Hit the road!

PHOTOS BY JOHN RIST

TRC pro 10 SPORT

by JOHN RIST

IT WAS COLD AND WET in January in Huntsville, AL, and to help drive away the winter doldrums, I decided to build a new car. The logical choice for a winter project is, of course, a 1/10-scale pan car because you build and run it indoors. I chose the TRC* Pro 10 Sport. This entry-level car has two features that make it a great buy: it handles well right out of the box, and it accepts all the parts that fit the Pro 10 Elite, so it can "grow" along with your driving talents.

THE KIT

The fiberglass T-plate chassis has five cutouts on each side, and this makes it easy to tape-mount a 6-cell saddle pack. The front suspension consists of a pair of spring-damped axle blocks that ride on kingpins. The front axle beam is made of fiber-filled nylon, and it comes with a pair of 2-degree caster shims. These provide a sure-fire way for beginners to set the caster. You don't have to fiddle with lots of adjustments or even understand what caster is or how it works!

The instructions don't tell you which way to turn the shims, but the clever engineers at TRC mounted the front axle with two screws on each side—large screws in front and small ones at the back. The shims have corresponding large and small holes, so it's impossible to put them in backwards! Excellent engineering like this was evident throughout the kit: every part fit properly, and all of the instructions were clear. The kit doesn't include a mechanical speed controller or other electronics, but it does come with a Bolink T-Bird body.

ASSEMBLY

I'm fairly new to pan cars (most of my experience is with off-roaders), so I had to rely heavily on the instructions to figure out how to put this one together. The kit includes two books—one of instructions and the other of pictures. This is great because you can look at the pictures and read the words without having to flip pages. My only complaint is that some of the pictures lack detail. The Pro 10 Sport has many black parts that are mounted on a black chassis, so photographing it must have been like trying to take a picture of a black cat in a coal bin! If you examine the pictures closely, though, you can figure out the correct orientation of and place for each part.

Assembly takes approximately 4 to 6 hours. I took my time and followed every construction step, but I made three changes to the stock kit:

- I don't like Z-bend steering linkages because they're difficult to adjust, so I replaced them with two sets of Rocket City* ball links and Du-Bro* turnbuckle rods. I prefer Rocket City ball links to most other brands because they come tapped and color-coded for right- and left-hand threads. The left-hand threaded end is tapped clean and turns freely; the right-hand threaded end is tighter and acts as a locking mechanism to prevent the rod from "backing out" of the ball links. This setup is light; it costs only about $5; and it makes adjusting toe-in easy.
- I also replaced the stock E-clip front axles with threaded Bolink* axles. I hate E-clips when they're used in high-maintenance applications. If you've done much racing, you know that it's necessary to remove the front wheels often to clean out the carpet strands that get wrapped around the bearings. (I call E-clips "gee whiz" clips, because every time I install or remove one, I holler, "Gee whiz, I've lost another one!")
- Finally, I added a stick-style, 6-cell battery box, which accomplishes several things. It permits the use of reasonably priced, readily available stick packs. (Not all entry-level racers can handle the chore of building and maintaining a saddle pack.) It allows you to charge several packs and change them quickly between runs, and it means you can bias the weight to the left side of the car. This was great because both of the tracks in my town are left-turn-only.

Above: The Pro 10 Sport comes with a rear spring damper, but you can order an aluminum shock and a shock-mounting bracket from TRC. The addition of the battery box permits the use of a stick-style battery pack.

Left: Rocket City ball links and Du-Bro turnbuckles simplify toe-in adjustment.

I chose a Team Associated* RC10 battery box, which works very well. It's tough to get the halves mounted in the right location, but this problem is easy to solve. Cut a piece of 1x2-inch board to the same length as a 6-cell battery pack, and mount it between the battery-box halves with servo tape. Now slide this one-piece assembly around the chassis until you find the best mounting spot. Mark the location of one of the battery box's four holes, drill

T R C
PRO 10 SPORT

Type	On-road
Scale	1/10
Sug. Retail Price	$109.95

DIMENSIONS:

Overall Length	18.25 inches
Width	9 inches
Wheelbase	10.50 inches
Front Track	7.38 inches
Rear Track	7.06 inches

WEIGHT:

Gross (with battery)	46 ounces

BODY:

Type	Stock car
Material	Polycarbonate

CHASSIS:

Type	Flat pan
Material	Fiberglass

DRIVE TRAIN:

Primary	Pinion/spur
Transmission	Direct-drive
Differential	Ball diff
Bearings/Bushings	Oilite bushings

SUSPENSION:

Front: Type	Fiber-filled nylon axle
Damping	Coil spring
Rear: Type	T-plate
Damping	Coil spring

WHEELS:

Front: Type	One-piece plastic
Dimensions (DxW)	2.5x1.125 inches
Rear: Type	One-piece plastic
Dimensions (DxW)	2.5x2 inches

TIRES:

Front/Rear	TRC green-dot foam

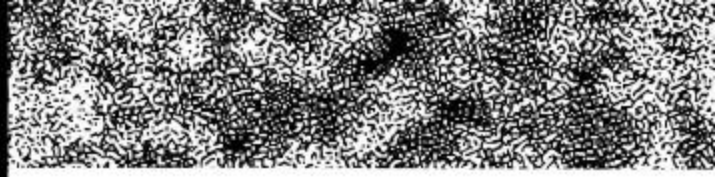
ELECTRICS:

Motor	05/540*
Battery	6-cell pack*
Speed Controller	Electronic*

OPTIONS AS TESTED:
Novak 410-MXc HF speed controller; Speedworks Joel Johnson stock motor; Futaba Magnum Jr. radio; steering links made up of Rocket City ball links and Du-Bro turnbuckles; Bolink threaded front axles.

COMMENTS:
The TRC Pro 10 Sport is an entry-level car, so it doesn't come with the weight-saving goodies (or ball bearings) that are found in the more expensive TRC Pro 10 Elite. Nevertheless, the Sport's heritage shines through: it's easy to set-up and drive, and all it needed to hook-up to the track was some tire dressing on the rear tires. As expected, the car responded well to the addition of ball bearings, and there are plenty of other "trick" parts you can use when you're ready to upgrade: all of the TRC Pro 10 Elite parts fit the Pro 10 Sport.

* not included



through the chassis, and mount the box with one screw.

Then, using the battery box as a template, drill the remaining three holes in the chassis using a 1/16-inch drill bit. (This bit is small enough not to remove any of the material from the holes in the battery box.) Remove the battery-box assembly and ream out the 1/16-inch holes in the chassis to accept 4-40 mounting screws. After you've removed the 1x2-inch board and cleaned the servo tape off the bottom of the box, it will be easy to mount the separate halves.

EQUIPMENT

I installed a Futaba* FP-R102GR receiver and FP-S148 servo—the standard components that came with my Futaba Magnum Jr. This radio is reasonably priced, yet it has adjustable steering and reverse on all channels, so it's great for both entry-level and advanced cars. (I've used my old Magnum Jr. to play in local parking lots as well as to compete in A-Mains!) I also used a Speedworks* Joel Johnson stock motor.

The speed controller I chose was a little exotic for an entry-level car, but I was reviewing Novak's* 410-MXc HF for "Scoping Out," and I couldn't pass up the opportunity to test a car and a speed controller at the same time! People often ask me which speed controller I recommend, and I tell them to buy the best racing-style controller they can afford. It's a wise investment, because a good controller is tougher and will last longer. Cars might come and go, but you can always move a good electronic speed controller from one to the next.

PAINTING

The chassis was a snap to assemble, and soon I was ready to paint the Bolink Thunderbird body. Back in the '60s, I watched the unlimited hydroplane races at Lake Guntersville, and the boat that always finished first was the Miss Budweiser. Since then, I've had a soft spot in my heart for any racing machine with the Budweiser logo on it. As you know, Budweiser sponsors Junior Johnson's Thunderbird on the NASCAR circuit, and that was the car I chose to base my model on.

I'm not into accurate scale paint jobs, but I enjoy building approximate representations. This way, people can identify your car with the real thing, but you don't put so much work into the body that you're afraid to race it. I started with a color picture of MRP's* Budweiser Stock Car. The blue Ford logos and the word "Thunderbird" are standard decals, as are the product decals on the fenders, the window netting, the hood clips and the windshield bars.

The difficulty came in finding the Budweiser symbols. The hobby shop didn't sell decals for the Budweiser Special, and even a search through supplier catalogues didn't turn up a

set. I'm stubborn, though, and I was determined to brew my own.

Fortunately, there are now sign shops that can supply custom, computer-generated, vinyl letters to go on the outside of a body, or mirror images to go on the inside. Mirror-image letters are great because, inside the body, they're protected from "wall rash." You can also spray over them with Coverite's* Body Shop paints, which are compatible with both Lexan and vinyl.

After looking at the picture of the Budweiser car and measuring my model, I came up with a pencil sketch of what I needed. I went to the sign shop and selected the type styles that most closely matched the lettering in the picture. The owner punched them up on a computer screen, and then he instructed the vinyl cutting rig to cut mirror-image letters. He even made some "Rist Racing" logos for me. I put them across the car's trunk lid, and they give it a nice personal touch. The whole process took about 30 minutes, and two sets of decals cost $20.

Some helpful hints: be sure to buy multiple sets of letters. It costs little or nothing for the extra sets, but it's really easy to ruin a letter. Make sure you rub the decals down around the edges, too, or paint might bleed under them.

I used masking film to keep the windows clear and put Carl Goldberg* red vinyl striping on the inside of the body. To finish the job, I applied the outside Ford logos and contingency decals. I'm proud of this body because it took more effort than just slapping on some decals. The bright red-and-white color scheme makes the car easy to photograph; just look at the color shots that accompany this article! Although the detailing isn't even close to scale, everyone who sees my car recognizes it as the Budweiser Special!

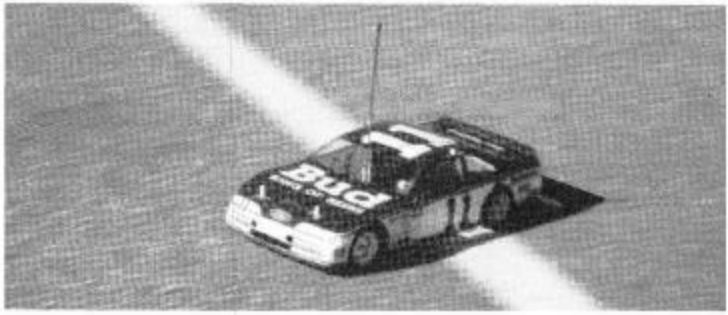
ROAD TESTS

The completion of my Budweiser pan car coincided with the opening of a new carpet track in Huntsville, AL, that's owned and operated by Rick Chambers of RC Hobby Shop. This large, flat track has 37-foot straight-aways, 35-foot-diameter turns and 12-foot-wide lanes.

For the initial test run, I used the kit-supplied green-dot front and rear tires. The car tended to oversteer, but a generous coating of tire compound on the rear tires solved the problem. With each successive run, the car ran faster and more smoothly. I'm sure that much of the improvement was the result of my getting used to the car and the track, but I was impressed by how easy the Pro 10 Sport was to set up. After just three runs, it was showing championship style.

When I returned home after the first test session, I tried some hop-up tricks on the car. I obtained TRC's no. 5330 Pro 10 Series Shock and Antenna Mount, the no. 5163 Aluminum Ball Joints and the no. 5450 Complete Shock Kit. No instructions come with any of the packages, nor is there any information in the stock kit's manual on how to install a shock, but I managed to figure out how it all went together. If you're new to the hobby, be sure to get help from your local hobby shop or a fellow racer.

I didn't really know how the springs fit into the shock or what to do with the supplied ball socket and link. The shock has two springs: the smaller one goes on the inside of the shock and forces it closed; the larger one goes on the outside of the shock and tries to push it open. By adjusting the outer spring's tension with the screw collar, you can balance the two spring pressures. This puts the shock in the center of its travel so it provides spring pressure in both directions much like the spring damper that it replaced.



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The ball link goes into the small end of the shock body. To accomplish this, use an Allen wrench to screw the setscrew into the end of the ball link, and then screw this assembly into the shock's small threaded end. Screw the aluminum ball into the second hole from the back of the motor block's top plate. (The hole doesn't have any threads, but the ball will tap its own.) Now it's easy to bolt the shock/antenna mount bracket to the T-plate and install the shock between the ball socket and the shock bracket.

I had to try one more modification. I removed the ball bearings and the graphite diff axle from my Bolink car

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and installed them in the Pro 10 Sport. They fit as if they were custom-made!

The following day, I returned to the track to test the modifications. I spent the first few runs adjusting the gear ratios and getting used to the track. The car still tracked beautifully, but its speed had increased dramatically owing to the lower drag of the ball bearings and the higher gearing. By the end of this session, I was convinced: the TRC Pro 10 sport is fast, well-designed and handles beautifully.

CONCLUSION

This car is easy to assemble, and I really enjoyed working with it. The rear body posts were too short for the Bolink body that's included in the kit, but I simply used longer screws and put a 1/2-inch stack of nylon washers under the posts.

I converted my car to use stick battery packs instead of saddle packs. I think that a stick pack with a connector is a lot easier for entry-level drivers to handle.

To dial-in the car properly, I simply applied tire compound on the rear tires to prevent the oversteer. (I might have been able to achieve the same results by using harder front tires.)

The TRC Pro 10 Sport is an excellent entry-level R/C car. It's reasonably priced; it performs well in its stock configuration; and with a little advice from fellow modelers, you shouldn't have any trouble getting it to hook-up. Then, as a need for speed sets in, you can add Pro 10 Elite hop-up parts (they all fit the Pro 10 Sport). I'm not sure that the shock improved the car's performance, but the ball bearings were definitely worth the effort it took to install them.

Just remember: this car is intended to be an inexpensive "fun" car that runs well—and it is. If you started upgrading *major* components, it would be cheaper to buy an Elite model.

**Here are the addresses of the companies mentioned in this article:*

***TRC**, P.O. Box 1058, 221 Charter St., Albemarle, NC 28002.*

***Rocket City R/C Specialties**, 103 Wholesale Ave. NE, Huntsville, AL 35811.*

***Du-Bro Products**, 480 Bonner Rd., Wauconda, IL 60084.*

***Bolink R/C Cars**, 420 Hosea Rd., Lawrenceville, GA 30245.*

***Team Associated**, 3585 Cadillac Ave., Costa Mesa, CA 92626.*

***Futaba Corp. of America**, 4 Studebaker, Irvine, CA 92718.*

***Speedworks; distributed by Trinity**, 1901 E. Linden Ave., #8, Linden, NJ 07036.*

***Novak Electronics, Inc.**, 128-C E. Dyer Rd., Santa Ana, CA 92707.*

***MRP**, 18676 142 Ave. NE, Woodinville, WA 98072.*

***Coverite**, 420 Babylon Rd., Horsham, PA 19044.*

***Carl Goldberg Models Inc.**, 4734 W. Chicago Ave., Chicago, IL 60651.* ■