Set up in general.

If the car is tweaked. Turning more to one side than the other. Something is wrong. This is important to get correct before you do any setup changes.

- Verify that the motor leads don't touch the body or moving parts.
- Check that the H/ T-plate is tighten down
- Check the front wheel bearings. They should rotate equal.
- Check the differential settings. The diff should not be locked.
- Verify that t he tires are the same diameter on both sides, and that they are mounted correctly.
- Verify that the tires don't touch the body in any way.

If all of the above is ok, and the car still has tweak, it is most probably the H/ T-plate that is the problem. This is a usual problem, and can be corrected like this:

- Drive the car in circles on low throttle. Increase the speed until it starts to over or understeer. Do this to both sides. Notice what side that has oversteer, and what side that understeers.
- Turn the car upside down. If the car spins out to one side, you will want to shim up the opposite side on the motormount. Place the shim between the H/T- plate and the motormount. Use some thin paper or something of this sort. It has to be very thin. It is rare that you have to shim more than 0,1mm. If you shim to much the problem will change to the other side of the car.
- A cracked or flawed plate can also be the problem. Check this often.

More steering:

- Softer springs front. (To soft springs can make the car bottom out and it loses steering mid corner)
- Harder H/ T-plate
- Looser differential for more steering off throttle. Tighter differential for more steering on throttle.
- Toe out \ /
- Less offset front wheels.
- More weight in the front of the car.

Less steering:

- Softer H/ T-plate
- Harder springs front
- Toe in / \
- Wider offset front
- More weight rear

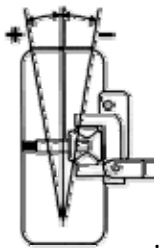
If the car spins out on throttle you can try the following:

- Loosen the differential
- Softer H/ T-plate. Not to soft. Make sure that the inner wheel don't lift from the ground
- Harder springs front
- More preload front. This is a very easy and effective tuning.

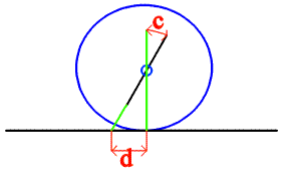
The differential:

- This is made to transfer the power to the ground.
- A clean well built diff will have a smooth feel when you turn the wheels. If it has a rough/ gritty feeling it is time for a rebuild. See article in the blog.
- The thrust bearing on the diff takes a lot of beating. This is the single most important bearing on the car, and wears quite fast. I typically change this when it is time to change the spur gear. Delrin gears wears less than plastic gears.
- You can use the diff as traction control if the grip is low. Loosen it so the pressure plates slips on the balls before the wheels slips from the surface.
- More steering on throttle. Tighten diff.
- More steering off throttle. Loosen diff.
- On some makes of differentials, it is important not to overtighten the wheelnut on the bearing side. This can lock the differential.
- To tight differential will decrease the speed in high speed corners.
- If you encounter problems with the car spinning out after a long straight etc off throttle, this can be adjusted with the diff as well. Loosen it so it slips on the diff instead of the wheels.

Wheel angles:



Camber: This is the angle of the wheels when you see the car from the front. . Use negative camber to make the tire surface touch more of the track surface when the car rolls. When you get the tires to wear flat, you have the correct camber. If they wear the tires cone shaped you should adjust.



Caster: This is the angle of the kingpin. If you see the car from the side . The kingpin here is angled. More caster increases turn-in. I side effect is that it makes the car track straighter when you are using toe out. This is because the weight of the car actually helps the car pull the wheels back to centre.

Toe in/ out: This is the angle the wheels are pointing when you see it from above. When the wheels are pointing like this to the front of the car / \, you have toe in. This makes the car more stable, and track straighter. When the wheels point like this to the front of the car \ /, you have toe out. This gives more turn in, but also make the car a little less stable and tracks less straight.