Basic Micro Sprint Setup

By: Mike Dicely

The Setup Philosophy: Baseline Chassis Setup

The baseline setup is defined as the zero point from which all changes are made and described from. It is basic and repeatable. It is documented, and changes can be made to it, with the purpose of recording the resulting gain (or loss) in performance. When the setup is changed, it should be in reference to this point.

Re-establish the baseline setup at the following times:

- before the first time on the track each season
- once every four races or more often if time allows
- after an accident capable of changing the setup

This baseline setup procedure can be checked it in about ten minutes, and modified it in about five to twenty minutes. Be patient, make notes, and fill out a setup sheet during the process. Once the baseline setup is in the chassis, use the suggested adjustments on page 8 to fine tune your handling.

To determine the measurements, block sizes, offsets, and angles needed for your chassis, you will need a setup sheet. The setup sheet will include the measurements you will need to complete the setup procedure. If you have a Hyper Chassis, we have very detailed settings and suggested adjustments that will work for your chassis. To obtain a set up sheet for your Hyper chassis, visit the chassis owner's section of hyperracing.com, and choose a setup based on track conditions, or call the shop. If you do not have a Hyper Chassis, consult your chassis manufacturer for a baseline setup. If this information is unavailable, use these specifications as a starting point, or visit hyperracing.com, and choose a generic setup.

Materials

- two framing squares, measuring approximately 12" x 12" at smallest to 18" at largest
- 8' or 25' tape measure
- 6" or 12" steel ruler
- set up blocks (found in the Hyper Racing Catalog) or wood blocks cut square and accurate within 1/32" to the lengths specified below. These blocks heights will vary depending on track conditions, chassis type, driver preferences, driver weight, and track layout.

  Reference your setup sheet to find the correct size blocks to use for your chassis.
- grease pencil or marker
- level stands or blocks: make your own with eight 2"x4"x20" pieces of wood, use four on each end of the car
- 1/4"x at least 6' flexible tape measure (stagger tape)
- Setup sheet from manufacturer or hyperracing.com

Preparation

The chassis must be in a race ready condition with all bolts tight and all components in place. make sure there are no bent rods, rod ends, shocks, axles, hubs, or torsion arms. With torsion cars make sure the bars spin freely in the bushings, you may need to use a reamer to remove material from the bushings to enable the bars to move freely with no resistance. Make sure all rods can move freely and don't bind up throughout the suspension movement. Choose a level, flat surface. Support the car by its lower frame rail on level stands or blocks as described in the materials section. The car should be level and high enough for the axles to fall and to fully extend the shocks. Place the 2-3/4" rear blocks between the rear axle and the lower frame rail on the left and right sides of the car. Place front blocks under the front axle. The blocks ensure that the axle is parallel to the frame. There should be no tension between the coil spring nuts and the coil spring or the torsion stop jacker bolt and the torsion tube. If there is, turn the adjusters up until the springs or stops are free. The driver should not be in the car. The blocks will remain in place until Step 9: Toe.

Procedure

1. Bearing Carrier Timing

With the chassis raised and the 2-3/4" bearing carrier timing setup blocks under the rear axle, place the framing square on the floor and slide it up to the axle along side the bearing carrier. Measure the distance horizontally from the center of the upper rod end to the square (distance x). Then, measure the distance from the center of the lower rod end to the square (distance y). If you have anew style bearing carrier with a bubble level in it, adjust the rod ends until the bubble is in the middle.

On the 4-link suspension (250cc Hyper), loosen the jam nuts on either of the control arms and turn the control arm until the specifications listed below are achieved. On the wishbone-type chassis (600cc Hyper), remove the bolts holding the wishbone to the bearing carrier to make adjustments. Tighten the jam nuts towards the radius rods. Move to the other bearing carrier and repeat the procedure.

For coil-over (Hyper), wishbone, and shackle-type torsion (Hyper) chassis distances x and y should be equal, making bearing carrier perfectly level. Also at this point, make the left side wish bone as short as possible for the Hyper chassis, this keeps the rear axle as far front as possible providing maximum forward bite. The right side wishbone will end up with the three rod ends extended about 1/2" to get the rear axle square.

For trailing arm torsion chassis (RTS, PMP, Stallard), the top of the bearing carrier should be tilted toward the front 3 degrees. Distance x will be about 5/16" greater than distance y. For trailing arm torsion chassis with the brake caliper bolted to the bearing carrier (not on a brake floater), x and y should be equal, to keep the bearing carrier from spinning over center.

2. Squaring the Rear Axle

The smaller or larger blocks can be used to square the rear axle. As with the bearing carrier timing, the object is to make the two sides equal by loosening the jam nuts and adjusting the control arms.


Squaring the Rear Axle

Before the rear axle is squared, set the rear axle placement side to side and rough align the rear sprocket to the front sprocket. On the Hyper chassis the torsion shackles should be close to the center of the bearing carrier, they definitely should not be bound up on the side plates of the bearing carrier.

Adjust the rear panhard bar to move the rear axle side to side to align the shackles. Then use axle spacers to get the two chain sprockets aligned. If you need to add or take away spacers, if using a chain guide bock you will need to change the spacers between the block and the bearing carrier.

Place a square against one side of the bottom frame rails and slide it up to the axle. Measure the distance from the square to a known square member on the frame. On most chassis, a square member is usually the torsion tube rack or rear tube. Hold the ruler level as the distance will change as the ruler is tilted. Another method is to put a square on the rack and measure to a surface on the rear axle. Make a note of this measurement (distance x). Move to the other side of the car and repeat the procedure. Be sure that if measuring against spacers on side you do the same on other side or subtract the difference. Make a note of this measurement (distance y). If distances x and y are different, adjust one side to match the other. Before adjusting the rods on a 4-link chassis, use a grease pencil to put a mark on top of both radius rods to help maintain bearing carrier timing as you square the rear axle.

On the 4-link chassis (Hyper 250cc), adjust by loosening the jam nuts on both the top and bottom control arms and turning them both exactly the same amount (1/2 to 1 turn each), to maintain proper bearing carrier timing. The marks you made on the control arms will stay aligned at all times. On the wish-bone chassis (Hyper 600cc), remove the bolt holding the wish-bone to the frame to make adjustments or use the turnbuckle if the car has one. If you choose to remove the rear rod end bolts, turn both top and bottom rod ends the same amount to keep the bearing carrier timing set. Continue adjusting until the measurements on the left and right are the same. Tighten the jam nuts so that they are tight against the radius rods.


Setting the Rear Torsion Stops

Always double check your measurements, because changing one side will also slightly change the other. The rear axle must be square within 1/32". The rear axle squareness will change if the axle has to be shifted to the right or left to line up the chain. Remember to repeat the squaring process if this is done.

3. Setting the Rear Torsion Stops or Springs

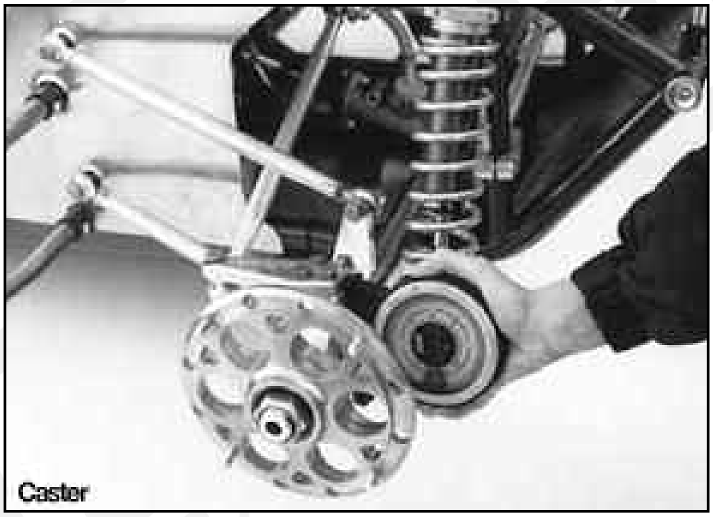
Place the smaller setup blocks between the rear axle and lower frame rail.

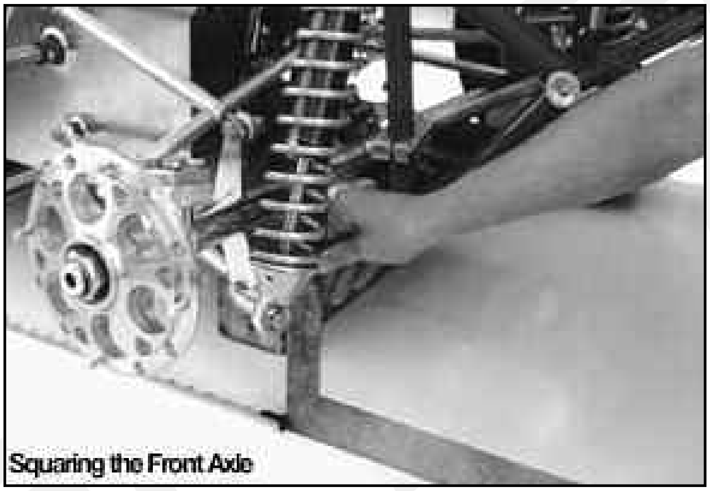
For a coil over chassis, with the rear blocks still in place, turn the coil adjusters until the adjusters just touch the springs. This is called the zero point. See the suggested setups to deter-mine how many turns to add or subtract from the zero point. A mark may help you to make an accurate adjustment.

For a torsion chassis, zero the rear torsion stops by tightening the jacker bolt on the stop with your fingers until it just touches the frame. See the suggested setups to determine how many.

4. Setting the Caster

Caster is the amount of angle that the top of the kingpins are tilted toward the rear. Caster is set using the right side control arms. The left side control arm will not be adjusted. With the front blocks between the front axle and the bottom frame rail on both sides of the chassis, turn the steering wheel to make the front wheels approximately straight. Place an angle finder or protractor on top of the steering arm or front of the spindle to measure the angle of the right front kingpin. Adjust the angle by turning the right front control arms until the angle equals 6 to 10 degrees.


Caster



Squaring the Front Axle

Less caster makes the chassis wander going down the straight-aways, but also make it easier to turn. More caster makes the chassis hold a straighter line, but also makes it harder to turn. Less than 6 degrees of caster is not recommended. Drivers using direct steering may prefer 12 degrees or more of caster to simulate a direct steering setup.

Once the specifications are achieved, make a reference mark on the top center of each control arm to help keep the caster accurate as you square the front axle and set the wheelbase. For both coil over and torsion, caster should be set at 8 degrees. Adjustments for personal preference can be made, in 2 degree increments until desired feel is achieved.

5. Squaring the Front Axle

Before the front axle is squared, locate the front axle laterally (side to side). With the blocks under the axle and the front hubs pointed straight ahead, measure directly up from the front axle form the frame to the face of the front hub on both sides of the car (right and left). Adjust the front panhard bar until the offset (difference between the right and the left measurement) equals 3/4" more on the right than the left. This means the front end is **offset** 3/4" to the right. This is the right place to start on the Hyper Chassis. We will need to check this measurement again when the car has tires on it and is set on the ground, but this will get us close for squaring the front end.

The front axle can be squared off of any known square frame member, on a Hyper you can use the frame member under the front axle. Sometimes it is hard to get measurement off the frame member, but if you are comfortable doing it this way that is fine. Set the front axle so it is parallel to the frame tube, this will make the front axle parallel to the ear axle.

Here is another method. Start on the right side of the chassis. Using the two framing squares, slide one up against the back of the rear axle or axle spacer and the other up against the front of the front axle. Both squares should be about the same distance from the centerline of the chassis. Measure along the ground from the face of one square to the other. Repeat the procedure on the left side. Loosen the jam nuts and turn the upper and lower front control arms until the measurements on both sides are equal. Be sure to maintain proper caster. Make a note of the end measurement (distance x) to use in step 6. On Hyper chassis, when you are in a hurry or at the track follow this procedure. With the front end up and blocks in place, take the front of the hood off, look straight down from the top of the car over the front axle and visually line up the front axle and the front cross member directly underneath it. Adjust the control arms until the two edges directly line up with each other. This actually can be a very accurate way to square the front axle if you have a good eye.

6. Setting the Wheelbase

Wheelbase is the distance from the centerline of the squared rear axle to the centerline of the squared front axle. With the front axle square, the wheelbase can be calculated. Add the diameter of the front axle to the diameter of the rear axle or rear axle spacer if your square was against one when you squared the front axle. Divide by 2. Subtract this from distance x determined in step 5. This number is the wheelbase. To adjust the wheelbase, turn the upper and lower front control arms equally on both sides. Tighten jam nuts. Generally, the wheel base can be set at 59-3/4" for 250cc and 60"-61-1/2" on the '98-06 Hyper Chassis 600cc and 62"-63" on the 2007 and up Hyper Chassis.

Starting in '07 the Hyper 600cc Chassis front axle was extended forward to increase rear weight bias for more forward bite. Note: As you move the rear axle and front axle forward, rear weight bias is increased, giving more forward bite.

7. Lead

When the left front is placed further back than the right front, it is called putting lead into the chassis. Putting lead into the setup takes weight off the left rear and puts it on the left front; this will loosen the car going in and somewhat coming off. Generally, the car can be made to handle correctly without resorting to adding lead to the car.

8. Setting the Front Torsion Stops or Springs

For coil over chassis, with the front blocks still in place, turn the coil adjusters until they just touch the springs. See the setup sheet to determine how many turns to add or subtract from the zero point.

9. Toe

Toe is the term used to describe the direction the front wheels point relative to each other.

For chassis with an axle mounted rack box or one long tie rod connecting the left front to the right front, the toe can be measured either on the ground as described below or with the wheel hub method, keeping the car on stands. To measure toe using the front wheel hubs, remove the front wheels and measure between the two hub faces toward the front and the two hub faces toward the rear.

Panhard Bar Height

For chassis with frame mounted rack boxes with two steering rods coming off the box (one to the left front and one to the right front), you must set the toe with the car on the ground. Put a mark on the center of each front tire and spin the tires, so the mark is at the forward most part of the chassis. Take the front and rear blocks out and set the chassis on the ground. Measure the distance between the two marks. Rotate the front tires 180 degrees and check the distance between the marks.

Adjust the toe by turning the steering tie rod or rods in or out accordingly. The distance in the back should be 1/16" smaller than the distance in the front. This is referred to 1/16" toe out. If the distance in the back were larger, it would be toe in. If you have an accurate eye you can set the toe without measuring. Set one tire straight then adjust the steering rods so the other tire is angled out just slightly. Coil over and torsion chassis should have 1/16" toe out. Small amounts of toe variation does not have any significant handling affects on the chassis. However stay away from toe in. Up to 1/2" of toe out can be used without any noticeable change. More toe adds more drag down the straight.

10. Panhard Bar Height

With the chassis on the ground or still on blocks (does not matter) measure from the top of the bottom frame rail to the centerline of the rod end on the right side of the chassis. Repeat the procedure in the rear of the car and raise or lower the panhard bar pinch clamp until the distance equals the measurement in the setup sheet.

When sliding the panhard bar up or down, it will cause the axle to shift right or left. Make sure you readjust the axle's offset when adjusting the panhard bar height. Our adjustable rear panhard bar assembly only moves the axle a small amount, however the rear axle's offset should be correct when the panhard bar is at 6"

When tightening the panhard bar pinch clamp, make sure the clamp is in line with the bar and not on an angle. Always tighten the bolt going through the rod end first, then the smaller bolt to avoid breaking the clamp.

Some chassis have a Jacob's ladder (w-link) to locate the rear axle. Jacob's ladder's are not generally adjustable. The roll center height of a Jacob's ladder is determined by the intersection of the centerlines of the top and bottom straps. The Jacob's ladder setup has a lower initial roll center than a panhard bar. This is because the Jacob's ladder setup has a roll center that rises as the chassis rolls and a panhard bar setup has a roll center that lowers as the chassis rolls. The offset of the rear axle with a jacobs ladder can be adjusted with axle spacers or a small amount by turning the rod end in or out.

11. Tire Offsets

The right way to measure tire offsets would be to measure from the center of gravity to the centerline of the tires. Of course, this would be way too time consuming to calculate and measure. A less accurate but much more practical way to measure tire offsets is from the distance of the frame to the centerline of the tire. The problem with doing this is that most chassis are different widths. This measurement needs to change with the width of the frame. A wider frame requires a shorter measurement. *Note to Hyper Chassis 600 owners: when viewing the offsets listed on the setup sheet, the adjustments for frame width has already been built into the settings.*

Rear Tire Offset

To set the right rear offset put the chassis on the ground with the springs set, measure the distance from the frame upright (bump the tape measure up against the side of the frame between the two rear bumper sockets) to the centerline of the right rear tire. Reference your setup sheet for the exact numbers.

Make adjustments from here based on track size, condition and driver preference. If the driver weighs more than 220 pounds, it will be necessary to add 1/2" to 3/4" to the setup sheet measurements. Move the right rear hub by changing spacers. Measure the distance from the frame upright on the left side of the chassis to the center of the left rear tire. Move the left rear hub until the tire side wall is 3/8"-1/4" away from the drive chain. Generally this tire is never moved. moving the left rear tire out will slightly loosen the car when pointed straight and tighten the car while turning left. With a wing on it can tighten the car during the entry phase while the car is leaning left.

Front Tire Offset

To set the right front offset put the chassis on the ground and with the front springs or bars set, turn the steering wheel to make the front wheels point approximately straight. Make a mark directly above the front axle on the top rail. Use the mark on the top rail to set the right front offset. To avoid inconsistencies throughout the season, use paint or a scribe to make a permanent mark. Measure the distance from this point on the side of the top rail to the center line of the right front tire. Check the offset of the left front the same way as the right. Try to achieve 3/4" offset to the right. For example, if the right front measured 13-5/8" and the left front measured 13" there is 5/8" offset to the right in the front axle. Generally, more offset to the right makes the car tighter.

12. Stagger

Stagger is the difference in circumference between the left and the right rear tires. Circumference is the distance around the outside of the tire.

Place a stand under the rear frame rails lifting both tires off the ground. Set the tire pressures. Measure the circumference of the left tire by placing the end of a stagger tape measure on the tire and spinning the tire 360 degrees.

Now measure the circumference of the right rear tire. Subtract the left from the right to get the stagger.

Check your setup sheet for the correct amount of stagger your chassis requires. Make adjustments from here based on track size, condition and driver preference. **Prestretch** new tires by inflating them to 20 psi and then letting them down to racing pressures. This will help "size" the new tire before you go on the track. Always check stagger before you race. Tires are always stretching and shrinking. Tires can be **stretched** by as much as 1 inch by inflating them to 35 -40 psi, let them sit for as long as you can allow. Tires can be **shrinked** by removing the valve stem, sitting on them to remove all the air, put the valve stem back in and let them sit. This process of growing and shrinking tires can become an art and is necessary to achieve the right stagger to get the chassis to handel correctly.

13. Tires

Correct tire **compound** is critical. Some are lucky enough to race at a track where all that is needed for a year of racing is a set of SD23's or D10's. Most racers have to put serious time and effort into selecting the proper tire sizes and compounds.

There is no formula to picking the right compound. Often it boils down to personal experience, and trial and error. Base the decision on reading of the track condition and driving style.

Consider the front tires in the equation. If the track is especially hard, and harder tires are needed in the rear, then harder tires will be needed on the right front as well. Generally use one step softer compound tire on the right front than the right rear.

Right Rear Tire Offset

Right Front Tire Offset

Remember, every track is different. Learn to read your track by looking at it up close, checking the moisture and hardness levels. Rate the track from hard and dry to soft and wet. Watch for **abrasiveness** on the track as a sure signal of a hard track. Look at tire wear of cars coming off the track.

Don't assume what worked for the heat races will be the best choice for the feature. After the race, feel the right rear and examine it for feathering. If feathers are longer than 1/8" the tire was too soft. Feathers on tires are bad because the car rides on the feathers eliminating all the other friction generating surface area.

A softer tire will generate more traction but will feather edges more quickly and can over heat more quickly. A hard tire will provide less traction unless the track is abrasive or hard.

Grinding and groving tires is important for those of us who can not afford to put new tires on for every race. Grinding tires is really important to remove the lip that forms on tires on the trailing edge, removes feathers, and to remove any glaze or hardness that forms on the outer most surface of the tires. The heat generated during the grinding process will also pull up the oil in the tire to the outer surface making it have more traction.

Grinding tires is more effective on harder tires than softer tires.

Groving tires is important if you are racing on a track where the tire is working into the surface (clay). It is the sharp edges that provide the traction on these surfaces. More sharp edges = more traction, think of a paddle in the water. As the track hardens and becomes abrasive, the edges of the tire become less important. On a hard track it is actually better to have less edges and more surface area. Radial grooves give side bite, grooves across the tire give forward bite.

Sipes are slits cut into the tire with a razor type blade. This type of tire preparation provides small, short lived edges. They can also help the tire heat up quicker by generating friction between the faces of the sipe, then as the tire heats up the sipes separate and allow the tire to run cooler. Spies are useful when running on a hard track and a hard tire is being used, the sipes will help the tire 'come in' quicker.

14. Shocks and Springs

When combined with the other facets of chassis tuning, changing shock rates can assist in reaching a new level in handling perfection. A driver who is consistent and sensitive to changes can achieve fine tuning right away with shocks. New drivers should spend a test day experimenting with shock rates to get a good feel for how they affect the chassis. Either way, a shock dyno is a partner in shock tuning.

"Dampening" or "damping" is a term used in shock technology meaning, to check, depress, reduce or lessen." These terms can be used interchangeably. Torsion Bars achieve suspension properties through twisting of one end of the bar while the other end is held firm. Torsion Bars are simply another form of springs and will be referred to as "springs". "Compression" is when the shock gets shorter; "rebound" is when the shock gets longer. For example, when the front bumper is stepped on, the shocks are compressed, and when the bumper is released, the shocks rebound.

tire compounds

	American Racer	Hoosier
Soft	SD23	D10
	SD28	**
	SD33	D12
	SD35	**
	SD38	D15
	SD44	D20
	SD48	D25
	MD50	D35
	MD57	**
Hard	HD65	**

*** no equivalent*

The suspension system controls movements of the chassis when the wheels hit bumps or during natural weight transfer when the chassis is accelerating, decelerating, or negotiating a turn. Shocks and springs work together to control how the chassis moves. The springs absorb the bumps and control body roll. Shocks control the speed of extension and compression of the spring during weight transfer. A stiffer shock will slow down a spring's action; a softer shock will allow the spring to act faster.

The primary purpose of the shocks and springs is to make the chassis stable and predictable while driving over bumps or ruts. If the shock/spring combination is too stiff, the tire can be pulled off the track surface for a period of time, eliminating that tire's traction ability. If the shock/spring combination is too soft, the chassis can bottom out on the track, again hindering traction ability. This loss of traction in both scenarios can cause the chassis to skate and make the chassis unpredictable and difficult to drive. Also, it can make it impossible for the driver to tell if the chassis is tight or loose.

The secondary purpose of shocks and springs is to control where the weight transfers, for a detailed explanation of this, see the document called "***My Big T.O.E. on Dirt***" available on the hyper owners section of the website.

A shock dampens the spring by displacing hydraulic fluid from one end of the shock to the other through a small hole or valve. On rebuildable shocks, valving can be changed to make the shock stiffer or softer. The valves controlling compression or rebound can be changed independently. This is called a split valve shock.

Check your setup sheet for recommended starting points for shocks torsion bar sizes and spring rates. Realize that if you do not have a Hyper chassis your chassis may have different arm lengths than what Hypers use. Arm lengths have a huge affect on spring rate. Use the *torsion bar spring rate formula* found at hyperracing.com to find the size bars needed to achieve the same rates as suggested.

15. Wing

The top wing has a very large effect on the chassis. Start with the wing mounted in the hole closest to the front. Slide the wing to the front most position in the sliders. Wings weighing more than 18 pounds are not recommended because they will change the center of gravity and make the chassis very inconsistent. Lay a protractor on the front part of the center section and slide the rear wing upright until the protractor reads 12-28 degrees.

16. Tire Pressures

As a general rule, only vary tire pressures (2-8 pounds) with track conditions. More pressure will be used on a tacky track. Tire pressures control the spring rate of a tire. The tire spring rates work exactly like the spring rates on the chassis. More tire pressure or stiffer spring rates on the right side of the chassis will make it looser. More tire pressure or stiffer spring rates on the left side of the chassis will make it tighter. A common misconception is that taking tire pressure out of the left rear will tighten the chassis, when actually the opposite is true. Not only does more left rear tire pressure make the left rear spring rate stiffer but it also adds static weight to the left rear because it raises the car on that corner and takes away stagger because adding tire pressure will always make the tire larger in circumference.

17. Weight Distribution and Scaling the Chassis

Scaling the chassis is optional but can be useful. Always scale the chassis with the driver sitting in it. Use the same spot on the floor each time you scale the chassis for consistency. On a torsion car, unhook the shocks to eliminate any residual forces. Also, keep the same amount of fuel in the tank and set the tire pressures to race ready levels.

Digital scales are the most accurate. Shipping scales that can be purchased at an office supply store are reasonably accurate. Bathroom scales are generally inconsistent but with a piece of wood on top to help distribute the weight across the scale, they can be an inexpensive way to start.

Rear Weight Bias or Percentage

Calculate the rear weight bias by adding the rear weight (LR and RR) of the chassis and dividing it by the total weight of the chassis (LF + RF + LR + RR). The more rear weight bias, the tighter the chassis will be going in and coming out of a turn.

For the 4-link and wishbone chassis, 62%-65% works best. Heavier drivers will add more. If upon calculating your weight bias, you were not in the target zone, you can make adjustments to change it accordingly. Move the seat forward will reduce the rear weight bias, to the rear will increase it. Moving the rear axle back, by making the rear control arms longer and the front control arms shorter will reduce rear weight bias. Conversely, moving the rear axle forward will increase it.

Right Rear Weight vs. Left Rear Weight

Track conditions, size and shape as well as wing size and shape will have an affect on what static weights you will want on the left rear. The bigger and higher the wing the more right rear weight you will need to get the best balance. Small tracks like more left rear weight, big track more right rear weight. For a detailed explanation of this, see the document called "***My Big T.O.E. on Dirt***" available on the Hyper owners section of the website.

Crossbite

Calculate the crossbite by adding the RF and LR and dividing by the total weight of the chassis. Look for about 42%-49% crossbite. Adding turns to the right front-left rear, and taking turns out of the left front-right rear is a how to increase crossbite. Crossbite decreases when the right rear is moved in to tighten the chassis. Therefore, this number cannot be looked at without taking all other factors into consideration. With the heavy tie down shocks we now run and the big wing side panels, the left rear is usually overloaded, decreasing overall traction. Generally on the Hyper Chassis with the recommended shocks, try to hit 0-15 pounds heavier on the right rear than the left rear.

For a detailed explanation of this, see the document called "***My Big T.O.E. on Dirt***" available on the Hyper owners section of the website.

Left Side Weight Bias or Percentage

Add the LF and LR and divide by the total weight of the chassis to calculate the left side weight bias. This is affected mostly by moving the right side wheels in or out and by moving the left side tires in or out.

Scaling as a Diagnostic Tool

Scaling the chassis can be useful in detecting binds in the chassis caused by bent or bad rod ends, bent shocks, bent axles, bent frames, or axles out of square. First scale the new chassis after the setup procedure is complete and record all the numbers and the exact setup you used. Then, after each race, put the chassis back to that setup and rescale the chassis and compare the numbers. If they are more than 4 pounds off (per corner), then something has changed.

Suggested Adjustments

Reference the setup sheet for suggested adjustments.