

Hyper Chassis Wingless Lightning Sprint Setup Guide

Suggested Starting Setup on a Normal Condition 1/6 or 1/8 Mile Track, Winged

	Left Front	Right Front	Left Rear	Right Rear
Torsion Bar /Coil Size	150	165	.800	.775
Block Size	2-1/2"	2-1/2"	3"	3-1/4" on small O.D. part of axle
# of Turns Off Block	0	+4	+2	0
Monotube ARS Shocks	327 2/1	3271/4	3274/2	3274.5/4
Monotube Adjustable	327 6.5-3/2.5	337 1/5-1	3278-4/3 WXS B/S	3276-3/3 WXS B/S
Monotube Pressure	20 psi	20 psi	15 psi	15 psi
Wheelbase	71-5/8"			
Center Line of Tire Offset		2-3/4" to the right	8-1/2" from torsion arm	11"-14" Start at 12" from arm
Tire Pressure	10 psi	10 psi	4-6 psi	5-8 psi
Tires	68.0/7-13	68.0/7-13	74 or 76.0/10.0-13	82.0/12.0-13
Wheels	13x7 (3" outer)	13x7 (4" outer)	13x10 (7" outer)	10x12 (9" outer)
Stagger	4"-10" (5" Start)	* Adjustable shock turns are turns out from full stiff (full clockwise) If LR is bottoming out on entry, stiffen the LR compression and use linear valving.		
Jacob's Ladder	Start right side hole			
Front Panhard	4"			
Rear Bearing Carrier Timing	4 degrees forward			
Right Rear Control Arm	top hole			
Left Rear Control Arm	bottom hole			

Setup Notes:

- Reduce tie down in left front shock for wingless to tighten coming off.
- Remember that on coil overs, you need to add 4 turns to make the same change as adding 1 turn on a torsion bar.
- Make sure your car is correct with the following: axles square, tire offsets correct, chain aligned, bearing carriers timed, caster set to 10 degrees, rear arms-not bound against the side of the bearing carrier, toe set to 0, chain tensioner blocks set correct, stagger checked, brake floater does not hit anything, front wheels are on correctly (LF is 3" outer with 4" inner, RF is 4" outer with 3" inner).
- On the recommended adjustable shocks: LR-start full stiff (clockwise, increase) minus 4 turns (not clicks). RR-full stiff (with the rebound adjustable RR, full soft on compression adjustable), RF-minus 1-1/2 turns, LF-minus 4 turns.
- For a driver heavier than 220 pounds use stiffer bars in the rear and keep the RR wheel out further.
- For the Jacobs ladder, start in the **left** side hole. On wet tracks, if you are tight, move it to the right side hole. Make sure you lengthen the rod end to keep the rear axle in the same side to side position. This is not a huge change, but it helps.
- Tire preparation, grinding, grooving, and siping are recommended to get the most traction.
- Add LR-RF weight to tighten up in the middle and exit on small tracks. This does not affect entry much on smaller tracks.
- Shock pressure changes are not needed for optimal handling. Treat monotube shock pressures like extra turns in that corner. The more pressure you run in a corner, the more weight. A 30psi change is similar to adding a turn. Shock pressure is in no way like running a stiffer bar. It adds weight on that corner but does not change spring rate.

To Make Car Tighter:

- Add more rebound or less compression to RR shock.
- Lower rear tire pressures.
- To make car tighter coming out (forward bite) raise ride heights front and rear and take tilt out of the car. This is generally done on a smaller track. Go 1 turn on the right side and 2 turns on the left side. Yes, raising the rear will provide more forward drive.
- Go to less stagger, as little as 4”.
- Go to stiffer coils in the front. Too stiff on the front will make the car inconsistent. It will push when the front hits a slight bump.
- Move the RR in to 11”.
- Raise the front panhard bar
- Soften up the RR bar.

To Make Car Looser:

- Add more stagger.
- Stiffen up RR shock compression, increase rebound in LR shock.
- Decrease RF shock compression.
- Increase RR tire pressure..
- If the car is rolling up on RR too much, move RR out to 14” or as far out as it will go.
- Make sure Jacobs’s ladder is in the right side hole.
- To make car looser coming out lower ride heights. Take 2 to 8 turns out of each front side and one to three turns out of each rear, add tilt.
- Stiffen up right rear bars.
- Soften up coils in the front.
- Further your education! Read all of our setup manuals, assembly manuals, and set up theory on our website at www.hyperracing.com