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Simple iRacing Car Setup Guide

These are general rules, but in some cases exceptions arise when you take things to the extreme.

CAMBER

More camber gives more lateral grip (to a point). If you have too much camber and use the inside of the tire too much over a longer run this can hurt your grip at that end of the car. Look at your tire wear across the tire. The outside will always have less tire wear but the middle and inside should be fairly close.

	Increase Oversteer	Decrease Oversteer
Front Camber	more	less
Rear Camber	less	more

CASTER

More caster increases camber while turning giving more lateral grip to front tires

More caster also increases the weight of the steering and can feel a bit less smooth as you transition into and out of a corner.

	Increase Oversteer	Decrease Oversteer
Front Caster	more	less

SPRING RATES

Using all soft or hard springs does not really give more or less lateral grip on a smooth track, it is the differences between the front and rear that affect the car balance. Softer springs better for bumpy tracks.

	Increase Oversteer	Decrease Oversteer
Front Spring Rate	less	more
Rear Spring Rate	more	less

ANTI ROLL BAR (ARB)

Using all soft or hard ARBs does not really give more or less lateral grip, it is the differences between the front and rear that affect balance. e.g Stiffer rear ARB compared to softer front ARB decreases the Lateral Weight Transfer on the front relative to the rear giving front end grip.

	Increase Oversteer	Decrease Oversteer
Front ARB	less	more
Rear ARB	more	less

Rake

Higher Rear ride height relative to front means more rake. More rake raises the rear Center of Gravity (CG) causing more Lateral Weight Transfer (LWT) in the rear reducing rear grip

Many will tell you that raising the rear causes more weight over the front tires, but it does not change the weight on the front tires by much if any at all. Don't believe me, look in iRacing's garage for your car setup and note the weight on each of the front tires. Then raise the front ride height a huge amount and check the weight on the front tires again. It will be basically the same number.

	Increase Oversteer	Decrease Oversteer
Rake (RRR to FRR)	more	less

TOE

Tires need slip angles to generate maximum grip. Using the toe to add some slip angle can increase grip, but you can overdo it and take away grip.

Adding more front toe out will give more grip on initial turn in but can actually take away grip mid corner as it might cause too much toe out with more steering input due to something called Ackerman. Ackerman dynamically increases the front toe out as you turn the wheel.

More toe can increase tire wear as it increases slip angle all the time even on the straights.

	Increase Oversteer	Decrease Oversteer
Front Toe Out	less for mid corner	more for mid corner
	more for initial turn in	less for initial turn in
RearToe In	less	more

DIFF LOCKING

Less preload or clutches reduces the locking effect of the diff allowing the rear tires to rotate more independent of each other.

Less preload or clutches means the rear tires are not fighting each other which reduces tire wear all things being equal.

Less preload or clutches allows the car to turn in better but push when you get on power.

Diff coast angle affects the amount of diff locking only when you are off power

Diff ramp angle affects the amount of diff locking only when you are on power

	Increase Oversteer	Decrease Oversteer
Diff Preload	less for corner entry	more for corner entry
	more for corner exit	less for corner exit
Diff Clutch plates	less for corner entry	more for corner entry
	more for corner exit	less for corner exit
Diff Coast Ramp Angle	less locking for corner entry	more locking for corner entry
Diff Drive Ramp Angle	more locking for corner exit	less locking for corner exit

BRAKE BIAS

More rearward means you are applying more braking force to the rear tires.

	Increase Oversteer	Decrease Oversteer
Brake Bias	more rearward	more forward

SHOCK DAMPING- LOW SPEED COMPRESSION AND REBOUND

Low speed damping settings help control the speed of springs as they compress or rebound (extend).

Adding more compression damping to just one end of the car will cause that end of the car to lose grip sooner as it transitions the lateral weight transfer faster.

Reducing rebound damping at the rear of the car will increase off power steering. Reducing rebound damping at the front of the car will decrease on power steering.

Make sure you read the iRacing description for each car so you know clearly how to increase or decrease damping

	Increase Oversteer	Decrease Oversteer
Front Compression Low Speed	less damping	more damping
Front Rebound Low Speed	more damping	less damping
Rear Compression Low Speed	more damping	less damping
Rear Rebound Low Speed	less damping	more damping

Bumpy Tracks

SHOCK DAMPING- HIGH SPEED (AND ALSO LOW SPEED)

If you have too much low and high speed damping the car will skip across the bumps and have less grip, so by reducing the high speed damping you can reduce this effect. However because high speed damping is added to low speed damping you may also need to reduce the low speed damping as well.

SPRING RATES

Softer springs will absorb the bumps better on a bumpy track

