CAR ACTION TRACK REPORT

Vanguard of k

by JOHN HOWELL

"HEY, IS THAT box for me?" I yelled.

"Forget it, Doogie," Frank retaliated.

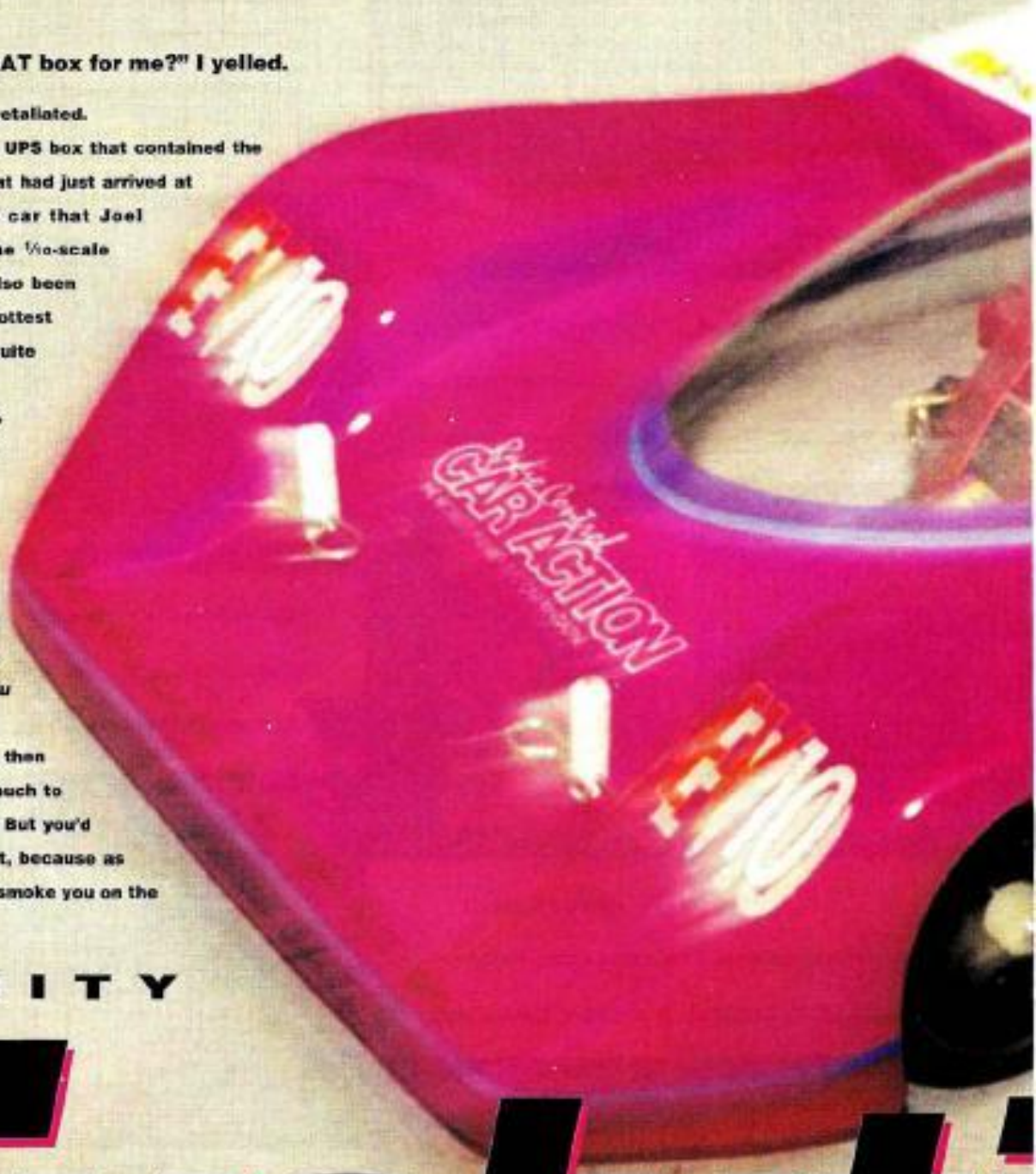
We were fighting over the UPS box that contained the new Trinity* Evolution 10 that had just arrived at our office. You know—the car that Joel Johnson used to capture the 1/10-scale IFMAR Worlds title. It has also been deemed by some to be the hottest on-road car to come out in quite a while.

"Come on, Frank, I'll trade you my other road car for it," I pleaded.

"You mean the one your cousin ran over with his Mustang? That thing's hammered. I don't want it."

"Think of it as a challenge. Something only *you* could fix."

Frank pondered the idea, then said "Well, if it means that much to you, go ahead and review it. But you'd better start practicing with it, because as soon as I get one, I'm gonna smoke you on the track."



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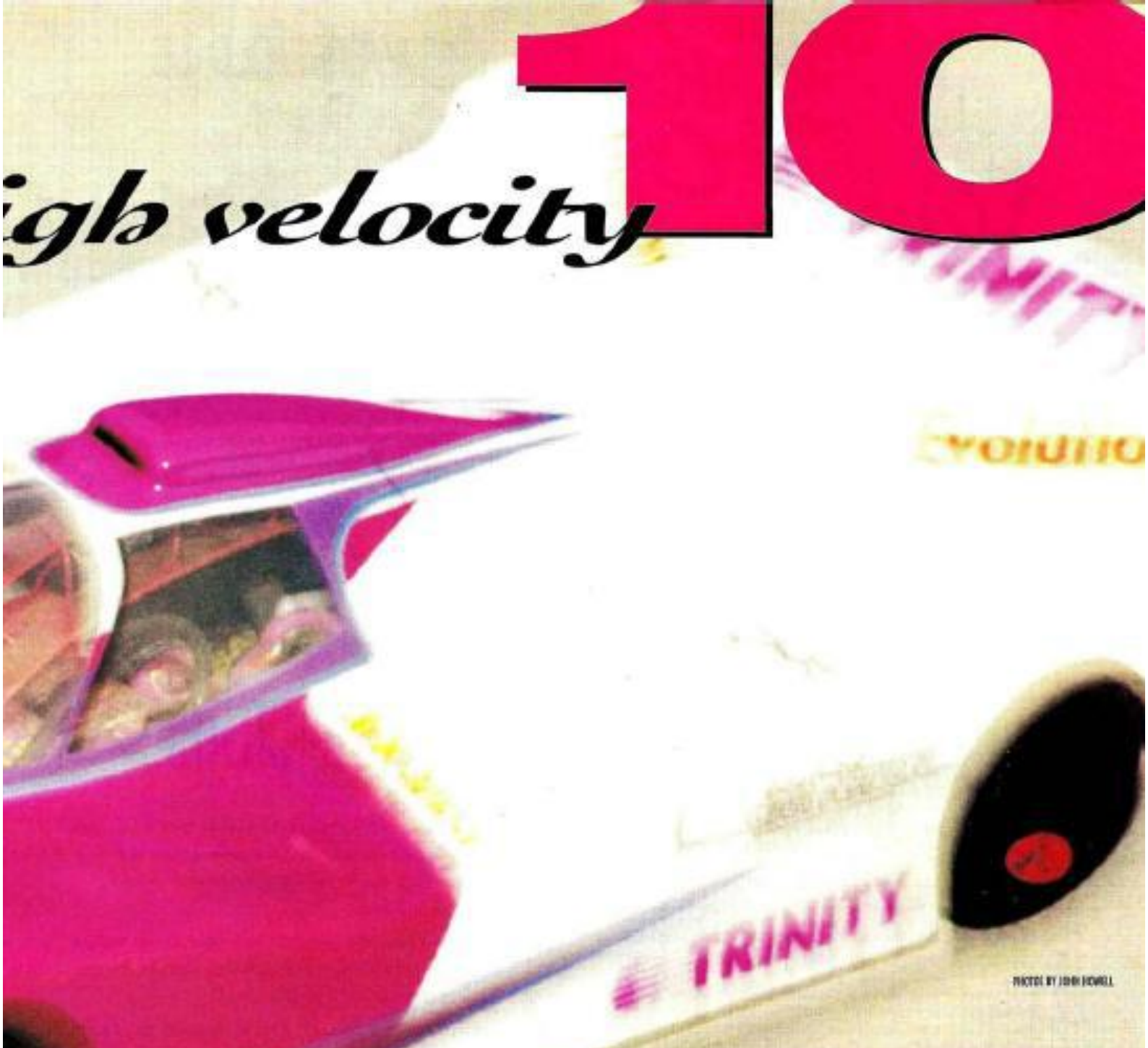


PHOTOS BY JOHN ROWELL

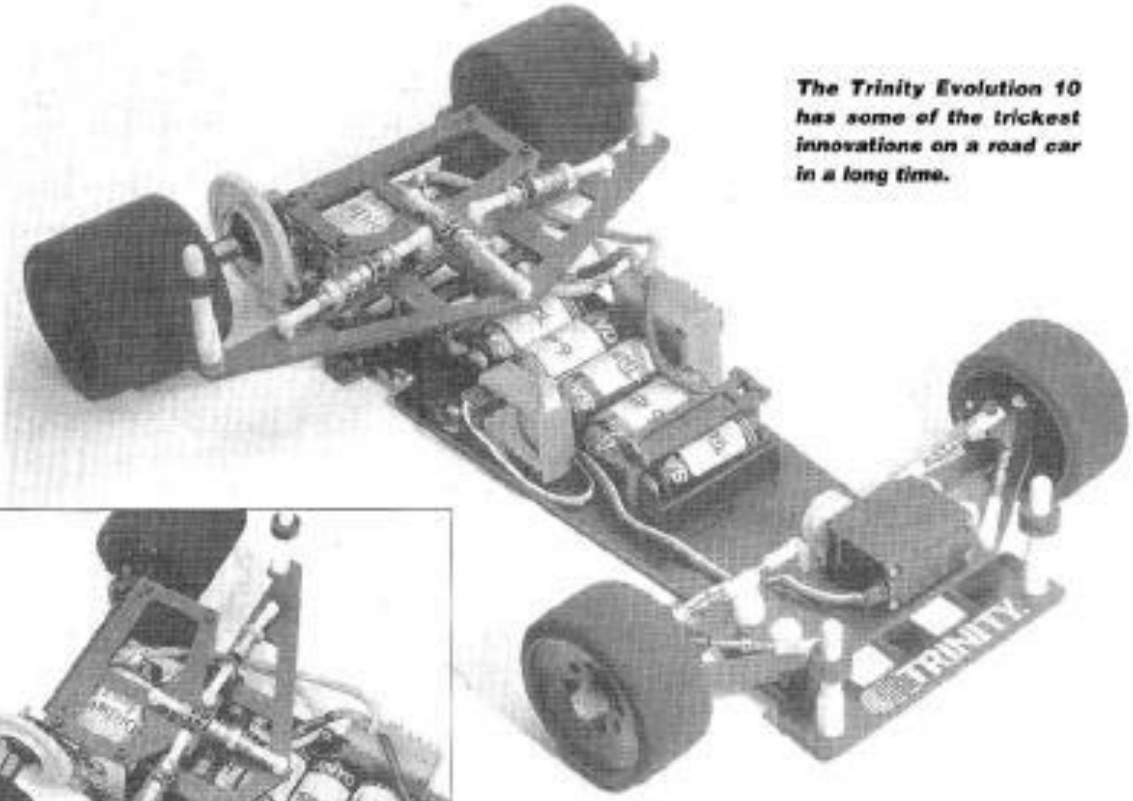
THE KIT

I took the kit home and spread the contents out on my worktable. Yes, that's right, all 245 pieces. I have to admit, though, it was a pretty lame move on my part; if you want to keep the building process simple, don't take the contents out of their bags until the instructions tell you to. Though the Evolution 10 may look simple enough to build without looking at the instructions, there are crucial tuning tips throughout the manual that help the building process go smoothly.

As I examined the contents of the kit, I realized that this car is definitely a piece of work—meaning that it's very high-tech, but at the same time, it isn't so complex that you'll be building it until 3 a.m. for weeks on end.

The best part about the Evolution 10 is that it's competitive right out of the box. You don't have to add anything to it except your radio gear, your speed controller, a 64-pitch pinion gear and your favorite motor/battery combination.

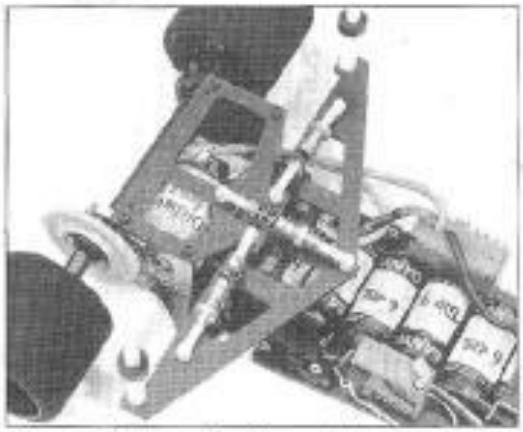
Other high-caliber features in the kit are an ultra-rigid Zero Flex .110-inch-thick



The Trinity Evolution 10 has some of the trickest innovations on a road car in a long time.

ADC graphite chassis; a Reactive Caster front suspension; a MonoSphere rear suspension with Triad damping; a light, hollow, graphite rear axle; a 64-pitch Magic Spur gear with a ball-bearing pro diff; a machined, billet-aluminum motor mount and rear hubs; mounted and trued TRC Pro-Cut ZR-1 natural rubber front and rear tires; and Class 7 ball bearings throughout.

Another of the Evolution 10's hot features is Trinity's Low Polar Movement battery-mounting system, which enables you to choose to mount your six cells either in stick packs or side packs. If you run the batteries in-line down the middle of the chassis, there's less lateral weight transference, and this enables the car to change direction much more quickly without getting "squirrelly."



Three Delta-type shocks provide the damping for the rear pod. A Magic Motorsports spur gear is coupled to a ball-bearing pro diff. The light, hollow graphite rear axle is one of the many "ultra-sano" items that keeps the car's weight down.

The Evolution 10's suspension is unique. In the rear of the car, the pod is attached with a single pivot and is damped by Trinity's Triad three-dimensional shock system. The Triad setup consists of three small Delta-type shocks mounted to the rear pod and to a graphite plate that rests directly above the rear of the chassis. The battery pack slides between that plate and the chassis.

Up front, Trinity's Reactive Caster suspension-system design has a fixed carbon-graphite lower arm and upper A-arms with fully adjustable upper links to allow infinite adjustments of caster, camber, damping and roll center. The design can also be set to allow the caster to decrease as the car enters a turn, and this improves front-end traction and stability as the car exits the turn.

So now that you know what's included in the kit, let's build it!

A LITTLE TIME AND EFFORT

First, assemble the front end. You may have to sand lightly around the sharp edges of both the chassis and the front-end graphite piece. (If you do, spread out something to catch the graphite dust, then wash your hands and the car's chassis.) A hot tip from the factory: apply superglue to the edges of the chassis so the graphite layers don't split apart and separate.

Next, slide the front kingpins through the front axle plate; once they're through, you should be able to move them easily. It's crucial that they move freely; if they don't, you won't have the best suspension action.

For different degrees of damping, you can vary the type of lubrication on the front kingpins. Jim Dieter, the car's designer, recommends that you use Teflon grease for light damping; silicone lubricant for medium damping (included in the kit); and—if you can find it—Losi's original diff grease (often referred to as "grape jelly") for the most damping.

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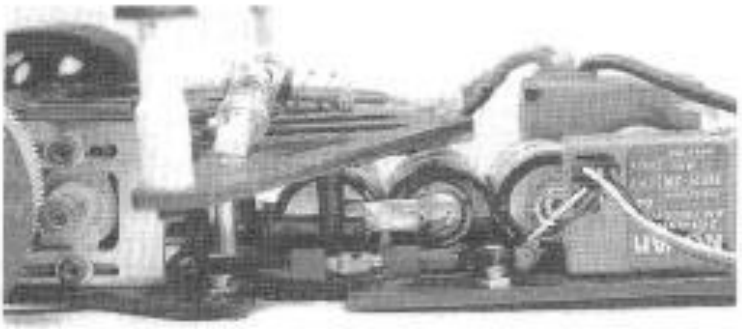
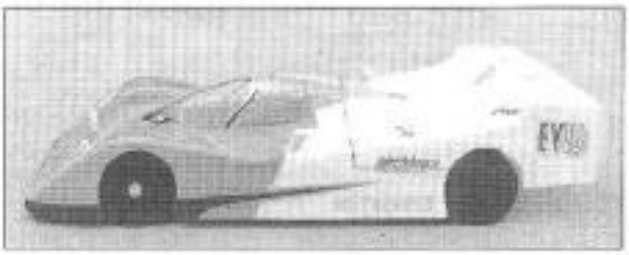
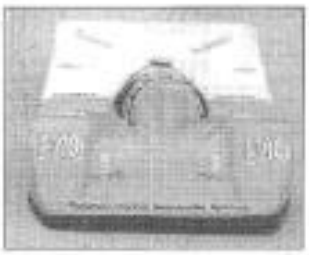


The rear pod is attached by a single rear pivot and two trailing links. To provide better steering and cornering, the batteries run in-line down the center of the chassis.

Assembling the front end is fairly simple, but you really have to pay attention to detail. Next to building the three rear shocks, it's the most time-consuming thing about building this car.





TRINITY EVOLUTION 10

Scale 1/10
Price $349.99

DIMENSIONS:
Overall length ..... 13 inches
Width ..... 9.25 inches
Wheelbase ..... 10.25 inches
Front track ..... 7.125 inches
Rear track ..... 7.25 inches

WEIGHT:
Gross (with battery) ... 2 pounds, 8.34 ounces

CHASSIS:
Type ..... Plate
Material ..... Graphite

DRIVE TRAIN:
Type ..... Direct drive
Primary ..... Pinion/spur
Differential ..... Ball
Bearings/Bushings ..... Class 7 ball bearings

SUSPENSION:
Front: Type ..... Reactive Caster Suspension
Damping ... Floating kingpin/coil springs
Rear: Type ..... Triad 3-dimensional damping
Damping ..... Three Delta-type shocks

WHEELS:
Front: Type ..... TRC
Dimensions (DxW) ..... 1.75x1.125 inches
Rear: Type ..... TRC
Dimensions (DxW) ..... 1.75x2 inches

TIRES:
Front/Rear ..... TRC Pro-Cut ZR1

ELECTRICS:
Motor/Battery/Speed controller ..... *

OPTIONS TESTED:
Trinity Championship modified motor and Pushed Sanyo cells, Novak 410-M1 ESC and NER-2X receiver.

HITS

• "Worldly" winning reputation • Great cornering ability • The front and rear suspensions offer more tuning versatility than nearly any other on-road car • Competitive out of the box

MISSES

• Fine-tuning the car is somewhat technical. • The complexity of the car may be more than most beginners can handle • The instruction manual is confusing in some areas and could be visually beefed up.

* not included

After you've assembled the front end, start working on the chassis. Your first task is to locate the aluminum pivot ball so you can start to build the rear pod. It's simple, and once you have the rear of the car built, the rest of it goes together quickly. All you have to do is add the battery-cup holder and install the antenna mount, and the rear pod goes on.

Building the shocks will take a lot of your attention, so don't rush through the next steps. Here are a few tips for when you build them:

1. When you start to work on your shocks, empty the contents of the bag into a shoebox or some other container. There are many little pieces that could be lost on a workbench, or in your carpet, so keep them contained.
2. Don't forget to put a drop of oil on the shock shaft and on the silicone O-ring before you slide it onto the shaft. If you don't, you could unwittingly damage the O-ring, and shock performance will suffer.
3. Only fill the shock (with the recommended oil) to the bottom of the threads in the shock body. Any more, and you'll just make a mess when it's time to bleed the shock.
4. Carefully remove any flashing from the cylinder nut; if there is any, it won't let the shock shaft slide freely.
5. Last but not least, keep a rag nearby to wipe up any oil spills. When I was working on my shocks, my stupid phone rang, and I was a total buffoon, and I didn't have anything around at the time to clean up my hands, so I got oil all over my phone. It ended up being some idiot named Harold wanting to sell me the lame local paper. I wanted to rip out his throat.

THE MAN, THE MYTH, THE DESIGNER

Jim Dieter's name may not be familiar to you, but his R/C background goes way back. Among the many R/C gadgets Jim has designed in his Joliet, IL, machine shop is the IFMAR Worlds-winning Evolution 10.

"I first got into R/C cars in 1980," Jim recalls. "I was wrenching on midget race cars with my Uncle Danny, and one of our drivers, Richie Vogler, had a Tamiya Rough Rider. I had to get one so we could race against each other."

Soon after Jim got his Rough Rider, he started to race 1/12-scale cars, and his first really big race was at the Cleveland Indoor Champs in '82. "I ended up third, but I should have done better. I got hung up trying to pass someone ahead of me and I hit the wall. I wasn't concentrating, and I almost caught up to him at the finish, but then I ran out of time, and the race was over."

In '83 and '84, Jim started racing Delta Eagle gas cars, and toward the end of '84, he started to race off-road. "I raced off-road until the end of

DIFF ACTION

After you build the rear shocks and snap them into place, build the diff. A Magic Motorsports 120-tooth spur gear is included in the kit—a nice touch. After you build the diff, put in the axle, adjust the diff and add the front and rear wheels. Now, take a step back and admire your handiwork.

When I completed my car, I called Joel Johnson and asked him a few questions about it.

"Hey, Joel, tell me a little about your Evolution 10."

"Well, it has four wheels, and it kicks @#$!"

"Be serious man; I need some quotes for the Track Report."

"It's the best car I've ever raced. With the in-line battery mounting system, the car switches directions quickly, and installing the battery is much easier with this car, too. The front and rear suspensions are very easy to adjust, and they work together perfectly."

"OK, what else?"

"Well, I won the Worlds with it."

'Nuff said.

TRACK TIME

I charged a few packs, mounted the body on the car, and hit the road in front of my house. It took me a while to get the car dialed-in, but when I did, I called Frank for a little test session at an indoor carpet track.

We took turns driving the Evolution 10. Thanks to the battery-mounting style, we could plant the car in the corners harder and faster than any of the other cars we ran against. A crowd of eager onlookers grew with every lap we took. Everyone wanted to sneak a peek at the "mystery car." The car drove supersmooth and handled high-speed cornering better than we had anticipated. So what does this mean? Let's put it this way: you don't have to slow down as much for turns, which enables you to run faster laps, which then, you hope, adds up to more wins for you.

This car, with its myriad fine-tuning options, is intended for serious racers. It may be a little technical for beginners, but advanced racers will love it. It really is incredible; both Frank and I fought over taking turns driving it. And, as Joel said, it *is* the world champ.

Trinity's Reactive Caster Suspension has a graphite lower arm and fully adjustable upper links that allow for adjustments of caster, camber, damping, spring rate/tension and roll center.

**Here's the address of the company that's featured in this article:*
***Trinity Products Inc.**, 1901 E. Linden Ave. #8, Linden, NJ 07036.* ■

'90. In that time, I've raced for a lot of people, like Kyosho and Schumacher," he said.

Jim's biggest wins include the '87 ROAR Nats 4WD Modified class, the '87 NORRCA 2WD and 4WD Nats and the '88 NORRCA 2WD Nats, as well as his share of regionals here and there.

In '89, Jim got into dirt-oval racing, and that's where he had the idea for Trinity's popular oval car, the ReFlex 10. Since then, Jim has been busy at Trinity coming up with truly innovative cars. Recently, Joel Johnson TQ'd with one of Dieter's prototype ⅛-scale cars (the soon-to-be Evolution 12) at this year's Cleveland race. That car, as well as a superspeedway version of the Evolution 10, should be available soon.

"For right now, I concentrate on being Joel's 'mechanic,' " Jim asserted. "He tells me what the car needs and how it needs to be adjusted, and then it's done. Joel's a great guy to work with, and he's really focused when it comes to driving. We're out there to win, and so far, we've been putting on quite a show."