

***SLACK* PERFORMANCE KARTS**

SET UP GUIDE

Thank you for purchasing a 2009 Slack Reactor Chassis. Slack Performance Karts strives to provide you with the very best chassis and components on the market today.

This setup information is only a reference and starting point for your new racing chassis. You must remember that all tracks and driving styles will take a variation in setups.

Good Luck!

Manufactured by Performance Manufacturing Corporation

Out of the Box

Whether the kart was picked up at a Dealer, Slack Headquarters, or the Big Brown Truck, finishing assembly will need to be completed. Instructions below will completely lead you through assembling of the kart and putting items in appropriate settings.

Front Bumper

The front bumper is attached to the kart with two slip fit tubes and two bolts which are attached to the chassis through rubber bushings. The bolts should just be snug and barely compress the rubber washer.

Nerf Bars

The nerf bars should fit loosely in chassis and have vertical movement when body is mounted. They are not drilled when leaving the factory as to accommodate all the variety of bodies on the market. Do not over tighten mounting bolts.

Steering Assembly

If your kart was shipped in a box, the steering post was disconnected from the chassis to allow the steering shaft to be laid flat. When putting this back together, it is critical to make sure everything is not bound up. The holes are enlarged to allow some twisting movement of the steering post.

Now is the time to go over all of the front end adjustments to make sure they are correct and all the hardware is tight. First, align the steering shaft pitman arm with the toe lock top plate. Next, align the caster brackets parallel with the caster plates welded to the chassis. The lines in the blocks will align with the lines in the plates. The RF lead adjustment should be placed in the front hole.

The front hubs are attached to the spindles and kept in place by spacers. On the LF and RF, a ¼” spacer should placed behind each hub. This will place the wheels close to the spindle arms without hitting them. This is the recommended setting for all applications.

Rear Axle Assembly

If your kart was shipped in a box, the axle assembly was removed. If the kart was picked up, now is the time to verify any settings. The rear cassettes have three ride height settings:

1. Top Holes – This setting is recommended for indoor racing on cola syrup or brake fluid and rosin surfaces.
2. Middle Holes – This setting is recommended for pavement racing.
3. Bottom Holes – This setting is recommended for all dirt applications.

Axle collars are included with the kart. This prevents the axle from sliding under load. Our recommended placement is one on each side of the LR bearing and one on the outside of the RR bearing. Do not tighten the set screws in the bearings. These can be removed and are not needed.

A gear guard has been included for the sprocket hub. When looking from the rear of the kart, the flat pieces are attached to the hub on the right. The gear is placed on the left side with the guards with spacers attached and are placed over top of the studs.

Check the placement of the brake rotor in comparison to the caliper. It should be placed directly in the middle of the space between the pads. If the rotor needs to be removed, slightly loosening the nuts holding the rotor to the hub will allow it to be moved easier.

Rear Bumper

The rear bumper is held into the frame via rubber bushings. By tightening down on the bumper nuts, more pressure is placed between the frame and rubber bushings. The torque applied to these nuts can affect handling. We recommend the inner nut be tightened down by hand with a large wrench. Turn the nut until it is as tight as possible. Once it is tight, hold the large nut in place and tighten the jam nut onto it. It is a good idea to check this every few races as it can loosen up.

Motor Mount

A motor mount is included in the purchase of your kart chassis. Assembly is required and the layout depends on the type of track raced. First, screw the low top socket head bolts into the middle holes of the top plate. Now place the top plate on the motor mount base. When racing dirt, we recommend the longer side to be placed toward the taller part of the mount. This will raise the motor for an increased VCG and clear the RR tire easier. Slide the top plate to the kart's left at least .25" and bolt into place. For pavement and concrete indoors, place the longer side of the top plate towards the lower part of the base to get the motor lower. Slide the top plate all the way to the left and tighten the nuts. The motor can be placed anywhere from .25" left of center to all the way left. Do not place the top plate bolts in the outside holes to slide the motor over further. The top plate will twist and cause chain misalignment.

Seat

Seat placement is extremely important in the Reactor!!! This cannot be stressed enough. A seat that is bound up will cause the kart to be inconsistent and unresponsive. A seat that is not mounted in the correct position will cause undesired handling. The Reactor does not like the seat placed the same way as our previous karts.

For Junior classes, mount the front of the seat centered up with the steering post. Align the center of the back of the seat with the brake rotor. The bottom of the seat should be slightly below the top of the frame rails. The seat height for Junior classes is mostly

determined by size and comfort. This measurement is not as critical as the Senior classes. The seat can be moved to the left or right slightly to get the desired percentages.

For Senior classes, the front of the seat should be centered up with the steering post. The bottom of the seat should be even with the bottom of the frame rails. Seat can be moved slightly left or right to help with percentages or so the bottom of the seat does not hit the frame rails. When placing the back of the seat, place the right side seat strut 3.25" to 3.75" off the inner motor mount rail. This distance is the gap between the strut bottom and motor mount rail. This distance is critical to the performance of the chassis..

Seat height is very critical to the performance of this chassis. The height it is placed at affects stiffness as well as VCG. A low or high VCG can be worked around with lead placement and tweaking the numbers or tires. However, chassis stiffness is not so easily changed. This is why we recommend the following settings.

- Dirt – 8.5" to 9" off axle
- Pavement – 8" to 8.5" off axle
- Indoors – As low as they will let you.

Rubber washers have been included to mount the seat in the kart. The seat should be tightened down to the struts so they are just snug and barely compress the washer. Seat struts need to be drilled and pinned to be legal.

If you do not feel comfortable mounting the seat, services are offered by many of our dealers and directly from Slack Performance.

On the Scales

Alignment

When the kart is new, any time a large front end adjustment has been made, or if you are just checking numbers, it is a good idea to align the kart. The new laser toe systems are convenient to use but are not necessary. A 4 foot level or piece of string with a tape measure will do a good job at aligning the front wheels with the back.

Our recommended settings for toe are 0" on the RF and 1/16" to 1/8" toe out on the LF.

Baseline set-ups for DIRT are as follows:

All Classes:

1.25" to 1.5" Front Stagger
.75" to 1.5" Rear Stagger
RR 1/8" to 3/16" off frame rail
39" to 39.25" Rear Track
Stock Caster (12° RF and 9° LF)

Junior classes:

46-47 Nose
55 to 57 Left
55 to 59 Cross
-1.75° RF to -2.75° RF Camber
0° to +1° LF Camber

Senior:

44-46 Nose
56.5-58.5 Left
58-64 Cross
-1.75° RF to -2.75° RF Camber
0° to +.5° LF Camber

Baseline setups for Pavement are as follows:

All Classes:

1.375" to 1.75" Front Stagger
.75" to 1.5" Rear Stagger
RR 1/8" to 3/16" off frame rail
39" to 39.25" Rear Track
8° RF Caster (rolled forward 2 lines)
6° LF Caster (rolled forward 1.5 lines)
5° KPI LF Spindle Setup
0.120" Wall Axle

Junior:

46-47 Nose
55 to 57 Left
56 to 60 Cross
-2.5° RF to -4° RF Camber
0° to +1° LF Camber

Senior:

45-46 Nose
57-59 Left
57-62 Cross
-2.5° RF to -4° RF Camber
0° to +1° LF Camber

Adjustments

Lighter and heavier drivers all require slightly different setups. Track size and amount of grip also determine the setup needed to win. The above numbers should encompass most drivers and track conditions. If you are finding yourself wanting to stray from these numbers, tires may be your issue.

Here are some things to think about when setting up your kart:

- Grip is the name of the game. Heavier drivers create more grip. Some tracks have more grip.
- Not enough grip will usually make the kart push or be “skatey”.
- Ways to increase grip:
 - Softer tires
 - Lower air
 - Less left side
 - Less cross
 - Less RF camber
 - More LF camber
 - More nose weight
- A kart with too much grip will either be loose or stick the right side tires hard into the track.
- Ways to decrease grip are opposite of above.

In general, a heavier driver or a track with more grip will need to have less grip built into the kart’s setup.

Example setup for 150 lb driver:

- 46 Nose
- 57 Left
- 58 Cross

Example setup for 200 lb driver

- 45 Nose
- 58 Left
- 62 Cross

Quick tuning guide

Pushing on entrance:

More rear stagger
Less front stagger
More nose weight
More left front camber
More right front camber
Move left rear out
Less cross (over loaded right front)
Add cross (under loaded right front)

Loose on entrance:

Less rear stagger
More front stagger
Less nose weight
Less left front camber
Less right front camber
Move left rear in
More cross (under loaded right front)
Less cross (over loaded right front)

Pushing on exit

More rear stagger
Move left rear out
More cross (over loaded right rear)
Less cross (over loaded left rear)
Less right front camber
Less left front camber (overloaded right rear)
Harder left rear tire

Loose on exit

Less rear stagger
Move left rear in
More cross (under loaded left rear)
Less cross (over loaded left rear)
More left side weight
Softer left rear
More right front camber