

SLOT CAR TUNING TIPS

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Take the car apart and start with the guide. Replace the braid. Make sure the braid is flat and smooth. The braid should make good contact with the track but it should not push the car up.



Take the front tire off the rim and inspect for smoothness. There should be no flashing or any rough spots that would cause tire to be out of round. If there are any rough spots, sand down the rim by putting the rims on an axle and use a dremmel at low speed. Make sure the sand paper is flat.

Next, put the tire on the rim and make sure it is smooth. If not, lightly sand down the tire. The front tires being smooth are very important to a non-magnet car. In the turns, the car leans on the front tire. If it is out of round, you will have a vibration causing poor handling.

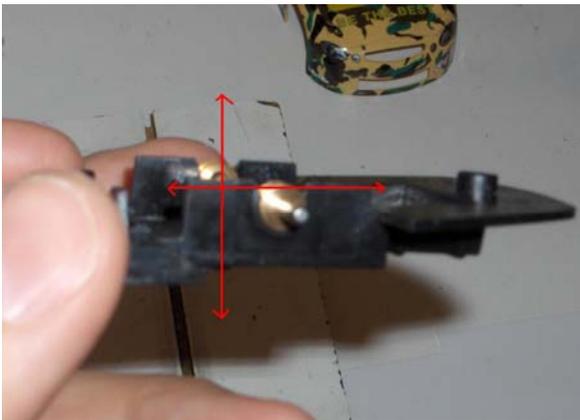


Next, move to the rear bushings. Use brass bushing as these have the best fit to the axle and the smallest amount of play. I recommend drilling part of the bushing out.

Use a drill larger than 3/32 but do not drill all of the way through the bushing. This helps to minimize any axle binding.

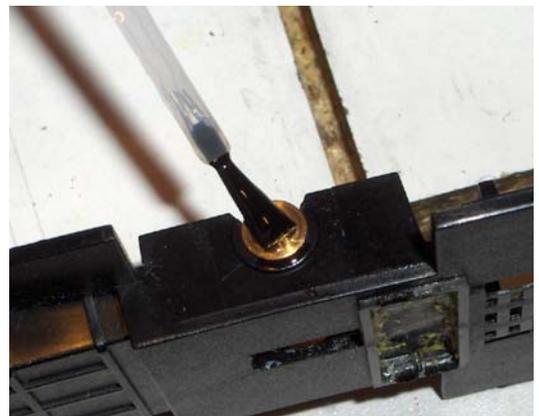


Glue your bushings to the chassis. I use super glue. Put some on the bottom of the bushing. If you ever have to remove the bushings, you can cut the glue with a razor knife.



Next, check for play in the rear bushings. Insert the axle you are going to use and move the axle up and down, forward and backward. If you have any play, you can eliminate it by the following steps:

- 1) Put a very small amount of super glue in the bushing.
- 2) Take an axle with one wheel installed on it and lightly oil the axle.
- 3) Insert the axle through both bushings and quickly spin the axle.





The axle should feel very tight spinning but you should be able to turn the axle. If the axle binds, the super glue can be removed by scraping it with a hobby knife. Start the process over again until you get it right. Perform this for both bushings.

For the next step, you will need some type of abrasive. I use polishing compound for a car but tooth past will also work.

- 1) Cover the axle with the abrasive and put some in the bushings.
- 2) Chuck the axle in the dremmel and push through both bushings. You will feel some resistance as you put the axle through the bushings.
- 3) SLOWLY start to spin the axle. Be careful not to spin it too fast as it will break the bearing loose from the chassis.
- 4) Work the axle in and out and slowly increase the dremmel speed. Slowly work up to full speed making sure to go in and out with the axle.
- 5) Remove the axle and clean the abrasive from the chassis, bushings and axle.
- 6) Oil the axle and slide into the bushings.
- 7) Check for play again.

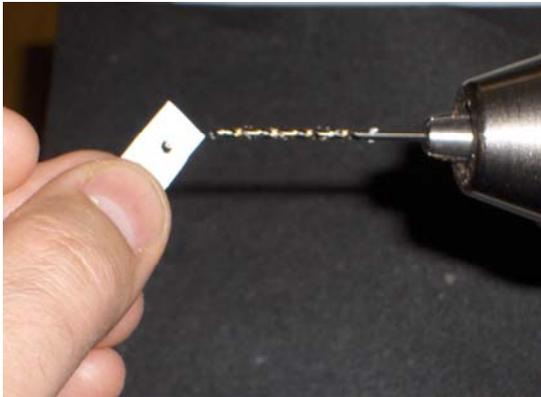
You should find no play in your axle but it will slide easily through the bushings!





Your next step is to install your rear tires and gear. I highly recommend using Slot It rims as they are true and you have a wide selection of tires and sizes to use. I also recommend using only Slot It S1 or PPR tires as they seem to have the most grip for both wood and plastic tracks. Please note if you are using a sidewinder, you should purchase the taller rims to make sure you have enough clearance for the gear.

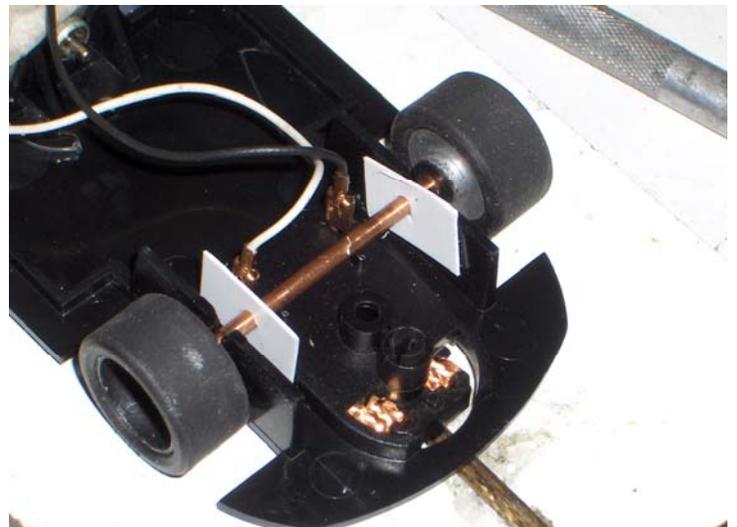
Your front tires play a very important role in the handling of your car. Install your front tires and rims on your car and check to see if there is any up and down play. If there is, take steps to support the front axle so there is no movement. Here is an example:

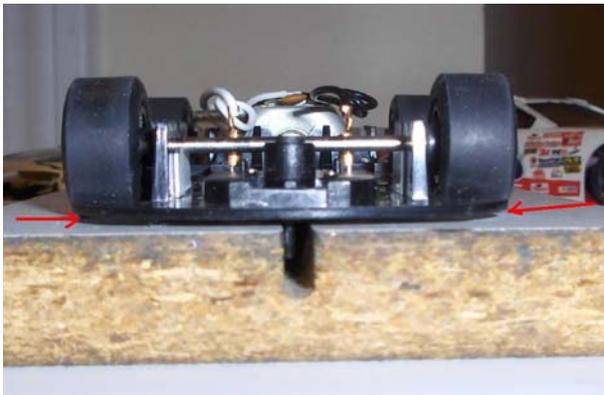


- 1) Using styrene, drill 3/32 holes to act as bushings.
- 2) Put the axle through the styrene and install the rims and tires on the axle. Install the front axle assembly onto the chassis.
- 3) Set the chassis on a test block with your guide and new braid installed

- 4) Push the wheels down so they are touching the test block.
- 5) Superglue the new styrene bushings in place.
- 6) Make sure the front tires are touching the block the chassis appears level.
- 7) Lube the axle and spin the tires to ensure the axle is not glued to the rim

You may find that a car which comes equipped with some type of bushing may still have play. This setup can be used with almost any type of front end.





Using a test block, look closely at the front tires. The front tires should be clearly on the track with NO space between the tire and the block. If there is any space, make sure to check that your braid is smooth.

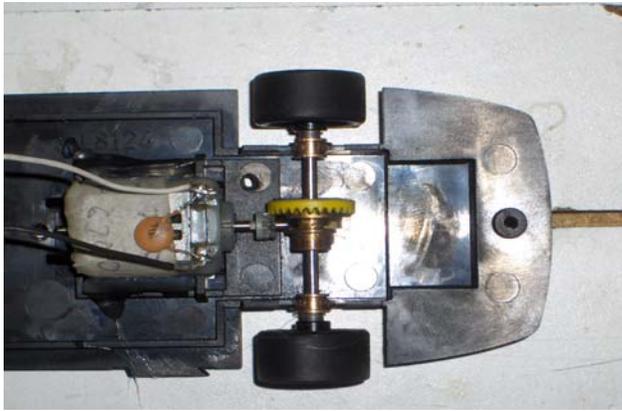
This next check is important and is the key to the previous steps you have taken. On a test block, push down on the front corner of your car. Look at the opposite rear tire. The tire should not come off the track. The key here is the front tires are clearly used as outriggers to keep the rear planted on the track when in a corner. Though this setup may reduce your top speed as the front tires may add drag, the handling gains should offset your loss of top speed.



Please note that this setup is good in a low grip situation which is most plastic or non-glued wood tracks.



Next, hot glue your motor in place.



Put washers on your axle to push the wheels farther out so you are close to the maximum car width allowed by the club. The wheels should be set on the axle so there is very little side-to-side play. You want to be able to feel a small click when you try to move them side to side so you can be assured that they are not binding. Next, set your gear so the motor shaft is

in the center of the gear and does not rub on the gear when you push side to side. You want the wheels to keep the gear aligned with the motor.

Take the chassis and remove any exhaust or other items that may be protruding from the chassis.

If rules allow, remove the interior and install a lightweight version. I use vacuum formed or paper interiors.

Put a small amount of lock-tite or super glue in the body post hole. This will keep the body screw from backing out.

Mount your body and make sure the wheels clear all wheel wells.

Back your body screws off $\frac{1}{2}$ turn and make sure your body floats on the chassis. If you have two body posts, make sure the wheels do not rub on the chassis

With the body mounted, put the car back on the test block. Follow the procedure where you push down on the front corner of the car looking at the opposite rear tire. It should not come off the block. If it does, check to make sure you body is mounted loosely and is not twisting the chassis.

You have successfully set up your car so when it leans into the corner, both rear wheels will stay flat to the track providing maximum traction in the corner.

