

Taken from the GTR but applicable to rFactor.

Brake pressure

Adjust overall force applied on the brakes. At 100%, full force will be applied to the brakes. When the best percentage of brake pressure is applied for a car for a specific circuit, the brakes are less likely to lock up.

Also some game controllers might not do well modulating brake lockup at the 100% setting, so you might need to reduce this to help compensate.

Brake Bias

Adjusts the balance of braking pressure between the front and the rear brakes. The right balance will keep one end of the car from locking up significantly before the other. However, you should usually aim for the fronts locking slightly before the rears. Changing this bias will also affect corner turn-in balance.

Brake Duct

Increase or decrease the duct to adjust the brake temperature. Brakes that are either too cool or too warm are less efficient, not stopping/slowing the car as quickly.

Steering Lock

Adjust the steering sensitivity a few degrees. Greater lock yields tighter steering response.

Differential

Adjust the Differential Power and Coast to tweak the distribution of torque to the rear wheels for traction and speed.

Power

Amount, or percentage that is used to lock the inside and outside tyres together when accelerating, as when exiting a corner.

Coast

Amount, or percentage that is used to lock the inside and outside tyres together when you are off of the throttle, as when entering a corner.

Pre-load

Amount of lock built in before any acceleration / deceleration effects take place like in a neutral throttle condition.

Radiator Opening

Adjust the air flow to radiator, which helps cool the engine. The larger the opening, the cooler the engine will run, making it safer to run at a higher RPM. Though a larger radiator opening creates more drag which will reduce top speed.

Water

Temperature of the car's water cooling system. Try to keep this temp under 100C.

Use a smaller or larger radiator opening to solve problems here. Air temperature extremes can affect this.

Oil

Temperature of the car's oil. Will change during practice and qualifying sessions. Try to keep this under 100C. Tied to the water temp and it's radiator opening.

Rev Limit

The higher the RPM limit, the higher the top speed you can carry. There is also a reduction in engine reliability as the you up the RPM limit. If you set the limiter at maximum and use that limit regularly while driving, your chances of completing a full length race are slim.

Gearing

1st - 7th(Depending on the car type) and Reverse Engine Gear Ratios. Adjust the ratio of each engine gear. Taller gear ratio (smaller number) yields slower acceleration but higher achievable top speed in that gear. Shorter gear ratio (larger number) yields quicker acceleration but lower achievable top speed in that gear.

Symmetrical Setup (off/on)

Automatically match the right and left sides.

Tyre Pressure

Adjust the amount of air pressure in the tyres. Each tyre has an optimum amount of pressure at which it yields the most grip. Decreasing or increasing the pressure from this point lessens the grip. Ideally the optimum pressure is when the centre tyre temp is the average of the inner + outer tyre temps once the tyre gets up to operating temperature (about 85-95C). Additionally, the higher the pressure, the stiffer the car will be as the tyre is really like a spring. This affects car control and handling as well as tyre wear.

Fast Bump

Controls the rapid UPWARD movement of this suspension corner following bumps and curbs. Called "Fast" because the damper is moving *up* (compressing) in a rapid motion, usually above 100mm/sec (use telemetry). So this adjustment controls how a tyre conforms to the road as it's negotiating the leading edge-to-peak of a bump or road undulation. If you find the car pushing to the outside of the track in a "skating" fashion over bumps, then soften (lower) this setting. If find the car floating and changing direction erratically, then stiffen (higher) this setting. When in doubt, go softer

Slow Bump

Controls the mild UPWARD movement of this suspension corner caused by driver input (steering, braking, throttle). Called slow because the damper is moving up (compressing) in a slow motion, usually below 70mm/sec damper speed (use telemetry). Used to affect chassis balance while we are transitioning into, and out, of the corners. Decreasing this number will speed up how quickly this corner accepts weight transfer while we are transitioning. Increasing will slow it down.

Fast Rebound

Controls the rapid DOWNWARD movement of this suspension corner following bumps and curbs. Called "Fast" because this damper is moving down (extending) in a rapid motion, usually above 100mm/sec (use telemetry). So this adjustment controls how a tyre conforms to the road as it's negotiating the peak-to-trailing edge of a bump or road undulation. If you've changed the bump setting, then it's usually a good idea to change this setting in a similar manner.

Slow Rebound

Controls the mild DOWNWARD movement of this suspension corner caused by driver input (steering, braking, throttle). Called slow because the damper is moving down (extending) in a slow motion, usually below 70mm/sec damper speed (use telemetry). Used to affect chassis balance while we are transitioning into, and out, of the corners. Decreasing this number will speed up how quickly this corner gives up - or "sheds" - weight transfer while we are transitioning. Increasing this setting will slow it down.

Springs

Adjust the stiffness of the springs. Lessening the stiffness yields better grip but slows response time to driver input. More stiffness makes the car respond more quickly to driver input, but yields less grip.

Camber

Adjust the angle of the wheel in relation to the driving surface. Negative camber makes the top of the tyres tilt inward towards the centre of the chassis, and helps give better grip through the corners. Though used less frequently, positive camber means that the wheel tilts outward, which gives some stability in a straight line but less grip when cornering. Ideal camber can be tuned by the tyre temps. You want the inner temps about 7-10C hotter than the outer temps, slightly less at the rear. For a road racing car, you will use only negative camber. The amount is dependant on the type of suspension the car has and the amount of roll resistance (springs + anti-roll bars) utilized in the setup. The stiffer the roll resistance the less negative camber you need. The less efficient the suspension the more negative camber you need.

Caster

Adjust the degree the tyre leans forward or back at the top of the wheel. Caster increases or decreases directional stability. Positive caster provides the directional stability, yet too much positive caster makes steering more difficult. Negative caster requires less steering effort but can cause the car to wander down straights.

Packers

Adjust the number of packers. Extra spacers put in to adjust how soon the bump stops come into play to limit downward travel of the chassis. The more packers, the sooner and more effective the bump stops will be at limiting travel, but can cause chassis instability over bumps and heavy vertical G-force corners - like Spa's Eau Rouge. Use only if necessary as a last resort to avoid chassis scraping.

Ride Height

Adjust how high the bottom of the car is off of the ground. The lower the ride height, the less suspension travel, and the lower the car's centre of gravity will be. Adjusting the ride height too low can make bumpy tracks tricky because the car is more likely to bottom out.

Front Splitter

Adjust the level of downforce applied by the splitter. Adds front-end grip at speed. The higher the number, the more air the front wing deflects, the more downforce and drag (slowing top speed).

Rear Wing

Adjusts the level of downforce at the rear of the car, and the main adjustment for Aerodynamic balance. After deciding on a front splitter for the track type, you use the rear wing to dial-in the aerodynamic balance. Total amount of adjustments are 10 for NGT cars and 12 for GT cars. For splitter setting "1" you need a setting of 4-7. For Splitter "2" you need a setting of 8-12. Keep in mind that the more rear wing setting used the more aero drag you will have, slowing top speed.

Anti-roll bar

Adjust the stiffness of the anti-roll bars in the front/rear of the car. Keeps car from rolling excessively through the turns. This aids in camber control for the tyres so we don't have to run excessively stiff springs or camber angles. It also gives an easy way to adjust over/understeer balance. The stiffer a specific anti-roll bar is, the more weight transfer that end of the car will handle and cause that end to lose traction sooner. So stiffening the front will tend towards understeer (front will wash out) and stiffening the rear will tend towards oversteer (rear end will come around).

Toe-in

Adjust the degree the front of the wheels angle towards or away from each other. This affects the directional stability and initial turn-in, but too much toe in any direction can slow the car down with increased rolling drag. On the rear, usually you want toe-in (positive settings), as toe-out (negative settings) creates instability. On the front, usually you want a slight amount of toe-out (negative numbers) as this helps turn-in. Too much toe-in in either direction can cause understeer and tyre wear. This is not a major setup tweak. Suggest you leave these at the defaults.

If you know who wrote this guide contact morpheus@rfactorcentral.com so they can be credit.