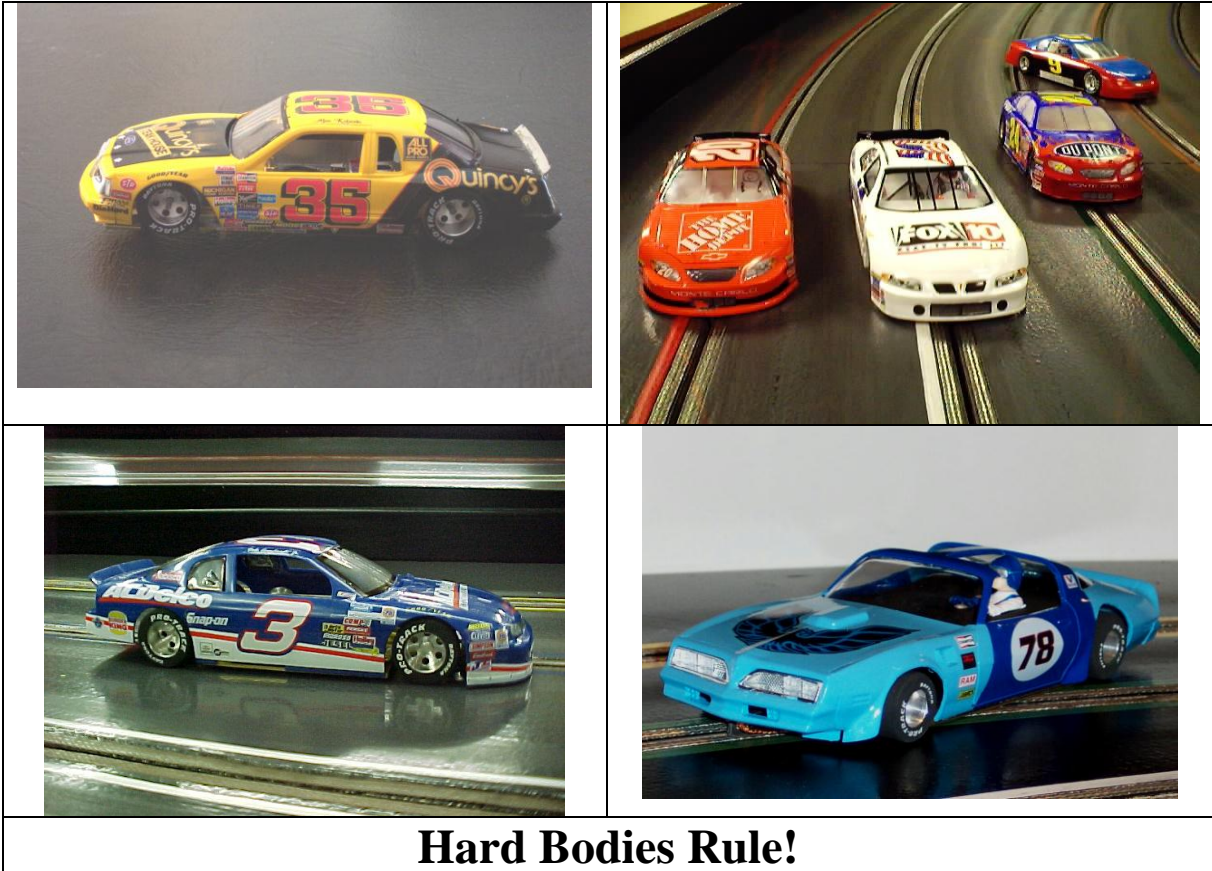


ProTrack Chassis Simple Modifications, Big Time Results!



Hard Bodies Rule!

Would you like to improve the lap times of your ProTrack hard body by about 2 seconds and improve drivability dramatically? It can be done with a few simple modifications!! Read on for details.

Our Prescott, Arizona slot car club (PASA) has been racing hard bodies for about three years. Our club is a mix of high school students, adults and families. For the first couple of years we raced custom brass and wire chassis cars exclusively. Although these are fun to drive, fast and handle well, at about \$70, many of the high school students were shut out of the hobby because of the expense. With the advent of the ProTrack rolling chassis, at a \$30 price point, we added another class of hard body racing that is affordable and fun.

The ProTrack rolling chassis provides a great base for hard body racing but in stock form is quite “tippy” and hard to drive. However, a few simple modifications can improve handling and durability dramatically. In its stock form, the combination of chassis and NASCAR body, has a center of gravity that is simply too high. Also the front axle

mounting brackets are weak and the axle has too much play exacerbating the tipping problem. The parts needed to remedy these problems may be purchased at a local hardware store.

- 1/8th-inch brass tubing
- 3/4- inch wide, .062 thick brass sheet. The 3/4- inch brass is great for NASCAR bodies, however our club runs classic 50s and 60s bodies as well so we must trim the brass to 5/8-inch to accommodate the narrower bodies.
- 1/2 -inch Number 4 brass bolts with flat heads (4 of these)
- Number 4 brass nuts (8 of these)

To address front axle mounting, first decide the fore and aft position of the axle. This will depend upon the body utilized. Many NASCAR bodies require the front axle to be mounted as far forward as possible while others fit better with the axle mounted as far back as possible. Cut a piece of 1/8-inch brass tube to fit between axle towers. Make the tube long enough to be supported by the existing axle towers. The mounting hole in the existing tower must be expanded slightly so that the 1/8 tube will fit properly. Be careful not to expand the hole in the tower too much. When the tube is soldered in place, the front wheels must be as close to the track as possible without touching. See figure 1 for the modified front axle mounting system. (The project illustrated in figure 1 shows the axle extending beyond the axle towers. I suggest that you cut and mount the tubing so that it just fits the existing axle tower and use spacers to locate the front wheel in the proper position. This way you can use other bodies and adjust the front track without cutting the axle tube. I have rounded the edges of the front wheels and coated the circumference with clear nail polish. This encourages the front wheels to slide rather than dig in and tip the chassis.

The high center of gravity problem can be solved by the addition of “outrigger” weights mounted flush with the bottom of the chassis and the addition of a little lead weight near the guide flag. The outriggers will be mounted to the chassis through the existing holes used to mount the L shaped aluminum body mounting hardware using the number 4 brass bolts rather than those supplied in the kit. The 4 extra nuts are used as spacers between the outriggers and the existing brass chassis. There are two good configurations for these “outrigger” weights. One is to extend them forward of the front wheel as shown in figure 2. Start with 5 inch long rectangular pieces of 3/4-inch brass and cut to match the configuration shown in figure 2. This configuration may create too much over steer. If you don’t have access to the tools or don’t have the skill to configure the outriggers as shown in figure 2 an excellent result can still be achieved by simply cutting 2, 3 inch long pieces of 3/4-inch brass for your outriggers as shown in figure 3. Mark the outriggers through the existing mounting holes, drill and countersink. The job is done! Mount using the brass bolts with the extra 4 nuts as spacers.

The finished slot car including the body weighs about 235 grams. Our club track lane length is only 75 feet and the Cheetah motor works fine. However with a longer track like a 155 foot King or Kingleman, the motors run too hot and burn out quickly. To remedy this we run a Deathstar for the longer tracks geared at 7/32 or 7/33. I think that the Deathstar is the better choice in any case because it has much better brakes and is

more reliable, however, if you are interested in keeping the cost to a minimum and are running on a shorter track go ahead and use the stock power plant.

How much improvement can you expect to gain from these modifications? Our experience indicates that on a Kingleman, the chassis modifications alone will improve lap times by about a second and improve consistency dramatically. Installing a Deathstar will improve lap times by about another second, not only because it is more powerful but also because it has much better brakes.

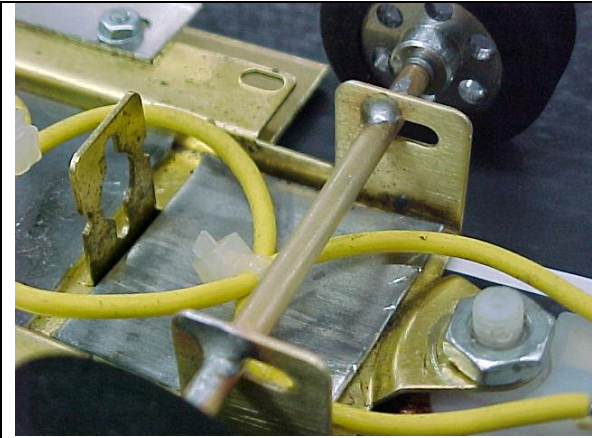


Figure 1 – Modified Front Axle Mounting



Figure 2 – Outrigger Best Configuration



Figure 3– Outrigger Alternate Configuration

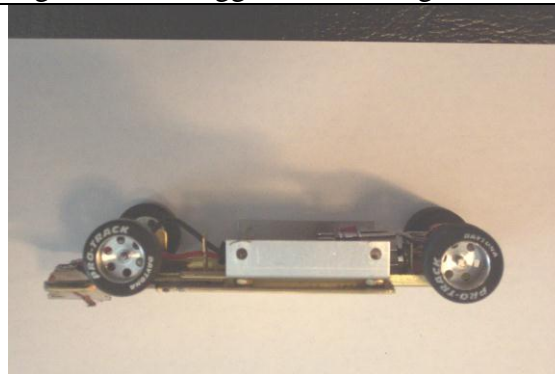


Figure 4 – Side View