking Garage > iRacing Setups > and then selecting the setup to suit your needs.

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 Configuration

The steering wheel's integrated digital display shows all relevant information to the driver in an easy to read, single-page format.

Dash Configuration Display	
Last	The previously completed lap time is shown in the upper left of the display in blue.
Best	The session's best lap is shown in the upper right of the display in pink.
Gear Indicator	The currently-selected gear is located in the middle of the display.
RPM	Engine RPM is located just beneath the gear indicator.
Tyre Press	Live pressures are shown in the center of the display in units based on what is selected in the garage. Imperial units will display Pounds-per-square-Inch and Metric units will display Bar.
Fuel Used	How much fuel that has been used since leaving pit road is shown on the left side of the display. Imperial units will show US Gallons and Metric units will show Liters.
Fuel Lap	After completing each lap the amount of fuel that was used in the previous lap will be displayed beneath the Fuel Used value in US Gallons or Liters.
DIFF	A live split time is shown on the right side of the display underneath the Best Lap display. This will compare the current lap against the Best lap, displaying a faster lap in green and a slower lap in red.
Speed	The vehicle's speed is shown on the right side of the display in Miles-per-Hour for Imperial units and Kilometers-per-Hour for Metric units.
OIL P	The engine oil system pressure is shown on the bottom left in Pounds-per-square-inch for Imperial units and Bar for Metric units.

Dash Configuration Display (Continued)	
TC	The currently-selected Traction Control setting is shown in a yellow box on the bottom of the display. This value will match the TC option in the F8 black box unless the setting is "0", when this will display "OFF" to indicate the system is disabled.
PPS	The currently-selected throttle shape setting is shown on the bottom right of the display in a purple box.
Water T	The engine's cooling water temperature is displayed in the bottom right, in °F for Imperial and °C for Metric units.

To the left of the driver, mounted on top of the dash, is a Racelogic Split and Laptime display. During a lap this display will show the current split time relative to the session best lap time, as well as a graphical bar representing the displayed time difference. A positive split and a bar displayed to the right of center will indicate a lap slower than the reference, while a negative split and a bar to the left of center indicates a faster lap. When a lap is completed, the display will show the previously completed lap time as well as a split for the new lap.

SHIFT LIGHTS

The shift lights for the Ligier JS P320 are not tied directly to a specific RPM value, but are instead timed to begin illuminating based on the engine RPM acceleration to where the shift indication is shown at the optimum shift point based on how aggressively the car is accelerating.

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
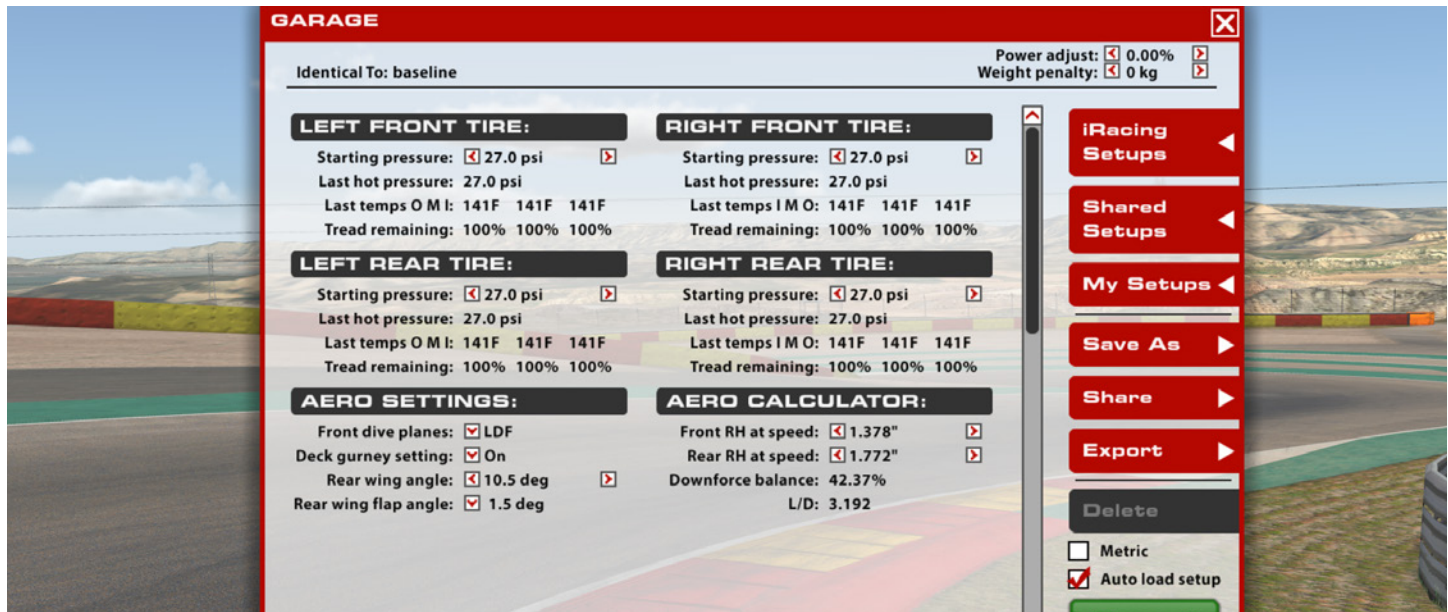
STARTING PRESSURE

This sets the air pressure in the tires when the car is loaded into the world. Lower pressures will produce more mechanical grip with more rolling drag and heat buildup, while higher pressures will reduce heat buildup and rolling drag, but will also reduce the available grip. Generally, higher pressures will perform better at tracks with high speeds and high loads while slower tracks with tighter corners will see better performance out of lower tire pressures.

LAST HOT PRESSURE

The Last Hot Pressure displays the air pressure in the tire when the car is returned to the garage. 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.

LAST TEMPS

Tire carcass temperatures once the car has returned to the pits or the driver has gotten out of the car. 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 relative to the chassis centerline.

TREAD REMAINING

The amount of tread remaining on the tire once the car has returned to the pits or the driver has gotten out of the car. 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 SETTINGS
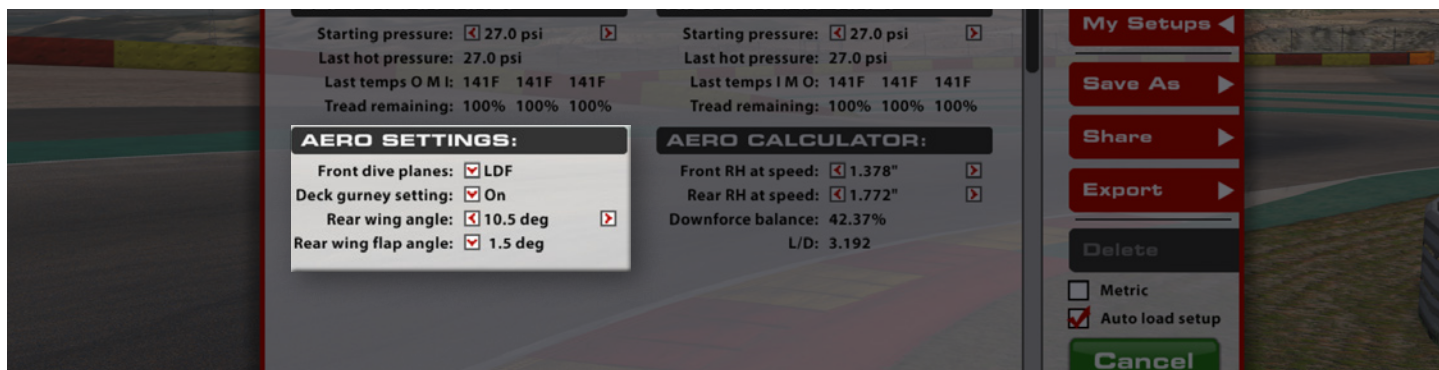
FRONT DIVE PLANES

The Front Dive Planes are aerodynamic surfaces attached to the front fenders beneath the headlights. These can dramatically increase the downforce produced at the front of the car while shifting the aero balance forward but will increase drag slightly. Three variations are available: The High Downforce (HDF) option will install a full dive plane and greatly increase downforce and drag. The Medium Downforce (MDF) will install a partial dive plane, reducing drag over the HDF option but with less downforce. The Low Downforce (LDF) option will remove the dive planes completely, an option for when top speed is absolutely crucial for best performance.

DECK GURNEY SETTING

The Deck Gurney is a small flap installed at the rear of the car to increase overall downforce. Using this aerodynamic device will increase rear downforce as well as total downforce, but will also increase drag.
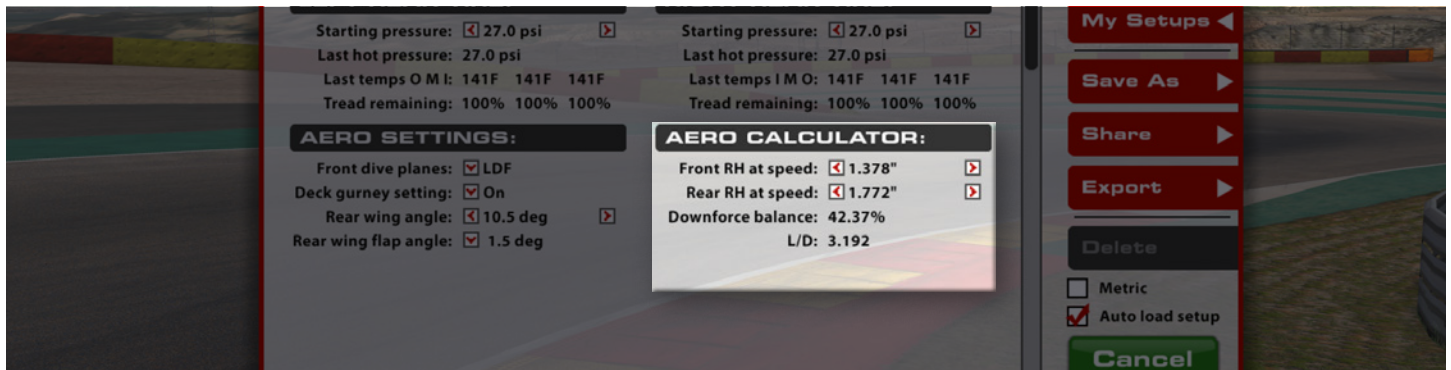
REAR WING ANGLE

Changing the Rear Wing Angle will alter the angle of attack of the entire rear wing assembly. Higher angles will increase downforce and shift aero balance rearward but will also increase drag. Lower angles will reduce drag and downforce while shifting aero balance forward. It's very important to tune the Rear Wing angle to suit the track characteristics for optimum performance: Higher-speed tracks will usually benefit from the reduced drag of a lower wing angle while slower, twisty tracks will see better performance with a high wing angle and increased downforce.

REAR WING FLAP ANGLE

The rear wing features a second element that can be adjusted independently of the rear wing mainplane to fine-tune the downforce level at the rear of the car. Just like the Rear Wing Angle adjustment, higher angles will increase downforce and drag at the rear of the car and lower angles will reduce downforce and drag. This adjustment value is an offset to a reference angle and can be set to a negative angle value, with these negative values still producing downforce.

AERO CALCULATOR

The Aero Calculator is a tool used to display the car's approximate aerodynamic values in a given configuration. Changes to the car's aerodynamic settings (Wing Angles, Dive Planes, Gurney Flaps) will be reflected in the Aero Calculator, giving an idea of how the car will behave aerodynamically while on the race track. This calculator can also be used to determine what changes need to be made to the car to alleviate aerodynamically-induced handling issues.

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.

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.

DOWNFORCE BALANCE

Displayed in percent of Front downforce, this value shows how much of the car's total downforce is over the front axle. A higher percentage value indicates an increase in front downforce, increasing oversteer in mid- to high-speed corners. A lower percentage value indicates an increase in rear downforce, increasing understeer in mid- to high-speed corners.

L/D

The "L/D" value is the ratio of Lift (downforce) to Drag. This quantifies how efficiently the car's bodywork is producing downforce in terms of how much drag is being produced as a result. A higher L/D value means more downforce is being produced for each unit of drag, meaning the bodywork is being more efficient. Having a higher L/D value without sacrificing overall downforce will result in a faster, more efficient car. Optimum values for L/D can vary based on the aerodynamic configuration and track type.

Chassis

FRONT
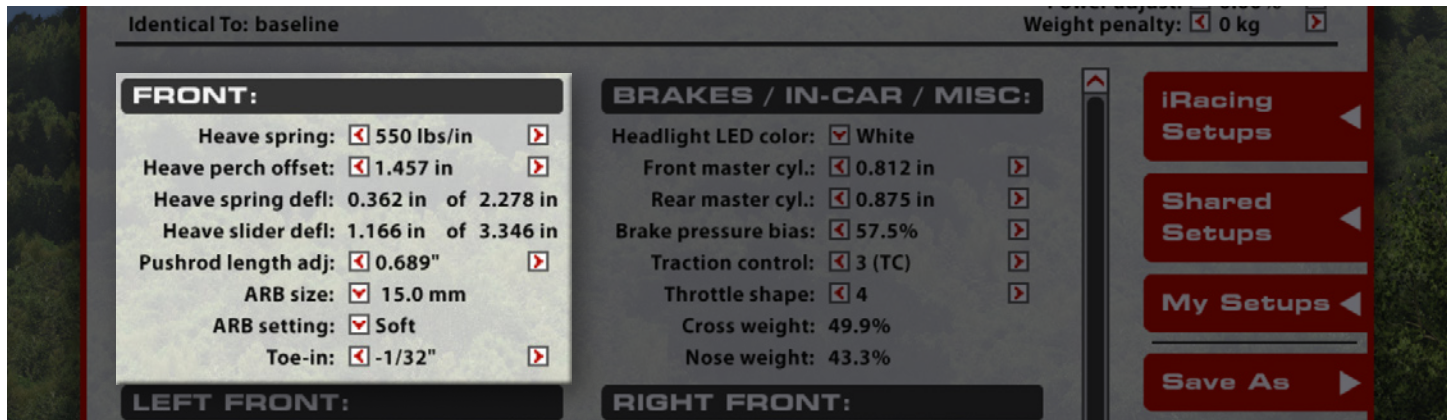
HEAVE SPRING

The front Heave Spring is a suspension element that handles external loads from purely vertical loads and doesn't control loads that would induce chassis roll when cornering. Generally these loads are present for increasing downforce loads at higher speeds, dips and crests in the track, or under heavy braking. Higher rate values will stiffen the suspension in heave, which is good for controlling ride heights to maintain a good aerodynamic platform, but can produce a bouncing effect on rough surfaces. Lower rates will absorb bumps and loads easier, but will hurt the aerodynamic platform due to excessive chassis movement.

HEAVE PERCH OFFSET

The Heave Perch Offset is used to adjust preload on the Heave Spring. This is one of two methods to adjust ride height through the front Heave element, with lower values preloading the spring more and raising front ride heights. Conversely, higher values will unload the spring and reduce front ride heights.

HEAVE SPRING DEFLECTION

Heave Spring Deflection represents the amount the Heave Spring is compressed under static conditions, essentially a display of the preload on the Heave Spring. This can change as a result of adjusting almost everything else on the chassis, so special attention should be paid to ensure the deflection, and thus the spring preload, remains the same after making setup changes. This setting is directly adjustable through the Heave Perch Offset setting, with higher deflection values indicating more static compression and higher spring preload.

HEAVE SLIDER DEFLECTION

The Heave Slider is a mechanism that keeps the Heave Spring assembly moving in a linear fashion without producing the forces that a damper would produce. The Slider Deflection is how far this slider mechanism is mounted on has compressed from fully extended. This has no influence on the chassis handling, but is a way to see how much travel is available before the slider bottoms out.

PUSHROD LENGTH ADJUSTMENT

This adjusts the length of both front suspension pushrods together, shown as an offset from a baseline length figure. This is a great way to adjust front ride height without altering the preload on the Heave Spring or either front Torsion Bars.

ARB SIZE

The ARB Setting is a fine-tuning adjustment that alters the overall stiffness of the front ARB assembly. The Soft setting will provide the least roll resistance and induce some oversteer while cornering, while the Hard setting will provide the most roll resistance and shift the mechanical balance towards understeer. The Medium option falls between the two settings in both roll stiffness and handling balance.

ARB SETTING

The ARB Setting is a fine-tuning adjustment that alters the overall stiffness of the front ARB assembly. The Soft setting will provide the least roll resistance and induce some oversteer while cornering, while the Hard setting will provide the most roll resistance and shift the mechanical balance towards understeer. The Medium option falls between the two settings in both roll stiffness and handling balance.

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 amount of 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.

BRAKES / IN-CAR / MISC
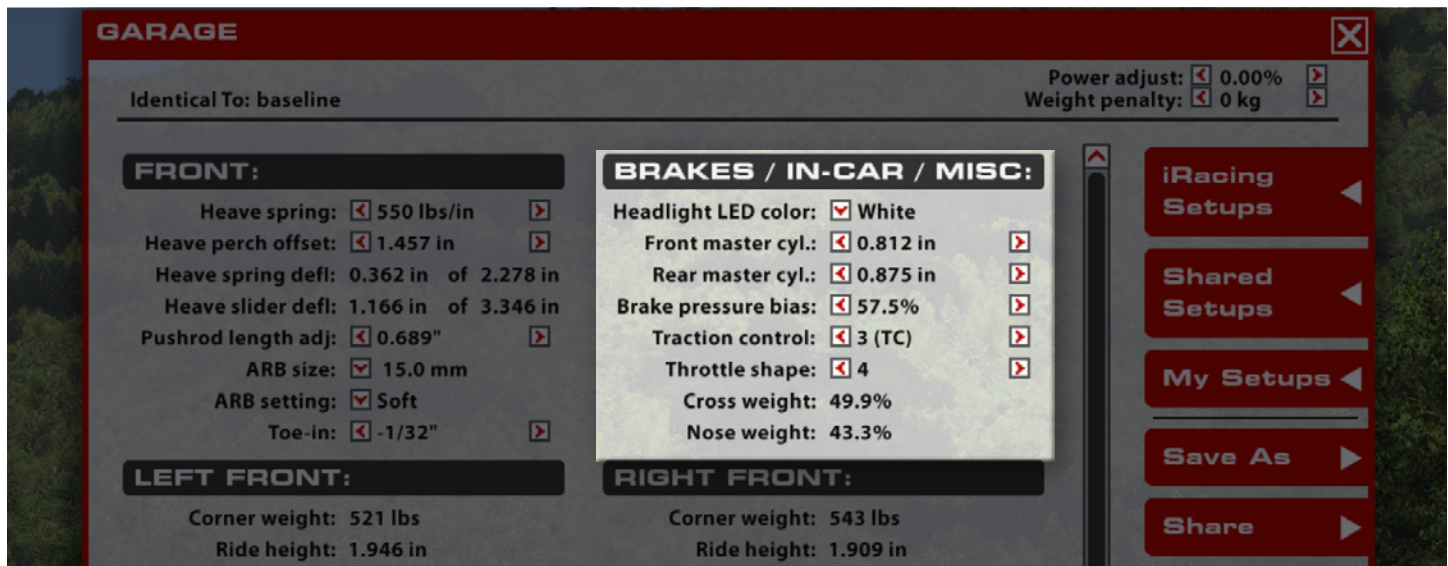
HEADLIGHT LED COLOR

This changes the color of the LED light strip around the outside of the headlights, useful for identifying a specific car on-track when multiple cars share the same livery. This has no effect on vehicle performance.

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, which will shift the brake bias rearwards and increase the pedal effort required to lock the front wheels. A smaller master cylinder will increase brake line pressure to the front brakes, shifting brake bias forward and reducing required pedal effort to lock the front wheels.

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, which will shift the brake bias forwards and increase the pedal effort required to lock the rear wheels. A smaller master cylinder will increase brake line pressure to the rear brakes, shifting brake bias rearward and reducing required pedal effort to lock the rear wheels.

BRAKE PRESSURE BIAS

Brake Bias is the percentage of braking force that is being sent to the front brakes. Values above 50% result in more pressure being sent to the front, while values less than 50% send more force to the rear. This should be tuned for both driver preference and track conditions to get the optimum braking performance for a given situation.

TRACTION CONTROL

This setting alters how much the Traction Control system will cut engine torque to prevent wheelspin in heavy throttle application or low-grip conditions. Higher values will be more aggressive with torque cut to reduce wheelspin while lower values will allow slightly more wheelspin before intervening. Setting this value to "0" will disable the Traction Control. This value is adjustable from the in-car F8 black box.

THROTTLE SHAPE

The Throttle Shape setting will adjust how linear the torque delivery is based on the throttle pedal position. Setting "1" is purely linear, with a given percent of throttle delivering a similar percentage of max torque (25% throttle = 25% torque). As settings are increased the torque delivery becomes more non-linear, similar to a butterfly-style throttle: less torque increase at very low and very high throttle percentage and more torque increase in the throttle's mid-range. This will change the feel of the car when throttle is initially applied and is a good tool for drivers with various driving styles.

CROSS WEIGHT

Cross weight is the amount of weight on the car's Left-Rear and Right-Front tires relative to the total weight of the car, displayed in percent. This is adjusted via the corner spring preload adjustments (Front Torsion Bar Turns and Rear Spring Perch Offset). This value should be around 50% for most tracks, with the garage tech limiting the value between 49.5% and 50.5%.

NOSE WEIGHT

Nose Weight is the amount of weight on the car's front axle relative to the total weight of the car, displayed in a percentage. This is not directly adjustable, aside from varying fuel loads, but can have an effect on the chassis handling balance: Higher nose weight values will lead to understeer in slower corners while lower values will trend towards oversteer.

FRONT CORNERS
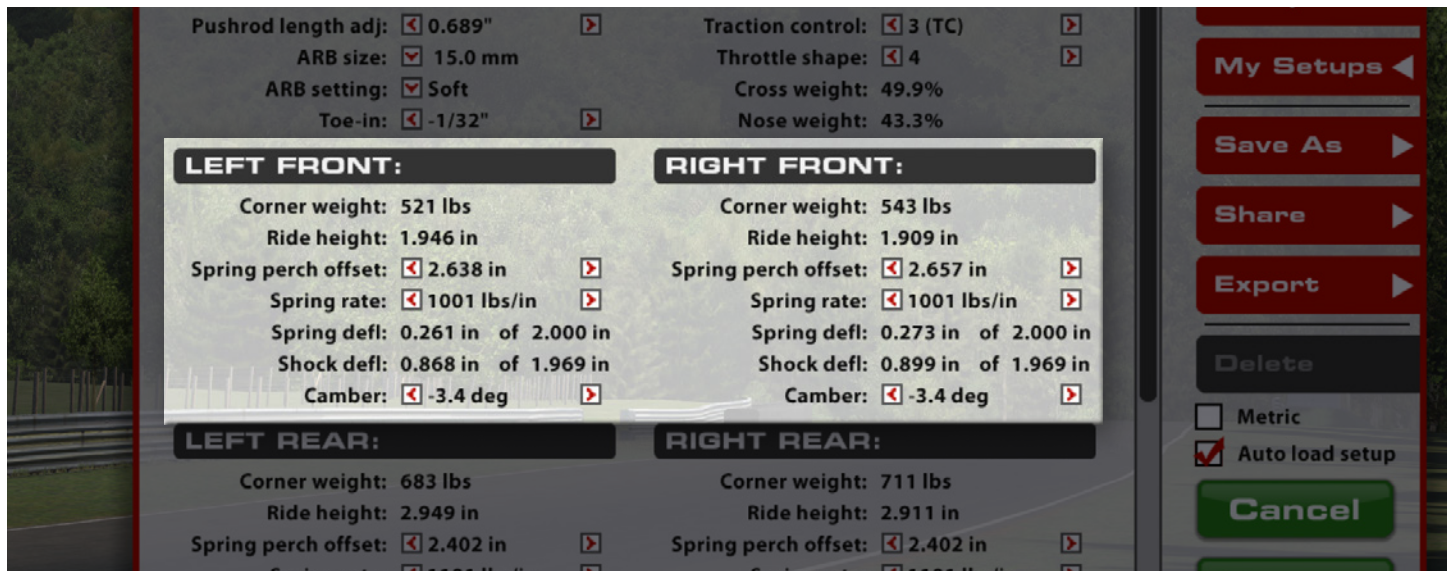
CORNER WEIGHT

This changes the color of the LED light strip around the outside of the headlights, useful for identifying a specific car on-track when multiple cars share the same livery. This has no effect on vehicle performance.

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 the front ride height will decrease overall downforce and shift the aerodynamic balance rearward, but will decrease drag slightly. Conversely, reducing front ride height will increase downforce and shift aero balance forward while slightly increasing overall drag.

SPRING PERCH OFFSET

Used to adjust the ride height at a corner of the car by changing the installed position of the spring's upper perch. Increasing the spring perch offset will reduce spring preload, lowering the corner of the car. Reducing the spring perch offset will increase spring preload and raise the 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.

SPRING RATE

Spring Rate is the stiffness of the suspension's corner springs controlling each wheel. The value is a representation of how much force (Pounds or Newtons) is required to compress the spring a specific distance. Springs are used to keep the chassis from contacting the track under the loads seen on track and to manage the chassis' aerodynamic attitude, but their stiffness also has a major influence on the car's handling characteristics. On the front end, stiffer springs can keep the front splitter from moving too much under increasing aerodynamic loads but will decrease mechanical grip and can cause understeer in slower corners. Softer springs will result in more front end movement, which can hurt aero, but will increase mechanical grip in the front axle and reduce understeer (or cause oversteer, in extreme cases). Due to homologation rules, front spring rates must be symmetrical across the rear axle and can only be changed in pairs.

SPRING DEFLECTION

The Spring Deflection value is how far the spring has compressed from its length when unloaded. This is a way to see how much each spring is preloaded and whether or not the chassis setup has any kind of asymmetry that could lead to inconsistent handling characteristics.

SHOCK DEFLECTION

Similar to Spring Deflection, Shock Deflection is how much the shock is compressed from its fully-extended length. While this is not a representation of any kind of loading on the shock, it is a way to see how much travel is available in the suspension before the shock runs out of available travel and contacts any travel-limiting devices. Be careful to pay attention to how much deflection is available for suspension extension, as the tire will become unloaded when shock deflection reaches zero.

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.

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 setting.

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. Raising the rear ride height will increase overall downforce and shift aero to the front of the car but will increase drag. Decreasing rear ride height will do the opposite, with aero shifting rearward and overall downforce and drag decreasing.

SPRING PERCH OFFSET

Used to adjust ride height and corner weight, adjusting this setting applies a preload to the spring under static conditions. Decreasing the value increases preload on the spring, adding weight to its corner and increasing the ride height at that corner. Increasing the value does the opposite, reducing height and weight on a given corner. These should be adjusted in pairs (left and right, for example) or with all four spring preload adjustments in the car to prevent crossweight changes while adjusting ride height.

SPRING RATE

Spring Rate changes how stiff the spring is, represented in a force per unit of displacement. Primarily responsible for maintaining ride height and aerodynamic attitude under changing wheel loads, stiffer springs will maintain the car's aero platform better while sacrificing mechanical grip. Softer springs will deal with bumps better and increase mechanical grip, but will cause the car's aerodynamic platform to suffer. Due to homologation rules, rear spring rates must be symmetrical across the rear axle and can only be changed in pairs.

SPRING DEFLECTION

The Spring Deflection value is how far the spring has compressed from its length when unloaded. This is a way to see how much each spring is preloaded and whether or not the chassis setup has any kind of asymmetry that could lead to inconsistent handling characteristics.

SHOCK DEFLECTION

Similar to Spring Deflection, Shock Deflection is how much the shock is compressed from its fully-extended length. While this is not a representation of any kind of loading on the shock, it is a way to see how much travel is available in the suspension before the shock runs out of available travel and contacts any travel-limiting devices. Be careful to pay attention to how much deflection is available for suspension extension, as the tire will become unloaded when shock deflection reaches zero. This is especially important for the rear of the car during braking and high-rake configurations, since running out of shock travel could cause sudden oversteer.

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 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. Higher rear camber values can increase cornering stability but reduce straight-line stability under braking, while lower rear camber values can often increase traction out of low-grip corners.

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 rear end, adding toe-in will increase straight-line stability but may hurt how well the car changes direction.

REAR
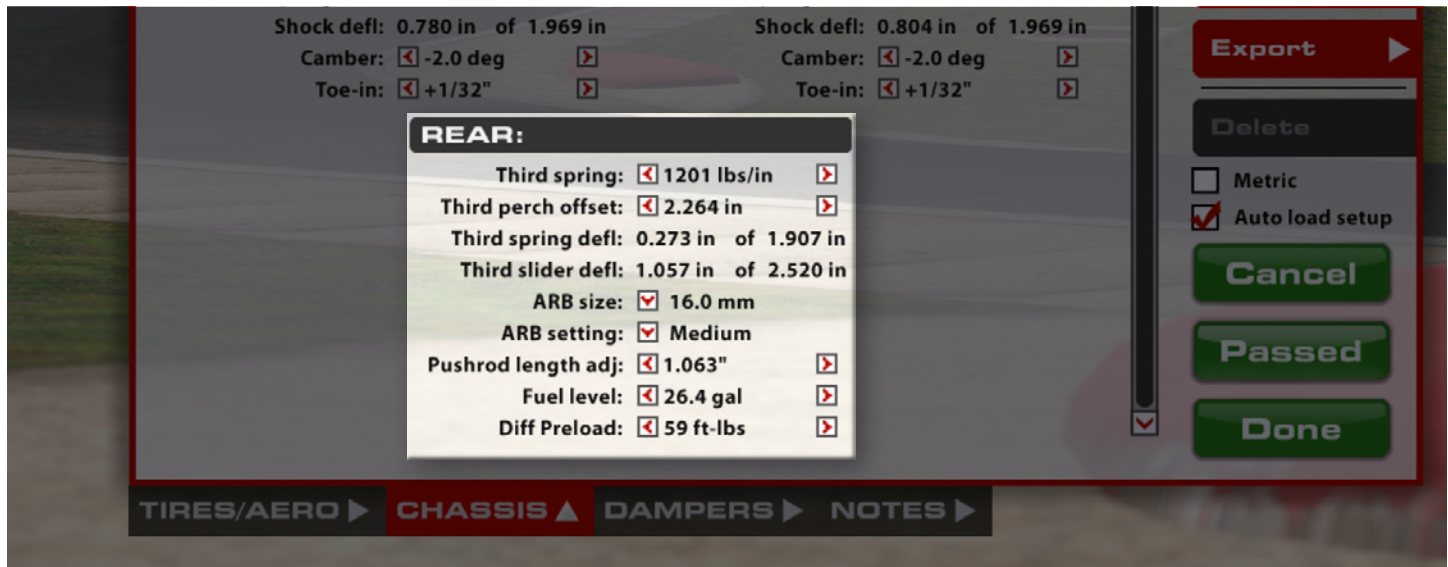
THIRD SPRING

The Third Spring, similar to the front Heave Spring, is a spring element configured to provide resistance only in vertical suspension movement without affecting roll stiffness. This spring element is helpful with controlling increasing aerodynamic loads and maintaining the proper aerodynamic attitude around a circuit. The rear end's third spring is crucial in maintaining and controlling the rear ride height around a circuit to maximize the downforce produced by the rear bodywork.

THIRD PERCH OFFSET

The Third Perch Offset is used to adjust preload on the rear Third Spring. This is one of two methods to adjust ride height through the rear Third Spring element, with lower values preloading the spring more and raising front ride heights. Conversely, higher values will unload the spring and lower front ride heights.

THIRD SPRING DEFLECTION

Third Spring Deflection represents the amount the rear Third Spring is compressed under static conditions. This is not directly adjustable but will change with adjustments to the Third Perch Offset and rear Spring settings.

THIRD SLIDER DEFLECTION

The Slider Deflection is how far the slider mechanism the Third Spring is mounted on has compressed from fully extended. Similar to a shock but without any damping forces produced, this doesn't influence the suspension's behavior.

ARB SIZE

The ARB (Anti-Roll Bar) size alters the stiffness of the rear suspension in roll. Increasing the ARB size will increase the roll stiffness of the rear suspension, resulting in less body roll but increasing mechanical oversteer. 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 steering, but grip across the rear axle will increase.

ARB SETTING

The ARB Setting is a fine-tuning adjustment that alters the overall stiffness of the rear ARB assembly. The Soft setting will provide the least roll resistance and induce some understeer while cornering, while the Hard setting will provide the most roll resistance and shift the mechanical balance towards oversteer. The Medium option falls between the two settings in both roll stiffness and handling balance.

PUSHROD LENGTH ADJUSTMENT

This adjusts the length of both rear suspension pushrods together, shown as an offset from a baseline length figure. This is a great way to adjust rear ride height without altering the preload on the Heave Spring or either of the rear corner springs.

FUEL LEVEL

Fuel level is the amount of fuel in the fuel tank when the car leaves the garage.

DIFF PRELOAD

The differential can be set with a static load applied. Higher values produce more locking force in the differential in all conditions, producing more understeer under acceleration and deceleration. This value will also affect mid-corner performance, with higher values not allowing the differential to unlock as much, increasing mid-corner understeer.

DAMPERS
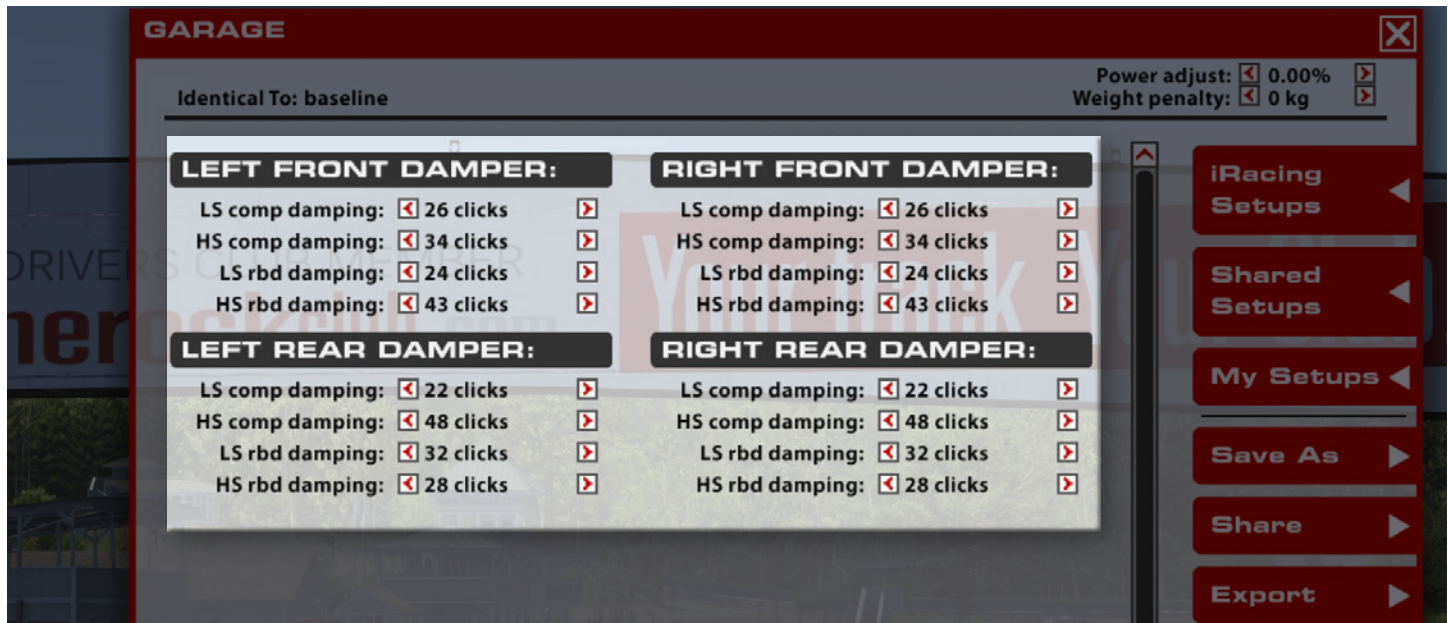
LS COMPRESSION DAMPING

Low Speed Compression affects how resistant the shock is to compression (reduction in length) when the shock shaft is moving at relatively low speeds, usually during movement caused by driver input (steering, braking, & throttle) and typical cornering forces. Higher values will increase compression resistance and transfer load onto a given tire under these low-speed conditions more quickly.

HS COMPRESSION 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 and risk the bottom of the chassis coming into contact with the track surface.

LS REBOUND 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 fast enough to maintain proper contact with the track. Excessive rebound can lead to unwanted oscillations due to the wheel bouncing off of the track surface instead of staying in contact.

HS REBOUND DAMPING

High-speed rebound adjusts the shock in extension following large 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.