Setup Tips

ARB (Anti-Roll Bar)
As a car turns, the cornering forces cause the chassis to roll toward the outside of the corner. The amount of the chassis roll needs to be limited in order to keep the contact patch and the camber of the tyres in the optimal range. The primary function of the anti-roll bar is to adjust the understeer to oversteer balance of the car during cornering, which it accomplishes by fine-tuning the amount of load that transfers to the outside tyres at the front versus the rear. A stiffer anti-roll bar at one end of the car will increase the load on the outside tyre at that end. If both bars are made stiffer, the load transferred will remain the same, but overall chassis roll will be reduced, which may require a camber adjustment.

Some cars only have a front anti-roll bar, and on some cars, the rear bar can be disconnected. Some cars have no anti-roll bars at all, in which case any tuning of roll stiffness must be done with shock/spring adjustments.

Front Anti-Roll Bar:

Stiffer: Will increase overall car stability and shift the cars balance toward UNDERsteer, allowing the driver to be more aggressive with the steering. The compromise can be on bumps and/or braking. A stiffer front bar will reduce compliance, so when one tyre hits a bump the entire front axle will be affected through a loss of overall grip.

Softer: Will shift the cars balance towards OVERsteer (or less understeer). The front will improve in compliance, which improves performance in brake zones and over bumps.

Rear Anti-Roll Bar:

Stiffer: As you add throttle through the corner while the steering wheel is still turned, the rear ARB becomes very effective. Stiffening the bar supports the rear and shifts balance to less UNDERsteer at the corner exit. Again, the compromise is in compliance; a possible snap oversteer may result if the rear ARB is too stiff.

Softer: Allows more roll at the back of the car, which will be most evident at corner exit. If the bar is too soft, the car will exhibit gradual exit OVERsteer.