

Use the standard set up notes stated in the *Hyper 600cc Torsion Setup sheet*

You can use this guide even if you are only using a front or even if you are only using a rear traction bar. If only using the traction bar on one end, set the car up according to the standard setup sheet on the other end. For an explanation of how these traction bars work, go to the 3rd page of this document.

Setup:

- Use two .675 torsion bars on the front when using a front traction bar
- Use a .725 right rear bar and a .700 left rear in the rear if you are using a rear traction bar
- Same turns in each corner of the torsion stops, this should put you close to the same ride heights. You may need to raise the car slightly.
- Use a .550 Rear traction bar
- Use a .475 Front traction bar

'U' stop turns of the traction bar:

- Roll left screw front -1(bottom)
- Roll right screw front -5 (top)
- Roll left screw rear -4 (bottom)
- Roll right screw rear-6 (top)

These turns are assuming you have the roll bar mounted with the 'U' stop on the right side of the car. On both the rear and the front, the top screw will affect the roll right resistance and the bottom screw will affect the roll left resistance. If you are using an adjuster for one of the screws, use it to adjust the roll right resistance, as shown in the picture below.



Notes:

- When using a rear traction bar, I like the rear panhard bar mounted in the lower mount on the left rear bearing carrier you will need an 18" panhard bar if doing this.
- Make sure none of the shackles have any binds in them, this is critical and needs to be checked after each race
- The advantage of the traction bar is to allow easy adjustment of chassis balance. Be conscious of track conditions and adjust the traction bars accordingly, this should be one of the first and favorite adjustments to your car.
- Before you get in the car, check to see where the roll screws are set, other wise you will be guessing where you are when you get on the track.
- You must adjust the roll left screw before you get in the car, this one is not adjustable from the cockpit and can make big changes in how your car enters the turn.
- On rough tracks, it is better to use **LESS** traction bar, not more, the roll resistance needs to be soft to absorb the bumps. This is true in both the front and the rear, if the car is hopping, that is a sure sign of too much roll resistance, or too much left rear tie down.
- On a rough track, you may need to raise the car to avoid excessive bottoming out.



Traction Bar Setup Sheet

To make car tighter on entry

- Add turns to the roll left front screw
- Take turns out of the roll left rear screw

To make car tighter on exit

- Add turns to the roll right front screw, generally this one is adjustable from the cockpit
- Remove turns from the roll right rear screw, cockpit adjustment
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If the car is generally too loose:

- Unhook the rear traction bar or
- Use to a softer rear traction bar (.500 or .450)
- Use a stiffer front traction bar
- Use softer rear torsion bars, if you do this, raise the car back up to achieve the same or higher ride heights

If the car is generally too tight:

- Unhook the front traction bar
- Crank in on the rear 'U' stop screws
- Use a softer front traction bar (.400)
- Use a stiffer rear traction bar (.600, .625, .650)
- lower the rear to achieve lower ride heights





Traction Bar Setup Sheet

Traction bars or anti-roll/sway/stabilizer bars have been around for a long, long time. The technology is nothing new. Their components can be found in all types of racing, mostly in asphalt racing, due to their ability to **resist roll**. High g-forces generating high roll angles make this attribute a much desired effect.....for asphalt. Wait a minute, last time I checked my tires, they have grooves in them, to remove dirt.....from a **dirt** race track. So why would we run a traction bar on dirt?

To understand how a traction bar affects the handling of a car we need to back up to the beginning. If you do not want to know the theory, do not fear, just skip the next paragraph.

If you want to understand the full picture and you have not read my paper called [Rethink Dirt - Advanced Dirt Track Theory](#), I suggest you do that now, it will form the foundation of thought you will need to fully understand why a traction bar affects a car the way it does.

So what does a traction bar do? It restricts the roll of the car by increasing roll resistance without affecting the vertical or up and down movement of the suspension. Many have spent nights trying to figure out how a traction bar pushes down on the left rear as the car rolls to the right and it is because of this action that gives a traction bar its advantage. Not true at all, it does not transfer weight to the left rear when the car rolls right. You can prove this very simply by placing the car on a set of scales, roll the car right and clearly see the scales will surely read an increase of weight on the right side.

A very important concept here to understand is that when we increase the roll resistance in the rear, the car will be looser, if we increase roll resistance in the front the car will be tighter. Very simple. On our race cars on dirt, the advantage comes in by giving us an easy way to adjust our race car. Dirt has the characteristic of changing very drastically very quickly. If we had a quick way to adjust our car, we would have an advantage. Yes we have wings and shock adjusters, but they do not adjust roll resistance which is one of the best ways to adjust your race car. If we were to do things right, we would be changing out bars three times a night. Nobody wants to do this, so we don't and we end up favoring a slick track or a wet track depending on what torsion bars we have in the car.

The traction bar allows us to change our roll resistance simply by adjusting the roll screws on the 'U' stop. I have heard it said "backing the roll screws off will make the car bounce off the right rear when it hits the roll bar screw". This simply is not true. The roll resistance comes in gradually starting with 0 pounds of increase and goes to about 30 pounds after the first inch of travel depending on which bar you have in.

The beauty of our 'U' stop adjuster is you can adjust the roll left and the roll right resistance separately. If the 'U' stops are mounted on the right side of the car, the top screw will adjust the roll right and the bottom screw will adjust the roll left. The roll left screws will affect the car on corner entry or when the car is winged down, the roll right screws will affect the car on corner exit or when the car is rolled right.

My general use of the system is to start out a heat race with my roll right rear screw set at minus 2 turns, then as the track goes slick, I crank turns out of it, to as many as minus 7 turns. In the feature I might start out with minus 6 turns on the roll right rear screw then if the track takes rubber, I crank in on this screw, many times I crank it the whole way in until I can't turn the knob any more. This makes for a huge adjustment and can easily be a race winner.

One note on the front traction bar is the tendency we have to make the cars too tight. It is definitely a good deal on a wingless car, because you can tighten the car up a ton with this system. But on a winged car, I always have a tendency to make the car too tight, but I do have some drivers that really like the front bar even on their winged cars.

I actually now run the same bars in my car with the traction bars in as I do with them out. I use the traction bar then to add roll resistance to change the handling of my car. Here then are my adjustments with my winged car.