

SLACK PERFORMANCE KARTS

SET UP GUIDE

Thank you for purchasing a Slack Axiom Chassis. Performance Mfg. strives to provide you with the very best chassis and components on the market today. Your satisfaction and success is very important to us. Please do not hesitate to contact us with any questions at (716)735-3500.

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.

We thank you again and good luck on a successful racing season!

Slack Performance Karts are 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 be tightened into the lock nut but loose as to 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 the 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. Tighten up the lower upright bolt first and align the upper toe lock bracket, then tighten the $\frac{3}{4}$ nut.

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 caster block with the welded caster plates to the desired caster setting. Make sure the RF lead adjustment is placed in the front hole.

The front hubs are attached to the spindles and kept in place by spacers. Some wheel manufactures have slightly different back spacing that requires different spacing. We recommend placing 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 setting. The rear cassettes have two ride height settings:

1. Bottom Holes – This setting is recommended for cola syrup, pavement and high bite smooth dirt tracks.

2. Top Holes – This setting is recommended for all dirt applications.

Axle collars are included with the kart. This prevents the axle from sliding under load. We recommended placement of one collar on each side of the Left Rear bearing and Right Rear bearing. Do not tighten the set screws in the bearings. These can be removed and are not needed.

If 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 brake 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

If 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. Slide the top plate to the kart's left at least .25" and bolt into place. Place the longer side of the top plate toward the lower part of the base to get the motor lower. The motor can be placed anywhere from 0.25" 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 any go kart. This is no different in the Axiom!!! 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.

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 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.

For Senior classes, the front of the seat should be slightly left of the steering upright post. (Viewed from behind kart) 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. Place the centerline of the back of seat (Viewed from behind kart) centered or slightly left of brake rotor.

Seat height is very critical to the performance of chassis. The height of seat affects weight transfer as well as VCG. A low or high VCG can be compensated with lead placement and by changing set up percentages. This is why we recommend the following settings.

- 1 Dirt – 8.5” to 9” off axle
- 2 Pavement – 8” to 8.5” off axle
- 3 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 barley compresses the washer. Seat struts need to 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 and easily provide the desired results. If you do not have one of these toe systems, either Performance Manufacturing or one of our dealers will be happy to assist you.

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 to 47 Nose
54 to 56 Left
55 to 59 Cross
-1.75° RF to -2.75° RF Camber
0° to +1° LF Camber

Senior classes:

46 to 47 Nose
56.5 to 59 Left
58 to 64 Cross
-1.75° RF to -2.75° RF Camber
0° LF 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 to 47 Nose
56 to 57 Left
56 to 60 Cross
-2.5° RF to -4° RF Camber
0° to +1° LF Camber

Senior:

45 to 46 Nose

58 to 61 Left

60 to 68 Cross

-3° RF to -4.5° RF Camber

0° to +1° LF Camber

Adjustments

Lighter and heavier drivers all require slightly different setups. Track size, amount of grip and also tires can determine the setup needed to win. The above numbers are a baseline to start with. We also recommend that you contact your local dealer or slack performance for more detailed set up.

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

- Grip is the name of the game. Heavier drivers create more weight transfer than lighter drivers. Some tracks have more grip. Not enough grip will usually make the kart push or be “skatey”.

- Ways to increase grip:
 - 1 Softer tires
 - 2 Lower air
 - 3 Less RF camber
 - 4 More nose weight
 - 5 Less cross
 - 6 Less left side
 - 7 More LF camber

- 8 A kart with too much grip will usually be slow and over stick the right side tires hard into the track

- 9 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:

- 1 47 Nose
- 2 58 Left
- 3 62 Cross

Example setup for 200 lb driver:

- 1 46 Nose
- 2 59 Left
- 3 64 Cross

Quick tuning guide

Pushing on entrance:

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

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

Harder left rear tire

Loose on exit:

Less rear stagger

Move left rear in

More cross (overloaded right rear)

Less cross (over loaded left rear)

More left side weight

Softer left rear

More right front camber

NOTES: