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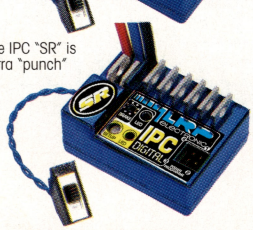


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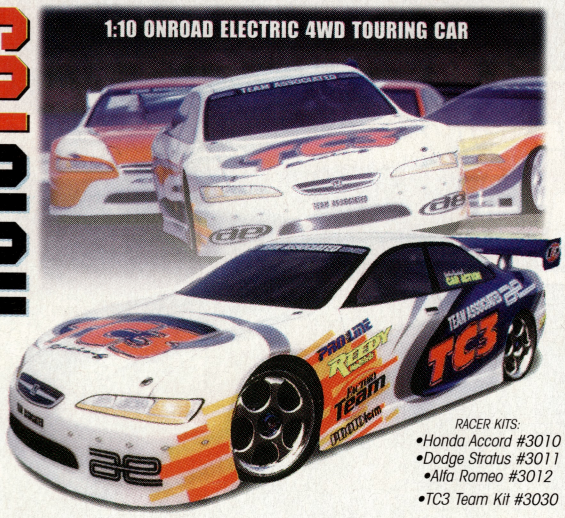


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ASSOCIATED

RC10TC3

1:10 ONROAD ELECTRIC 4WD TOURING CAR



RACER KITS:
- Honda Accord #3010
- Dodge Stratus #3011
- Alfa Romeo #3012
- TC3 Team Kit #3030

RC10B3

1:10 OFFROAD ELECTRIC 2WD BUGGY



- B3 Basic Plus #9003
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- B3 Team Kit #9032
- B3 Factory Team Kit #9043

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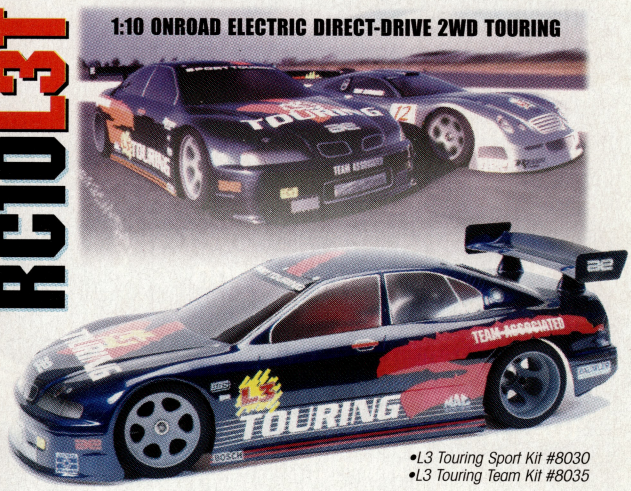
1:12 ONROAD ELECTRIC 2WD



- 12L3 Onroad #4015

RC10L3T

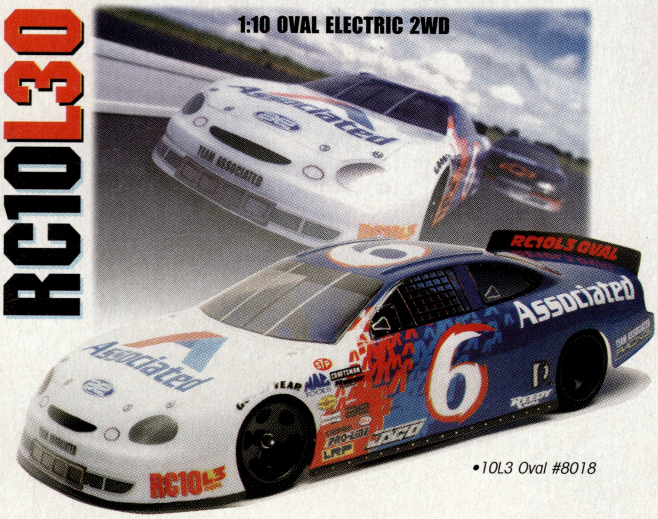
1:10 ONROAD ELECTRIC DIRECT-DRIVE 2WD TOURING



- L3 Touring Sport Kit #8030
- L3 Touring Team Kit #8035

RC10L30

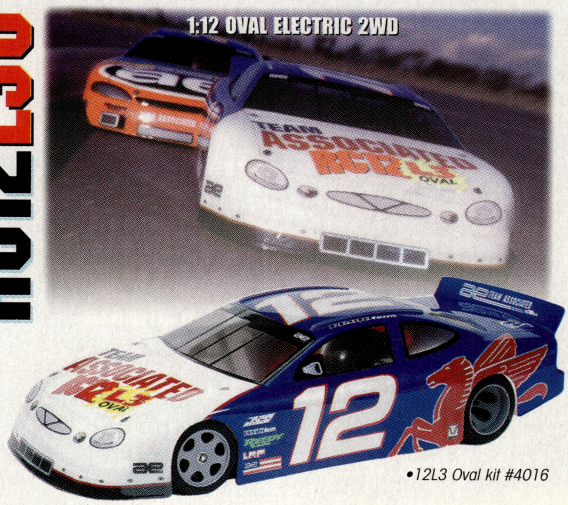
1:10 OVAL ELECTRIC 2WD



- 10L3 Oval #8018

RC12L30

1:12 OVAL ELECTRIC 2WD



- 12L3 Oval kit #4016

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R/C CAR

THE RADIO CONTROL CAR MAGAZINE

July 2000, VOLUME 3, NO. 7

NEW CAR TESTS

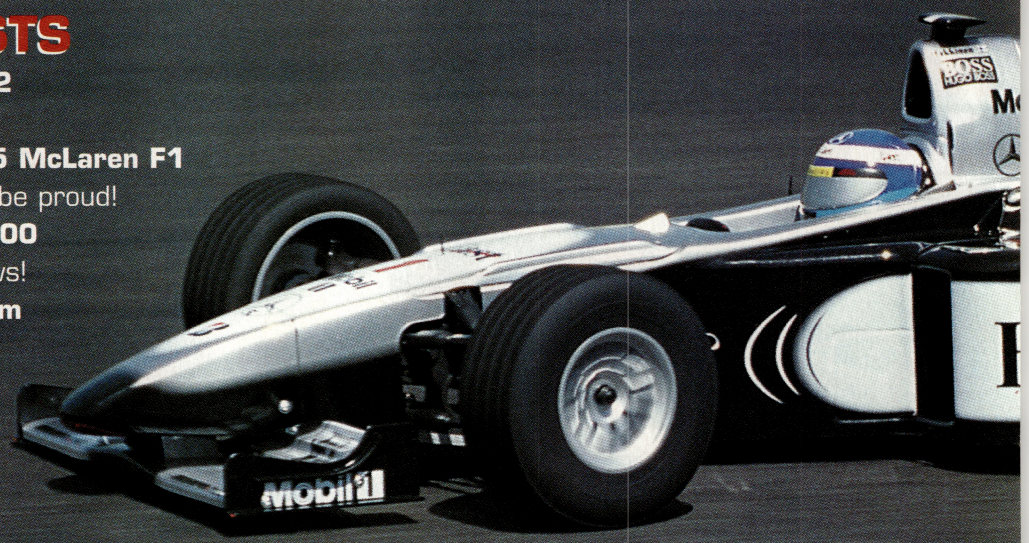
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On the cover: The Traxxas T-Maxx gets our vote as one of the best R/C inventions ever! We had a little Olympic games style competition with ours to see who was the best monster trucker on our staff. Tamiya's Juggernaut 2 peeks out from the top of the cover, and FG Modelsports new 1/5 scale McLaren F1 car sits alongside its 1/10-scale little brother. Photos by John Howell. **On this page:** FG's F1 slides around the Crystal Park track in Compton, California for John's Nikon.

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drivers' stand

by Frank Masi



The permanent roadcourse at the Crystal Park Hotel and Casino in Compton, CA.

Bigger or Better?

To be honest, I've never been very interested in large-scale R/C. I've tested 1/4-, 1/5- and 1/6-scale cars for nearly a decade, because it's my job to do so, but none of the cars ever got my heart pumping or loosened the hermetic seal of my wallet (thus allowing the moths to escape). March 22 is the day this all changed. This was the day I met…her. My newfound love has perfect proportions; a slender waistline and a low, sexy, curvaceous body. She's fast, but not in any cheap sort of way; she will cost a pretty penny at first, but after that, she only asks to be driven hard. Oh, yeah, she's an exotic European, too.

Thought you were reading one of those cheesy romance novels with Fabio on the cover, didn't you? Gotcha! My new passion is FG Modellsport's F2000 1/5-scale Formula chassis. Doogie and I met this car firsthand and in all its glory at the new permanent road course down in Compton, California, at the Crystal Park Hotel and Casino, and all I can say is that my jaw is still lying on the ground where it dropped! Large-scale R/C cars such as the F2000 are about the closest thing to a real racing car that you can get. But size isn't the only attractive feature: today's large-scale models perform as well as they look, and they are as sophisticated as any 1/10- or 1/8-scale model. Watching the 20-pound racecar circle the tree-lined track at over 50 mph evoked visions of Mikka Hakkinen in his McLaren/Mercedes, lapping the backmarkers at Imola. I can only imagine a field of eight of these 1/5-scale beauties freight-training through the chicane, each waiting for the right moment to zig and make its bid for a higher position.

And it's not just me. Of all the cars that have been in our offices, it has been the big 1/5-scale cars that draw the most attention from everyone, including people who have never seen an R/C car before. I have to thank Jeff Devlin at SEI Racing—importer of the F2000—for allowing us to spend some time with this mechanical marvel. Look for the report in this month's issue, and be sure to call Jeff about an easy financing plan!

While on the subject of what's hot, I have to tell you about this month's Nitro Truck Buyer's Guide. Nitro trucks are in, and we've corralled all of them in one easy-to-digest guide to help you decide which type and brand is best for you. If you've been contemplating the purchase of a nitro truck, don't spend a dime until you read this feature!

As always, we welcome your letters, suggestions and, reluctantly, your gripes. Just send your correspondence to Feedback, c/o R/C Car, P.O. Box 958, Valencia, CA 91380-9058. You can also get in touch with us at our e-mail address—*evaone@pacbell.net*. And don't forget to check out our new website at *www.rc-car.com* ◆

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THE RADIO CONTROL CAR MAGAZINE

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TEAM LOSI TECH-TALK

Slide, Swing, or CVD

Many racers ask which form of rear drive is best; Sliders, Swing shafts, or CVD. Well each one works differently. Each one impacts the handling differently. What we need to determine then is which one is best suited for you particular needs. Before we get into the specifics lets remember that the differential is the same in all of these drive systems. In particular, this means that you build and adjust the differential so that there is no slippage. All differential and slipper adjustment is done as described in the owner's manual.

Sliders were first used by Team Losi for the JRX-2. At the time most tracks were rough and covered with loose dirt. Tires, motors, and batteries were good but not near today's standards. So the slider allows the suspension to move very freely and keep the tires on the rough surface. They also allow the weight to transfer freely across the chassis to increase side bite and catch slides. These conditions are very uncommon today but the characteristic of freeing up the suspension is still valuable. When running sliders it is not uncommon to need a rear sway bar to help control the chassis roll. You will probably need to run a little heavier spring and a bit more pack in the shocks. Pack is obtained by decreasing the size of the hole in the piston and running a lighter weight fluid. This does not effect the normal dampening of the car but sudden harsh bumps will cause the shocks to become stiff and not move as quickly.

Swingshafts are undoubtedly the most versatile form of rear drive. The pin type drive used on both the swing shaft and the CVD tend to lock up under power as they are put under load. This does a number of things that are mostly controllable and therefore advantageous for off-road as well as on-road racing. Off power, the suspension is free to move to whatever limits you have built into the suspension. The car is free to roll, turn, or whatever. However, under power things change. The pressure of the outdrives trying to turn the pin drive dogbone of the swingshaft (or CVD) makes the drive shaft and axle try to become straight in line with the outdrive creating a dynamic tension. This tendency to seek and stay straight takes some of the freeness away from the rear suspension. Although obviously not as good in extreme rough conditions this actually helps in several other ways. By not allowing the chassis to roll over as the weight transfers, the car will corner better at higher speeds. This also helps hold up the rear of the car under acceleration which greatly helps the chassis "square up" exiting turns and driving off of jumps. To a lesser degree this can also help with landings. Typically this will help your high speed steering as well. In some respects this does what a sway bar does for sliders but only under power. Off power you will find that steering is decreased compared to the sliders. Bumps present a unique problem in that the pin drive is obviously not going to be as free as the slider due to the tendency to bind the rear suspension. The up side of this is that you will usually run a softer spring and dampening in the rear due to the "help" the pin drive is giving in holding up the rear of the car under power.

CVD's are very similar to the swingshaft. The pin drive is virtually identical to the swingshaft but the axle end actually has a bit more tension under power. This just magnifies the tendencies described for the swingshaft and creates a greater difference between on and off power handling. As the axle end wears it becomes more like the regular swingshaft. The increased difference in on and off power handling can at times be a slight advantage.

Another item that should not be overlooked is the wear on the outdrives when using a swingshaft or CVD. As the outdrives wear the tension will increase and at times actually create unwanted movement in the driveshaft/dogbone. The pin drive will wear a depression into the outdrive and as described above, the pin will seek this spot without control. The cure is to replace or swap (sides) the outdrives so there is an unworn face driving the pin. This isn't necessary with the sliders but you should clean them on a regular basis and over time they to will wear and need replacing.

So now you're an expert. Which rear drive system do you use? Potentially either the sliders or the CVD's can help you find a fraction of a second or make the car easier to drive under the right conditions with the right set-up. In general you will probably find that the swingshafts are the easiest to use for the varying conditions most dirt tracks offer. At a recent major race there were eight Team Losi vehicles in the A-Main. Of these one had sliders, two used CVD's and five used stock swingshafts.....Go figure. The bottom line is now you have something to try and have fun with. One last word of wisdom, If you find you have gotten lost in your quest for that extra tenth of a second get out the owner's manual or your previous set-up sheet and you will be surprised how well the car works.

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news flash!

What's new and noteworthy in the world of R/C!
Compiled by the editors of R/C Car



Scoop! Losi tests new gas truck in Vegas!

The rumors are true: Team Losi is in fact developing a new gas truck that may or may not be based on the new Triple-XT platform. Several prototype trucks were seen at the recent Silver State Nitro Challenge held in Las Vegas. The prototypes, which featured many hand-fabricated parts, appeared to use front suspension that was identical to that of the Triple-XT electric truck. The rear suspension also appeared to use similar "long-arm" technology, although at this time it isn't known if the geometry is the same as that used on the Triple-XT. Among other interesting features are a new aluminum chassis plate with raised sides for added stiffness, and an innovative brake design that is vastly different from those used in other gas trucks. As you can see from the photo, the new truck's brake disc is located on the left side of the gearbox instead of on the right side. Usually, the disc is located, along with the spur gear, on the gearbox's input shaft. Losi's new design appears to separate the disc from the gear, which should reduce the distance between the gear and the transmission, and make it much easier to get the brake dialed-in. The official word from Gil Losi Sr. is that these test trucks are still in the early prototype stages, and that when a new production version is finalized, it may look quite different. Losi hasn't yet set a release date for the "Triple-NXT." Stay tuned for more information as we get it.

Return of the Racer!

Remember the original Nitro RS4 Racer? It was a hopped-up factory version of HPI's original Nitro RS4 touring car, including all of the accessory items most popular with racers. Well, HPI has performed the same makeover to its latest nitro sedan, the Nitro RS4 2. The result, of course, is the Nitro RS4 Racer 2!

The Racer 2 uses HPI's second-generation equal-length arm suspension geometry, which provides more control and consistency through corners. HPI has also designed a new fuel tank that does away with the plunger-style primer to prevent any unwanted air leaks. Also standard on the Nitro Racer 2 are HPI's Nitro Racing Clutch for added traction tuning, a heavy-duty purple countersunk aluminum chassis, full ball-bearings, a full set of MIP's Shiny CVD driveshafts, fade-resistant Fiber Brake Disk, pre-cut foam front bumper, front belt-tensioner, and full turnbuckle tie-rods with stronger upper arms. HPI also includes its Nitro Handling Kit for added tuning ability. The Nitro RS4 Racer 2 comes without a body and without an engine or pipe, as these choices are best left to the racers who buy the kits.

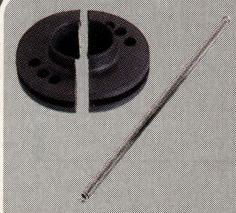


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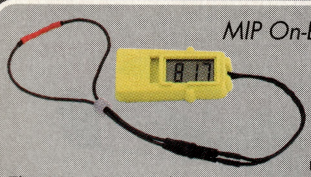
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news flash!

PRO-LINE'S cheap lift-kit



Pro-Line's innovative new Masher (above left) and Dirt Works (right) tires offer an inexpensive way to increase both the look and performance of any off-road truck that uses 2.2-inch wheels. The Masher's aggressive tread and taller stance will give your Traxxas, Tamiya, Losi, Associated and Kyosho truck that extra clearance it needs to tackle the toughest backyard obstacles. The Dirt Works is a great all-around truck tire for dirt, grass or pavement. Both tires sell for $17.95 per pair and come with foam inserts for added support. Contact Pro-Line, P.O. Box 456, Beaumont, CA 92223 • (909) 849-9781; fax (909) 849-2968

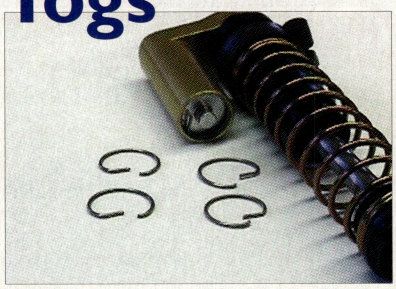
Sleek Celica in Scale



You love it or you hate it, but there's no doubt that Toyota's new Celica is a head-turner. HPI has reproduced the stunning lines of the Celica in 1/10-scale with the release of its Toyota Celica 200mm body (part no. 7440) for wide electric and nitro sedans. Like all HPI bodies, the new Celica comes complete with a huge decal sheet made from flexible vinyl. Included on the sheet are decals for window lines, headlights, grills, taillights and lots of HPI logos to show your loyalty. Even dimples for mounting and a large racing wing are included. The price is $24.

For more information contact HPI, 15321 Barranca Pkwy., Irvine, CA 92618 • phone (949) 753-1099; fax (949) 753-1098.

Reservoir Togs



Progressive Suspension has improved its original Piggy Back shock reservoir design by offering its new G-Clip kit. The new clips make building and maintaining the Piggy Backs an easier task, as they can be removed/installed using a pick or small hobby screwdriver. A set of four G-Clips sells for $2.50.

Part no.: PBR-1506

For more information, contact Progressive Suspension USA, Inc., 11129 Ave. G, Hesperia, CA 92345 • phone (760) 948-4012; fax (760) 948-4307.



This new Traxxas truck, code name NR One, is a fully hopped-up Nitro Rustler. The truck comes with chrome wheels, a metal tuned pipe, full ball-bearings, a high-torque steering servo, and a five-color painted body! Talk about one hot truck! We'll keep you posted as soon as we get more info. Look for a full-test soon!

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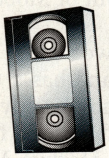
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news flash!

Spashett/Trinity Win 2000 1/12th Euro Champs


The large indoor carpet track inside the Peter-Paine Sports Centre.

The annual 1/12th Euros were held from March 17-19 in Boston on the East coast of England. The race took place in the Peter-Paine sports center and the whole European 1/12th elite was present. Everybody was excited about who would win this prestigious event.

The favorites for the title and top positions were the current World-Champion David Spashett from Trinity, Andy Moore, Markus Mobers and Sakke Ahoniemi for Corally, and for Associated it was the well-known Phil Davies and last year's third from the Euros, Mikael Fransson.

This was the first time that the Euros were held according to new rules with just four cells and 3000mAh batteries. The track wasn't too big, so it was perfect for four-cell 1/12th with some tight turns, sweepers and a 20-meter straightway. The organization did a good job, as usual at races in England. The only bad thing was the terribly small turnout of only 47 drivers!



The A-Main drivers on the stand.

Practice

The track didn't have much traction in the beginning, but it was already easy to see who had done his homework properly and found a good car setup. David Spashett and Andy Moore were very fast from the beginning and showed their title ambitions.


David Spashett's winning Trinity SB12.

Qualifying

As already seen in practice, David Spashett was in the same very good shape as when he won the previous Euros and the US-Indoor Champs in Cleveland. He set his Switchblade on TQ from the first to the last qualification round and was the only driver who was able to make 36 laps. The gap was fairly big to the rest of the field, which was much closer together. Second was David's teammate Andy Moore followed by the fastest Corally of Markus Mobers and the rest of the gang. Some known drivers found themselves in unusual positions, especially past Euro-Winner Erik Jonk and the third of last year,s Euros Mikael Fransson who were both only qualified for the B-final!

Finals:

In the first A-final, Spashett showed the competition the back of his car and easily won. Andy Moore and Markus Mobers were battling for the runner-up position and Mobers closely took the second position in front of Moore, Simo Ahoniemi and Mikael Nilsson, who came from ninth !

In the second final, Spashett did it again and won the second leg without any problems. With this win, Spashett became the new European Champion. Mobers was clearly in front of the rest of the field and finished second followed by Moore, Griffiths and Konig, who came from the last position on the grid!

In the third final, it looked the same as in the previous finals with Spashett just driving away from the competition. Mobers and Moore battled for the second positions, as both could still finish second overall! It looked good for Mobers until the five minute mark when Moore passed him. Spashett overdrove his car in this last final and dumped in the last lap, allowing Moore and Mobers to pass him! So Moore won the third A-final in front of Mobers and Spashett.

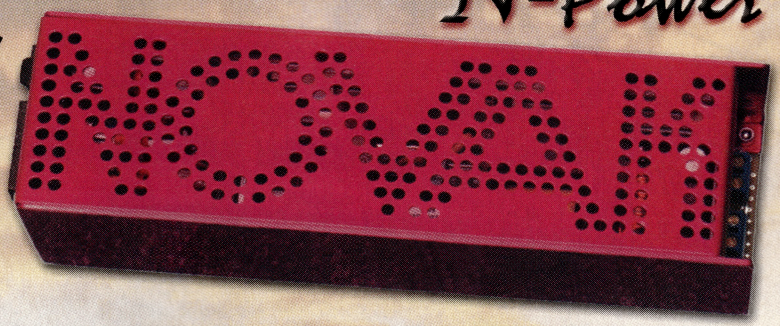
David Spashett won his fourth 1/12th title in a row and has a total of seven European titles now! Andy Moore finished a great second close in front of the fastest Corally of Markus Mobers; these two were tied on points.◆

1/12 EURO-CHAMP WINNERS

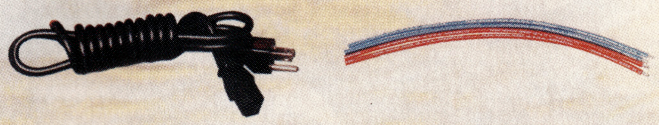
Name	Car	Motor	Batteries	Speed-Control	Body	Total
David Spashett GB	Trinity Switchblade	Trinity D4 9x237.0	Trinity 3000	LRP IPC-V7.1	Protoform Nissan	22
Andrew Moore GB	Trinity Switchblade	Trinity D4 10x536.0	Trinity 3000	LRP IPC-V7.1	Protoform Nissan	43
Markus Mobers D	Corally G3	Corally 9x235.0	Corally 3000	LRP IPC-V7.1	Andy's Mercedes	44
Mikael Nilsson S	Corally G3	Corally 10x231.0	Corally 3000	Advanced	Corally Nissan	105
Andy Griffiths GB	Corally G3	Corally 10x233.0	Corally 3000	GM V12	Corally Nissan	116
Ryan Coxall GB	Trinity Switchblade	Trinity D4 10x536.0	Trinity 3000	LRP IPC-V7.1	Protoform Nissan	127
Simo Ahoniemi SF	Corally G3	Corally 11x234.0	Corally 3000	LRP IPC-V7.1	Andy's Mercedes	138
Sakke Ahoniemi SF	Corally G3	Corally 11x235.0	Corally 3000	LRP IPC-V7.1	Andy's Mercedes	149
Reto Konig CH	Associated 12-L3	LRP Fusion 10x236.0	LRP 3000	LRP IPC-V7.1	Protoform Nissan	154
Phil Davies GB	Associated 12-L3	Reedy Fury 11x237.0	Reedy 3000	LRP IPC-V7.1	Protoform Nissan	160

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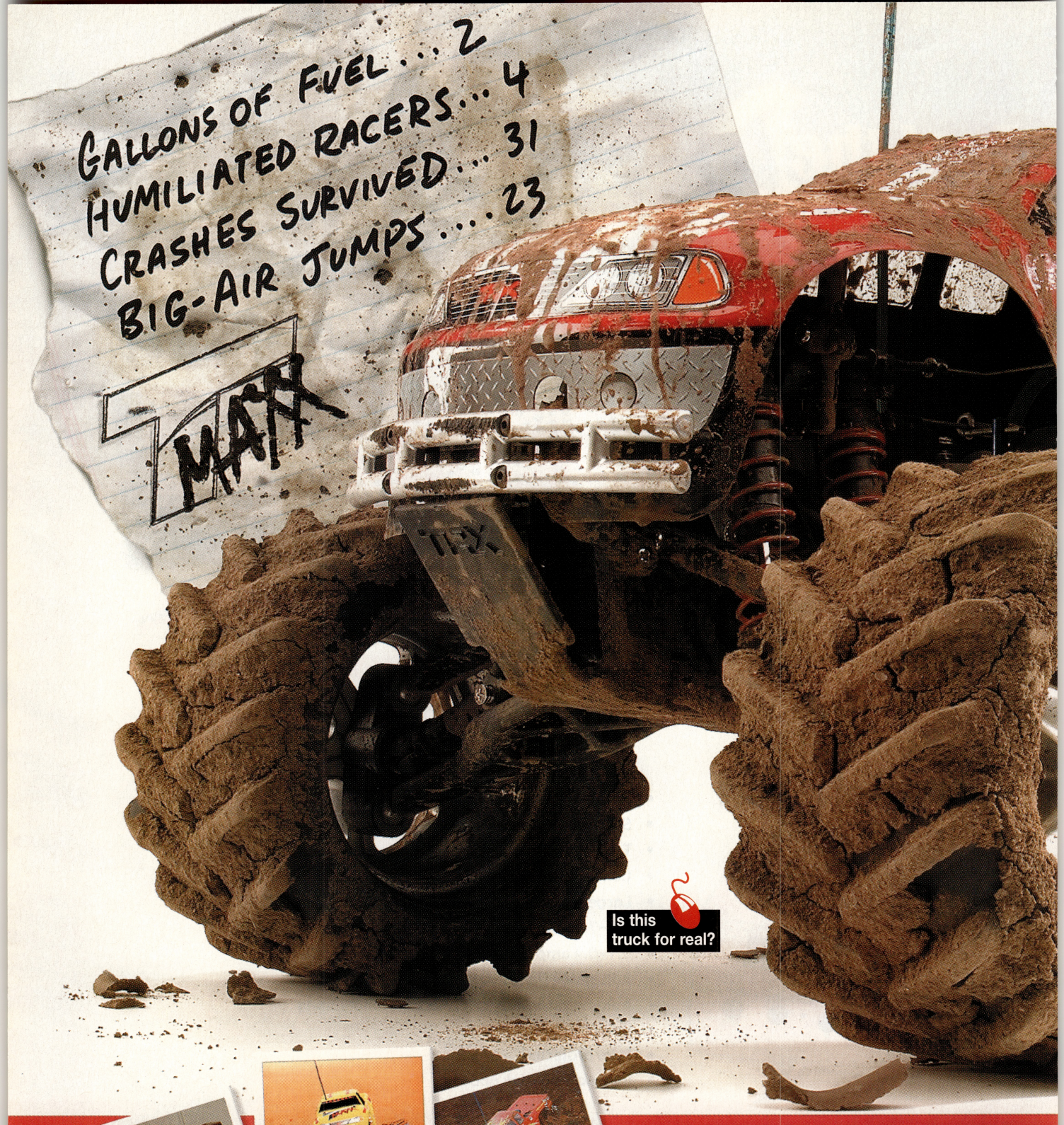
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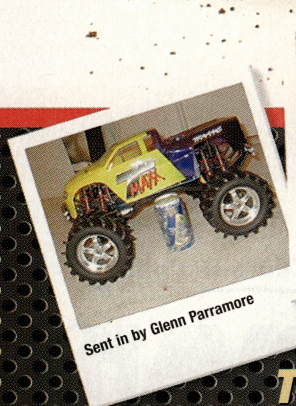
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Xtreme R/C Cars magazine

"(T-MAXX) breaks all the 'rules' of monster truck design, yet out-performs every monster truck that preceded it."
R/C Car Action magazine

"...no other vehicle we've tested, regardless of scale and horsepower... was as capable as the T-MAXX!"
R/C Car magazine

What is this?

"You people have re-written the book on customer satisfaction and standing behind your product!"
Jeremy Cox, via e-mail

"All I can say is 'I love this truck!"
Rob R., via e-mail

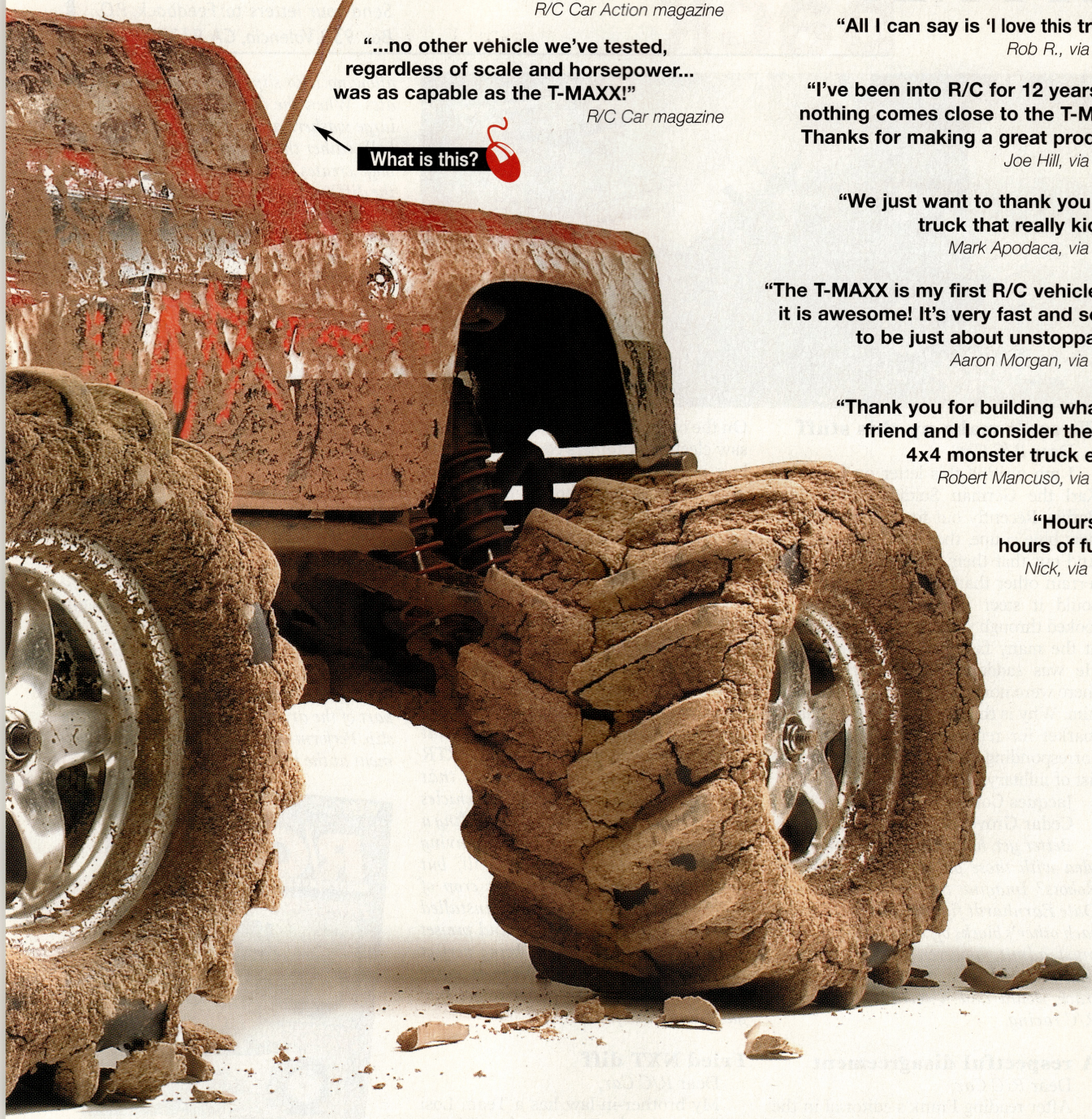
"I've been into R/C for 12 years and nothing comes close to the T-MAXX. Thanks for making a great product."
Joe Hill, via e-mail

"We just want to thank you for a truck that really kicks!!"
Mark Apodaca, via e-mail

"The T-MAXX is my first R/C vehicle and it is awesome! It's very fast and seems to be just about unstoppable!"
Aaron Morgan, via e-mail

"Thank you for building what my friend and I consider the best 4x4 monster truck ever!"
Robert Mancuso, via e-mail

"Hours and hours of fun!!!!"
Nick, via e-mail



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feedback

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We can't make up this stuff

Dear *R/C Car*,

I am writing this letter on behalf of Karl the German Soldier and Malibu Barbie. Recently out for a drive in their new blue coupe, they were chagrined to find out that their car could not handle terrain other than the kitchen floor, nor could it steer in forward mode. Karl looked through your magazine with envy at the many fast and tractable vehicles. He was saddened when learning that there were none that could accommodate him. Why is this? I could imagine a large market for replica race cars with their corresponding driver figures for one. The list of military vehicles is long.

Jacques Cottier

Cedar Grove, NC

Better yet, how about combining your idea with those old Rock 'em Sock 'em Robots? Imagine tiny Jeff Gordon and Dale Earnhardt figures that could knock each other's blocks off after each race? We must admit, however, that the idea of tiny broken bodies strewn over the race track would add a certain...realism...to R/C racing.

A respectful disagreement

Dear *R/C Car*,

After reading Frank's editorial in the May '00 issue, I had to write and disagree with his opinion on which is better for a beginner, gas or electric. He states that even though he acknowledges that electric is usually the best bet, that he would still recommend nitro because of the added run time, noise, etc. I worked in a hobby shop for over four years, and I can tell you that by far the majority of problems we fixed were with nitro vehicles, and just about every one of those problems had to do with engine failure caused by lack of experience. I can tell you that after a couple of blown engines, most people started looking for a new hobby. On the other hand, the only time we ever saw electric customers come back was to buy replacement parts like suspension arms. At least they were having fun; the nitro guys that had problems in most cases had little if any.

Danny Maio

New Rochelle, NY

We admit that by their very nature, electric vehicles are inherently more user-friendly than gas. But you have to give the people what they want, and judging by the sales figures of such companies as Traxxas and DuraTrax, many first-time buyers prefer gas. Look at what Traxxas has accomplished with its RTR gas trucks, and you'll notice that DuraTrax's entire line of RTR vehicles are entirely gas-powered. Sure, building a gas car or truck from a kit—and having success with it—takes some skill, but when you consider the current crop of RTR gas vehicles that have pre-installed radio gear and carb linkage, and pre-set carbs that are very close to being perfect right out of the box, you have to agree that it has never been easier to get into gas—and have fun doing it.

Fried NXT diff

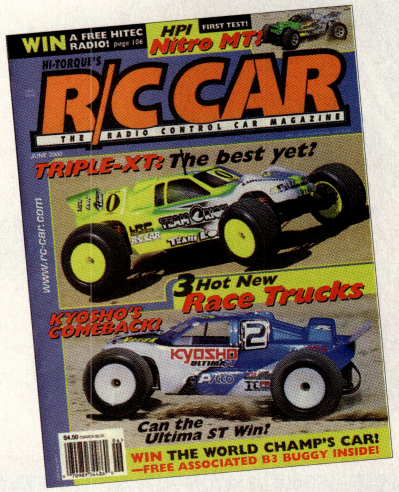
Dear *R/C Car*,

My brother-in-law has a Team Losi NXT gas truck. We were installing a new engine and checked the tranny and diff, which didn't feel at all right. We pulled the tranny apart and found that the balls in the diff gear were melted to the gear! We also noticed that the tranny had no lube in it (we bought the truck used). So far, we have replaced the diff gear twice even though we lube the tranny. How do you tell if you got the diff adjusted right?

Jeff

via *R/C Car* online

Jeff, the cause of your problem is that the truck's diff is set too loose, which is allowing it to slip when the truck accelerates. When the diff is allowed to slip, the large washers are slipping against the diff balls rather than gripping them. This slippage creates a lot of friction, which causes the diff balls, the washers and even the plastic diff gear to get very, very hot. The diff can actually get so hot that the balls will melt the plastic gear. To solve this, you'll need to rebuild the diff. This means buying a new diff gear, new diff washers and new diff balls. While you're at it, go ahead and get a new thrust bearing and thrust washers (the small washers that go inside the diff outdrive). Once you've rebuilt the diff, you need to set it tightly enough so that it cannot slip. Check this by first tightening the truck's slipper clutch all the way so that it can't slip. Next, hold the spur gear and the right-side rear wheel and try to turn the left-side rear wheel—it should be very, very difficult to turn. If you can, tighten the diff a little at a time until it's nearly impossible to turn the left wheel. Once you've set the diff, begin loosening the slipper clutch while performing the same steps as you did for checking the diff's setting. Loosen the slipper until it is somewhat difficult to turn the left wheel. Remember, the slipper is the only part of the drive train that should actually slip. Perform the final slipper clutch adjustment at the track. ◆



Don't be a spectator! ***R/C Car*** *is your magazine, so get involved. Send your letters, comments and questions to the editors at Feedback, c/o* ***R/C Car*** *magazine, P.O. Box 958, Valencia, CA 91380-9058. You can also email Frank at evaone@pacbell.net and John at doog1@earthlink.net.*

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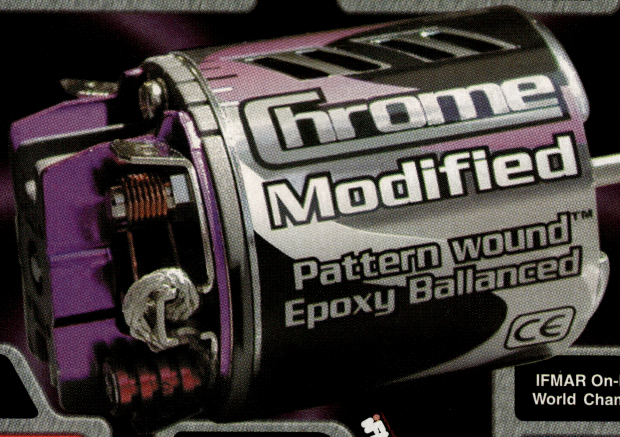
David Jun
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Richard Saxton
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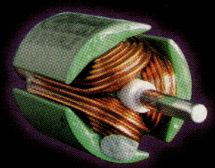
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GOT SPEED?

From: COOL RACER (fastguy@gotspeed.com)
To: JOE RACER (joeyr@racenut.com)

YO JOEY,

Bro, at the next club race, get ready to see how it's done. I got the new "SPEED SERIES" body from DEANS. That's right they're finally here!!!

Here's the view I'll be seeing during the race. You'll see it in the pits. Sorry dude, I didn't get a shot of your view, you know THE BACK OF MY TRUCK!

Gotta charge bro – Gotta make room on the shelf for this weekend's trophy.

Later,
Cool Racer



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Trash

racers write

by Richard Saxton

I'd like to start out this column by saying that I am getting married to Angie Edwards, and her beautiful little girl Madison. It's kind of like an RTR kit. I love them both very much!

Well, it has been a while so lets get to it. I have been a traveling fool since the last time I wrote an article. I went to Columbus, Ohio, for an indoor gas race that was a lot of fun. I qualified fifth in gas truck and second in 1/8th. The track was small and you had to run 1/10th-scale truck tires on your 1/8th or you were way off of the pace. Rob Schaffer was on the gas in 1/10th—he borrowed a truck and was on it and TQed. In the main I was doing all right until I forgot to turn at the end of the straightaway and popped a ball cup off. Rob was in control of the race until he forgot to turn and he broke. Adam Drake ended up winning; I finished fifth. In 1/8th, Josh Cyrul TQed and I was second. In the warm-up I ran into the back of a car and broke a graphite shock tower; needless to say, I run aluminum now. Josh ended up winning. Thanks to the club for holding such a cool race. One thing I did notice was that there were a lot of people with the Thunder Tiger 1/8th-scale car that was way cool. Also the rental car in the snow was good too.

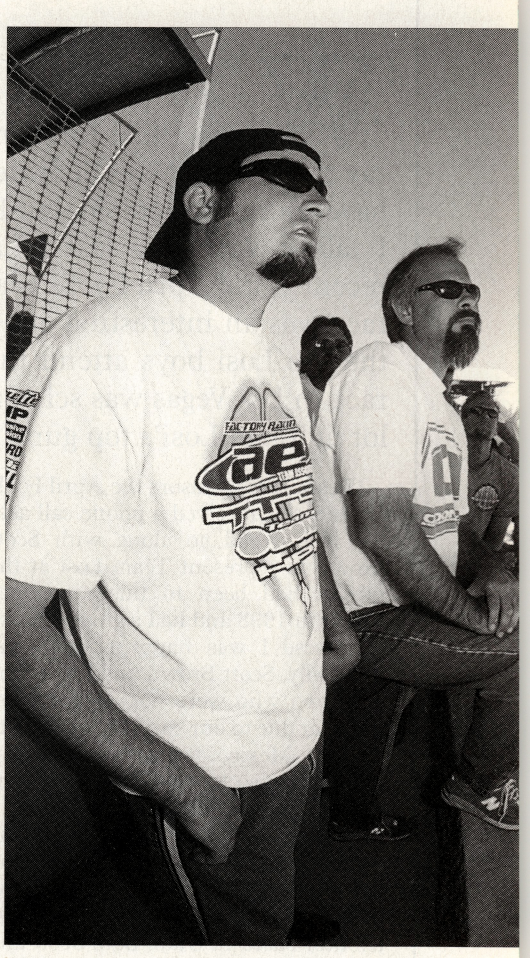
Next we went to the Florida Winterchamps. I don't have much to say except that I got spanked. Matt Francis was on it—I think that was the best I have ever seen him drive. He should have walked out of there with two firsts. The hotel was exciting—we played shoot the tire in the six pack container, needless to say I lost about a hundred and thirty bucks to Daren Westman but then stole it back from him in twenty-one! By the way, Daren, you did have twenty one—wasssuup!

Then Regan and I were off to Hemet; it has been a while since there has been a big gas race at Hemet. Joey and all of "The Dirt" people made an awesome track—it had berms, doubles, triples and an over/under; it was great. The dirt was so awesome! There was major traction and a lot of ruts. In 1/10th I qualified second and Squirrel TQed. In the main Squirrel didn't even start. He shoo-gooed his servo in and that was that. I was doing pretty well until I ran out of gas. Chad Bradley won with Woodscrew second and I was third. A 13-year-old named Jared Tebo bumped all the way from the last main into the A and finished fourth overall! In 1/8th I was TQ. I had a great battle with Bradley and Woodscrew all the way down to the last 10 minutes, and it was really close. I ended up winning with Chad second and Woodscrew broke.

Last but not least, we just had the Silver State race here in Las Vegas; the track was tight, rough and blue grooved—all the things an off-road track needs. The winds on Thursday and Friday were brutal, but Saturday and Sunday was pretty nice. In gas truck, my first round wasn't so good and the way the scoring was set up, it killed me. I ended up ninth qualifier and the top eight go directly into the main, so I had to bump up. Well, that didn't happen, so I got to watch my first gas truck race in a long time. The 13-year-old sensation, Jared Tebo, was TQ. How awesome is that! He and his dad are a role model for what R/C is about—having fun. In the main, though, Squirrel used tabs on his servo this time and he schooled the field with the prototype chassis and parts from Associated—actually, first through fourth were all prototype Associateds. My truck was awesome, but I just had one of those weeks. In 1/8th-scale I was TQ—my fastest time of the week was eleven seconds faster then the second-place car.

There were a lot of newbies in the 1/8th class—Matt Francis, Squirrel, and Adam Drake. Adam did the best—he qualified second, which is awesome for his first 1/8th gas race.

I am proud to say that we had three Thunder Tigers in the A-main. In the main I got a clean start while the rest of the pack was fighting over positions. By the ten-minute mark I had lapped every one in the field except for Billy Easton who was in second, but I was on his back door. I came in for my third pit stop and stalled my motor, got going and Billy was all over me; he passed me and I passed him back—we had a great race going. Then I hit a rock with my flywheel and that was it. I got going again but was a little upset, and popped



a tie rod off soon after so I couldn't steer my car and I cut part of the track to get back to the pits. I got going again and with five minutes to go third place was right in front of me. I ended up passing him and getting the spot.

After the race it was brought to my attention that I had cut the course, so I forfeited third place. I don't know if that was right, because if you look at the lap it was way slower than a normal lap—I didn't make time by cutting this part of the track. Actually, I lost a lot of time in the pits being fixed. But if that's how someone wants third after someone has flamed twice and broken once and then still got beat by me, then they want it worse than I do. If I can't win, I don't want any other spot! But it was a good day for Thunder Tiger, Champion tires, O'Donnel fuel and motor, because Billy ended up winning. I think our tires made a big difference that day, they were that awesome! That's about it for now—I'll talk to you all soon! ●

racers write

by Jimmy Babcock

What's up, everyone! Wow, it's been a real busy past couple of months for me and the whole Team Losi crew. The frequent flyer miles are stacking up, to say the least! This is definitely one of the busiest race years I have ever encountered, but I'm enjoying every bit of it! Since I talked with you last I have been to a few races—most recently, the April Fool's Classic in Magna, Utah. This year's race was an interesting one to say the least. Usually most of the top Losi boys attend this event but somehow a big gas race in Las Vegas was scheduled for the same weekend and a lot of Team Losi's top guns had to go to the gas race instead.



Team Losi sponsors the April Fools Classic, so I received a phone call asking if I would go along with Scott Brown to represent Team Losi at the race. I had been to this race once before in 1998 and had a great time, so of course I was happy to go back. Ironically, Scott Brown and I were the only two who were not at this event last year due to our spring break trip to Cancun, Mexico. It was kind of a last-minute trip so I rushed to get my gear packed and headed off to the airport.

We arrived in Utah on Wednesday morning and were excited to see and run on the track. Our first stop, however, was at HRP, which is an R/C distributor based in Utah. Both Scott and I run hobby shops and deal with this distributor all the time and wanted to stop by for a visit. After our stop, we headed to the track for some practice. The track as always was in perfect shape and is becoming one of my favorite race facilities anywhere! We basically practiced for the next few days, getting things ready for racing on Saturday morning. I felt real confident since my Losi cars were working awesome in practice.

For some reason I was in a mood and decided to race five classes and pull ironman duties for the weekend. The first day of qualifying was great for me and I ended up TQing four out of the five classes I was entered in. This was too good to be true and I was stoked! They had two qualifiers on Saturday and one plus the mains on Sunday. Now Sunday rolled around and my cars just didn't feel as good as they were on Saturday, but I was still going pretty fast. After all was said and done, I top qualified in 2WD Pro Stock, Pro Stock Truck and 2WD Mod. My teammate Scott Brown top qualified in Mod Truck and 4WD Mod. I ended up winning both stock truck and car but had some problems in the mod mains and finished second in 4WD, third in 2WD, and third in Mod Truck. I had a great time in Utah and definitely will be back for next year's race.

Theresa and her staff did an awesome job with the race and I want to personally thank her and everyone at Intermountain R/C for being such gracious hosts and treating Scott and I so well. Also congrats to my teammate (and soon to be proud daddy) Scott Brown on winning all three modified classes. Well, that does it for racing updates this month. There are still quite a few more races coming up for me including the NORRCA gas nationals in Bakersfield, California, and the ever-rapidly growing Houston Invitational in May.

To end this month's column I want to talk about a topic that is very important to me, and that is aggressive driving. Now, at one point in time all of us have been accused of making a banzai pass or driving into others during a race. I am no saint and have done this accidentally on several different occasions. As a matter of fact, most top drivers have been guilty of this and that's just part of racing. Racing R/C can become intense at times, and everyone has one similar goal, which is to win. I mean if you really think about it, you have ten cars going around the track and there is bound to be contact sooner or later. Now preventing this problem is almost an impossible task, but there are ways to limit the contact. I have a few tips that I have learned to help me limit my incidental contact on the race track and I will share them with you in hopes of maybe helping you as well.

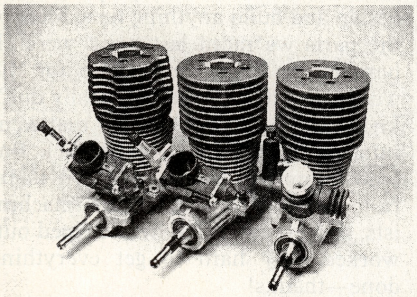
First is letting faster traffic through during qualifying and mains. Trust me when I say that I have had to move over while being lapped on several occasions and it is not fun, but if you really think about it, you are getting lapped, so you obviously are not the fastest on the track and should pull aside to avoid unnecessary contact. Second, if you are following someone during a race then more than likely you are a little faster. While following you must be careful not to run over the car in front of you and to avoid this you may have to let off the throttle a little earlier than usual. More times than not the driver in front of you will get nervous with you all over him and end up wrecking, giving you an easy pass. Finally, try and be patient when you drive. I have seen a lot of drivers try to make a banzai pass as soon as they catch the car in front of them without even waiting for a hole. Patience equals prosperity and you will be rewarded for being patient and letting the race come to you.

Well, that just about does it for this month's column. I want to thank everyone out there for reading my columns and giving me positive feedback on them. It really means a lot to me when someone says that my articles helped them or that they learned a lot from something I wrote. Once again thanks for your support and I will see you at the races! ◆

PARIS RACING

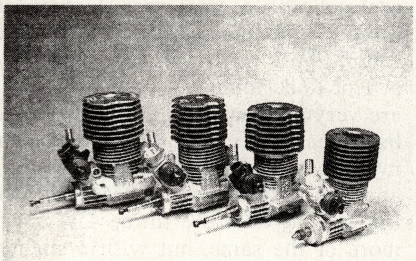
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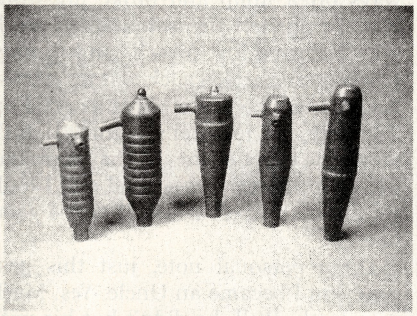
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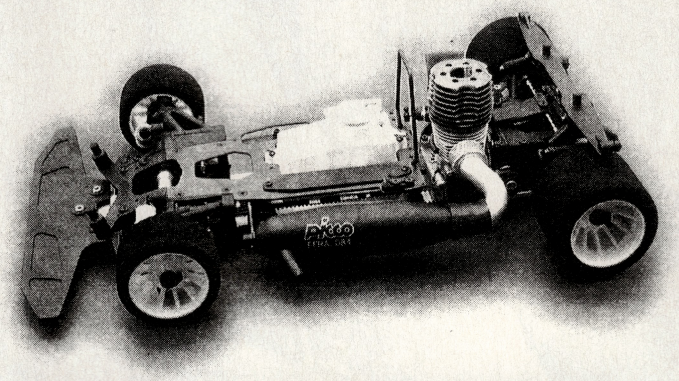
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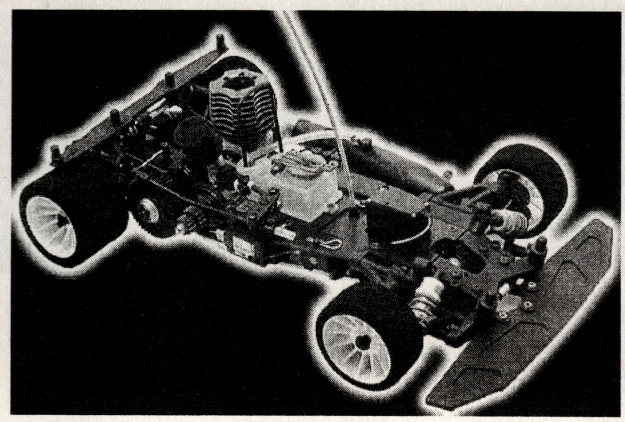
PARIS PIPES

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News flash - TurboRing 1/8 pipes coming this summer!



PARIS PICCO 1/8 SCALE INTEGRA

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PARIS PICCO 1/10 SCALE INTEGRA

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racers write

by Matt Francis



I don't even know where to begin. There has been so much going on lately, I guess I will start with the latest and work backwards.

Just this past week I was in Las Vegas for the Silver State Nitro Challenge. As most of you know, Losi premiered a new Gas Truck, which I will call the XXX NT. This may or may not be the name, but for reference purposes I will call it this. Anyway, the truck worked excellent. We had seven drivers running the truck, including myself, BK, Jason Ruona, Travis Amezcua, Adam Drake, Ron Rossetti and Todd Hodge. This was the first time we got to drive the truck, and most of the guys didn't finish building their trucks until Wednesday afternoon. So with only a day and a half on the truck and track, we went racing. I would really like to get into details about the truck, but I was sworn to secrecy. Basically, if I told you I would have to kill you! And I really don't want to do that. So with that said, let me talk about the race itself.

I, along with Gil Jr. and Travis, cruised the new Losi team van into Vegas on Tuesday morning straight to the Silverton Hotel to pick up Adam Drake and Jason Ruona. From there we went to the track and started the long week of thrashing. It wouldn't have been so bad, but there were 40-mph winds all day long. Imagine this; sitting in a junkyard, smelling oil and diesel fuel from the passing trains, getting sandblasted by 40-mph winds, and to top things off, having to eat Jack in the Box every day. The only thing good was that we were racing, and with a prototype truck at that. The racing itself went well. I qualified seventh and Jason Ruona qualified fourth. In the main, everyone ran very well with little trouble. Scott Hughes was the man—he won. I finished fifth followed by Jason in sixth.

The week prior to the Silver State I went down to Losi to help build the new trucks for myself and the rest of the team. Richard Trujillo and Todd Hodge were in Florida for the Carpet Nationals, so I came down to help out. It was kind of cool seeing chunks of plastic develop into a finished product. It takes a lot of time and preparation to design and build anything new. Most of the parts we raced last week were all hand-made. I was only there for the week prior to the race, so I really don't know all the time and energy that went into getting this truck on the track. But I do know that everyone down there, from Gil Jr. to the engineers, machinists, and everyone else who helped out, worked very hard to get everything done—thanks!

Moving on! A few weeks back was the Cactus Classic race at Scottsdale R/C Speedway in Tempe, Arizona. This has always been one of my favorite races to go to, mainly because of the track itself. This was my tenth year attending the Cactus and once again it was a great race. I raced all three Modified classes. I will start with 2WD. I built my car with a setup I use at Hot Rod Hobbies. These two tracks are very similar so I knew this would be a great starting point. Sure enough, my car was dialed and I went on to TQ and win with my brother Mark finishing second and BK third. 4WD was more of the same, but with a slightly different result. My car was dialed right from the start. I set the pace early on and took the TQ. The first main was shaping up well until the last lap, when I negotiated traffic a little too slowly and BK went on by to win. In the second main, I bobbled the first lap, and in the process of catching up I landed sideways off a jump and broke my front end. So this left BK to take the overall win followed by myself and Jimmy Jacobson in third. Truck was up next—Jimmy J was fast all week and ended up TQ with me just behind him. I can't recall the exact events in the main, but BK won, Jimmy was second and I took third. So all in all it was it was a good race.

On a personal note, just this past weekend I became an Uncle. Yes, Mark gave birth. Well, he didn't but his wife Laurie did, to Austin Howard Francis. Austin was born on April 2, 2000, weighing in at 7 pounds 10 ounces. Everything is going well for them and I am sure he will be racing in a couple of years. I am already in the process of building him a car! So until next time—Sacramento Kings for life! ●

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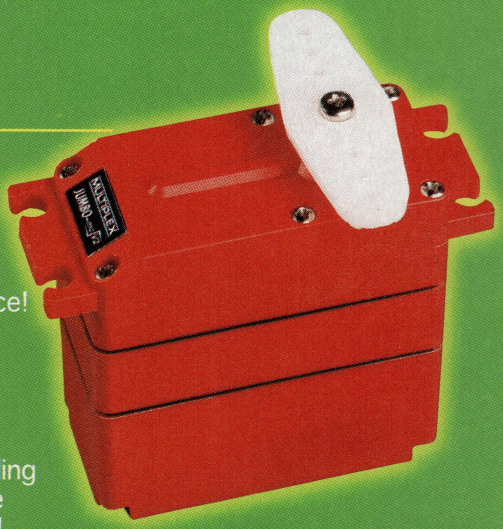
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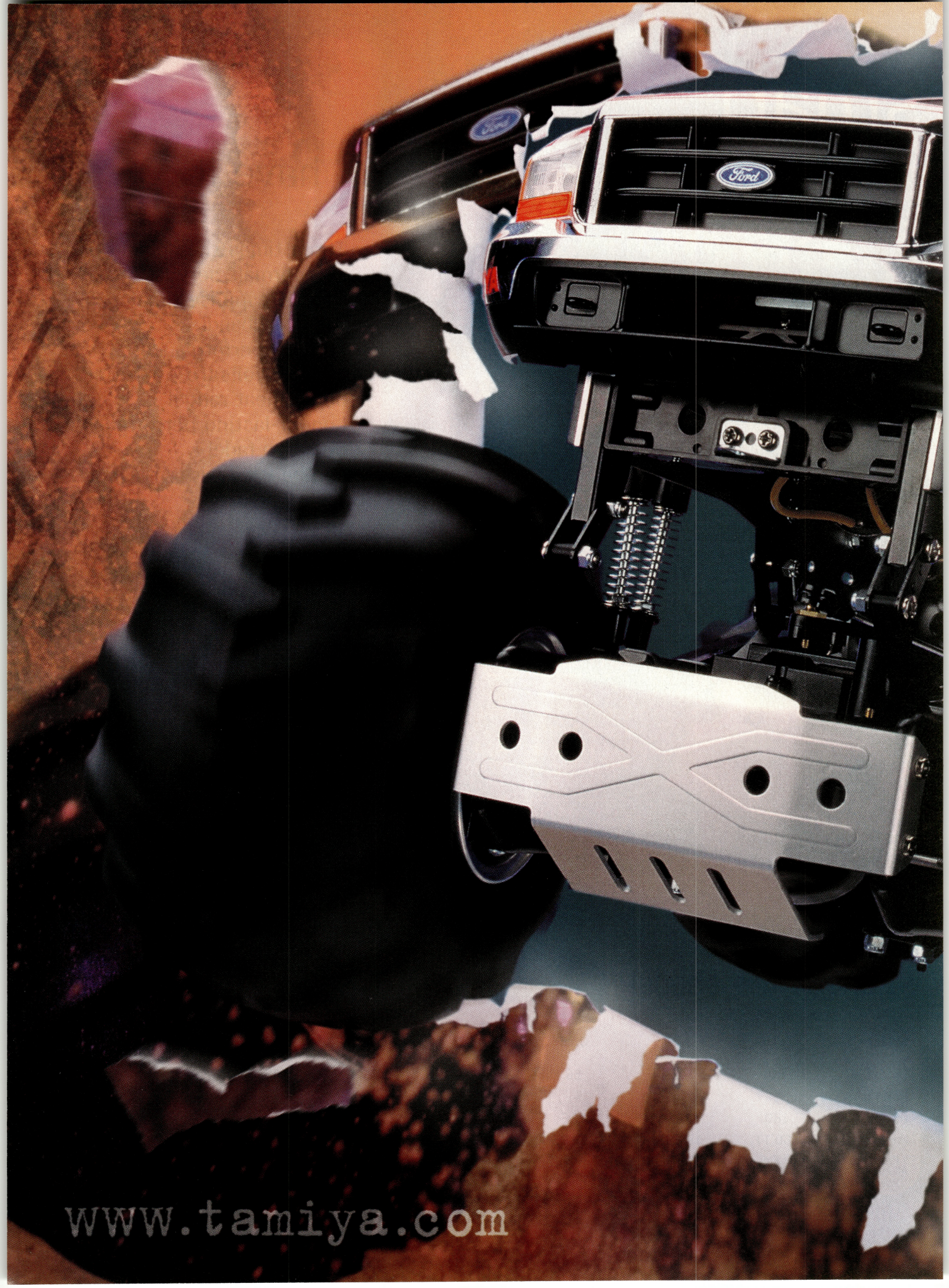
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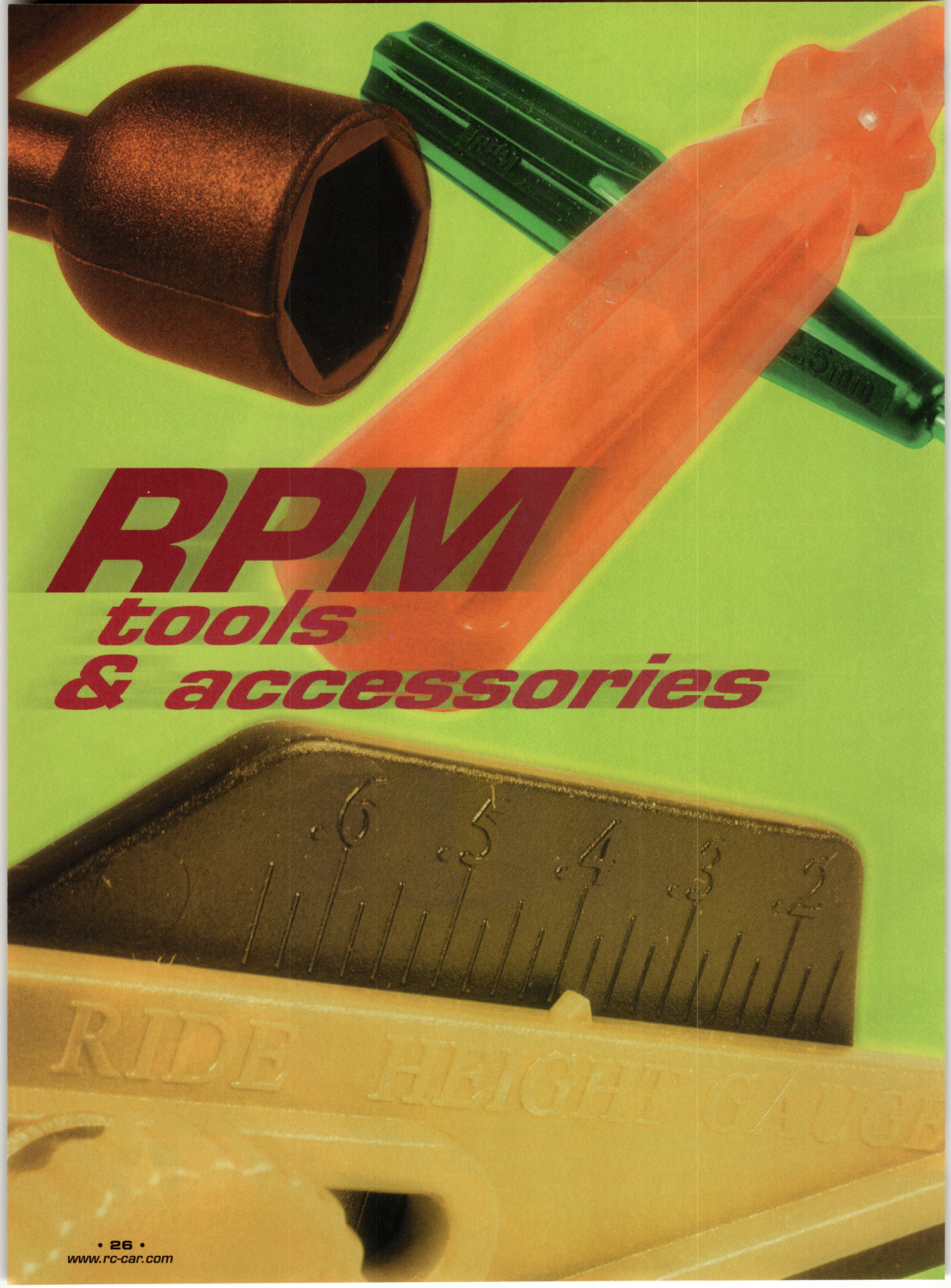
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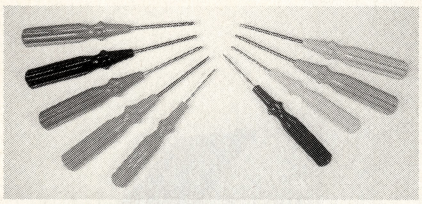

RPM
tools
& accessories
RIDE HEIGHT GAUGE

AFTERMARKET GUIDE TO RPM TOOLS & ACCESSORIES

We rate 'em before you buy!

Richard Royall began producing OEM products for R/C vehicles over 25 years ago. Since then, his company RPM has created its own name in the industry by manufacturing high quality and innovative parts and accessories for virtually every popular R/C kit available. In particular, we have always found RPM's lineup of molded tools and gauges to be incredibly ingenious. This is why we chose to focus our attention on reviewing the entire range of tools, gauges and gadgets from RPM's extensive 20-page catalogue.

TOOLS



RPM Hex Drivers

Once you've built a kit or two, it becomes pretty clear that the little L-shaped Allen wrenches that most manufacturers supply just don't cut the mustard. You need some real manly Allen drivers, such as RPM's Hex Drivers. The Hex Drivers come in both inch-sizes—0.50 (for pinion-gear setscrews), 1/16 (for flat-head 4-40 screws) and 3/32 (for 4/40 socket-head screws)— as well as metric—1.5mm (setscrews from Kyosho, Tamiya, HPI, etc.), 2mm (also fits 5/64-inch screws such as Associated Stealth diff screws), 2.5mm (most motor-mounting screws) and 3mm (Kyosho-style engine-mount screws). Each wrench features a tip made from heat-treated, high-grade tool steel that's been permanently embedded into a color-coded plastic handle that's resistant to oil and impact. In addition, the popular 2.5mm and 3/32-inch sized drivers are available as ball-hex drivers that can be used for hard-to-reach screws. RPM also offers a set of four of the most commonly used Hex Drivers (.050 in., 3/32 in., 1/16 in. and 2.5mm) in a molded case (the case is also available separately).

Part numbers: 80610 (.050 in.), 80620 (1.5mm), 80630 (1/16 in.), 80640 (2mm/5/64 in.), 80650 (3/32 in. Ball Hex driver), 80660 (2.5mm Ball Hex driver), 80670 (3/32 in.), 80680 (2.5mm), 80740 (3mm), 80690 (four-piece set w/stand), 80702 (wrench stand only)

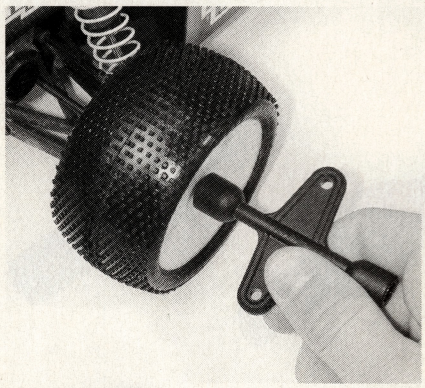
Prices: $8.95; $34.95 four-piece set; $7.95 wrench stand

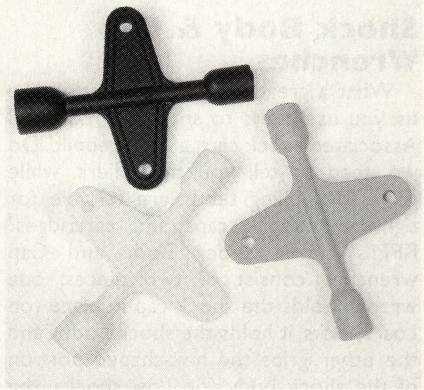
***R/C Car* Rating:** The RPM drivers earn high marks for their easy identification, i.e., their brightly colored handles and embossed numbering. The RPM wrenches are different from most others because their handles are actually molded around the wrench tips. This means that the tip will probably never become loose in the handle, but it also means that if you break a tip, you'll need to buy a whole new wrench. The good part is that the RPM drivers cost about the same as most other manufacturers' replacement tips.

Wheel & Shock Nut Wrenches

For years, Team Associated and Team Losi have relied upon you to buy the appropriate nut-drivers or wrenches to remove or install their wheel nuts. Recently, Associated has included in its kits its own molded wrenches for this purpose, but Losi hasn't yet joined them. Prior to this, you had to either spend $15 to $20 on a pair of drivers, or you resorted to the "hack" method of using pliers to remove and install your wheel nuts. RPM has come to the rescue with these innovative molded wrenches that include sockets for both the front and rear wheel nuts. Both the Losi and Associated wrenches have one end that's a 4-40 nut socket (it also makes a handy slipper-clutch wrench), while the Associated wrench's other end is made for the smaller MIP-style rear-wheel nuts, and the Losi wrench fits the large aluminum wheel nuts used on Losi's stock axles. Recently, RPM has introduced a wrench with 5.5 and 7mm sockets for most sedan wheel and shock nuts.

Part numbers: 70932 (Losi wrench), 70981 (Associated wrench), 7091 (metric wrench)



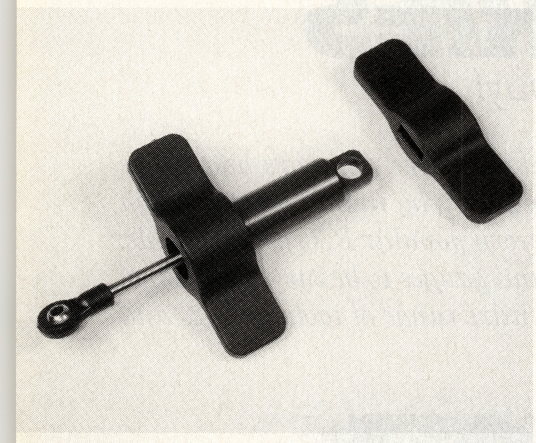


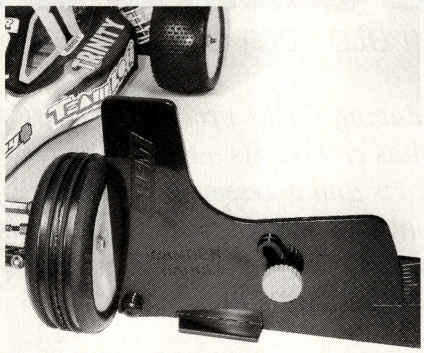
Price: $4.95

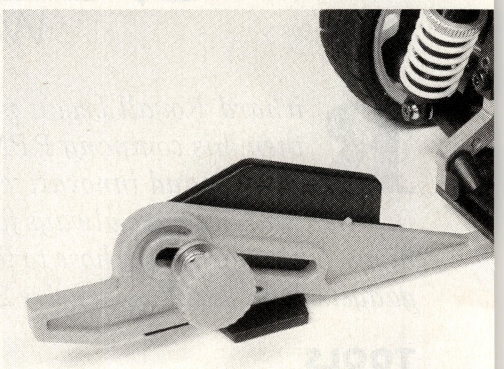
***R/C Car* Rating:** At $4.95, you just can't beat the value that the RPM Wheel and Shock wrenches represent. Sure, they will be more prone to becoming stripped than a regular steel socket, but for most applications, these wrenches provide more than enough torque to tighten wheel nuts. The extra "meat" around the sockets provide additional strength, but make reaching wheel nuts more difficult when cone-style, i.e., stock Associated wheels, are used. We like the color coding that RPM uses—black for Losi, white for Associated and blue for metric—because it makes it much easier to find the right wrench during those fast pit stops.

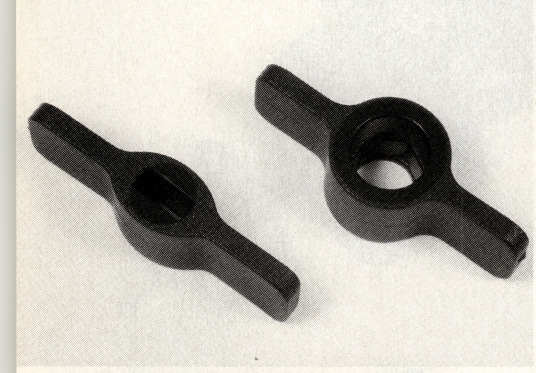
AFTERMARKET GUIDE TO RPM TOOLS & ACCESSORIES

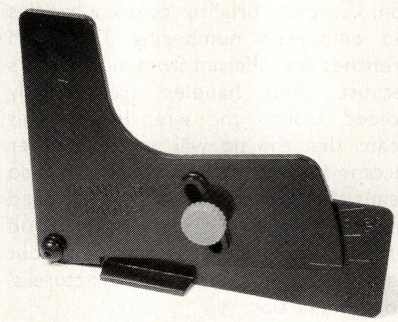
GAUGES

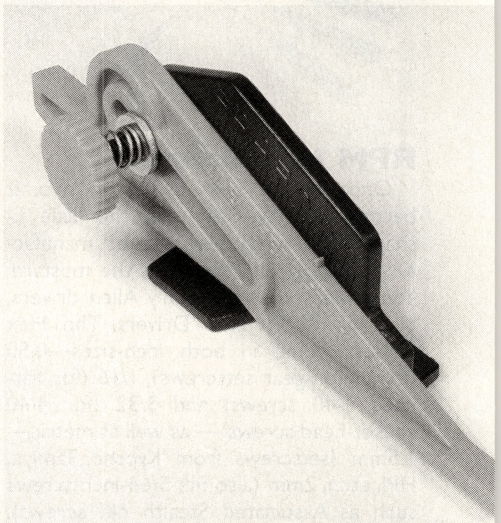












Shock Body & Cap Wrenches

What a great idea! If you're at all like us, you use pliers to snug your Losi and Associated shock caps after a rebuild. Do we need to tell you that pliers, while good for pulling teeth, are terrible for tightening shock caps and cartridges? RPM's clever Shock Body and Cap wrenches consist of two pieces: one wrench holds the shock cap in place (on Losi shocks, it holds the shock body), and the other grips the hex-shaped portion of the shock body (on Losi shocks, the shock-seal cartridge is held). A gentle twist of the wrenches is all that's needed to tighten those shock caps and cartridges to their proper amount. And because the wrenches are made of molded nylon, they'll never scratch your precious shocks.

Part numbers: 70732 (Losi wrench); 7078 (Associated wrench)

Price: $4.95

***R/C Car* Rating:** If you own any Losi or Associated vehicle, run right out and get yourself a set of these wrenches. Better yet, buy two; ours have a way of disappearing from our toolboxes in a hurry! How did we ever live without these?

Precision Camber Gauge

Do you know what camber is? Camber is a term used to describe the angle of your vehicle's tire if viewed as if it were rolling straight toward you. If the top of the tire leans inward toward the center of the vehicle, that tire is said to have negative camber. If the top leans outward, the tire has positive camber. Camber is important because it determines how much of the tire comes into contact with the track—especially when your vehicle corners. A greater amount of negative camber will provide more contact as the vehicle's chassis leans (during severe cornering) and provides more grip to that tire. So if camber is so important, why would you trust setting it using only the eyeball method? You wouldn't if you cared about proper handling. That's why RPM came up with this adjustable camber gauge. Slide the gauge up to your tire to find out just how good you eye is. The gauge can be set to between ten-degrees of negative or positive camber. Positive camber is rarely used, and if you get to ten degrees in either direction, go home—you're not feeling right.

Part numbers: 70992

Price: $9.95

***R/C Car* Rating:** For only $9.95, you can have perfectly set camber. Hey, we'd pay $25! RPM's gauge is the original and in our opinion, it's still the best. With a wide "foot," you're assured of accurate readings even on slightly uneven surfaces such as plywood. Even if you don't race, a properly set suspension will allow you to get the most from your vehicle. The RPM Precision Camber Gauge should be in everyone's toolbox.

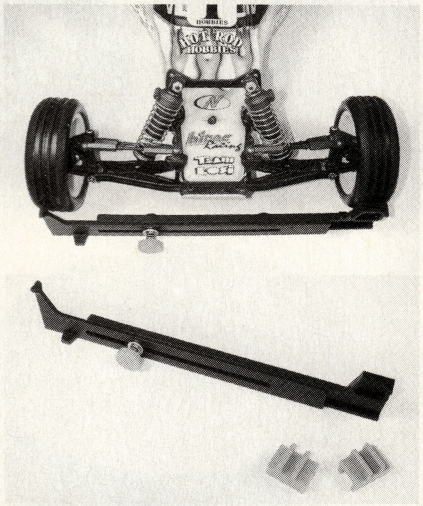
Ride-Height Gauge

Ride-height is a crucial chassis setting that unfortunately is far too often overlooked—even by expert racers. Ride-height affects everything from traction and cornering to how well your off-roader jumps. RPM's Ride-Height Gauges are designed to provide accurate measurements at all four corners of your chassis. Just slide the gauge under your chassis to learn if you're too high or low. Or, if your friend's car is handling the way you wish yours was, just use the gauge to copy his ride height to the tee. Each gauge has a slide that has one side for use with low-riding on-roaders and one for towering off-roaders. A graduated scale on the gauge allows you to make accurate measurements quickly and easily.

Part numbers: 81300 (inch scale), 70992 (metric scale)

Price: $9.95

***R/C Car* Rating:** Many racers and even manufacturers specify ride-height in terms of the attitude of the vehicle's suspension arms or driveshafts. They'll tell you to set the ride height to "dogbones level," or "suspension arms slightly below level." Does this mean that precise ride height isn't important? No. It means that experienced racers have developed a feel for how high their vehicles should be set. We like to make more precise measurements, which is why we like to see exactly how high "arms level" really is. This way, it's easier to reproduce a setting that works well on a particular track.



Toe-in Gauge

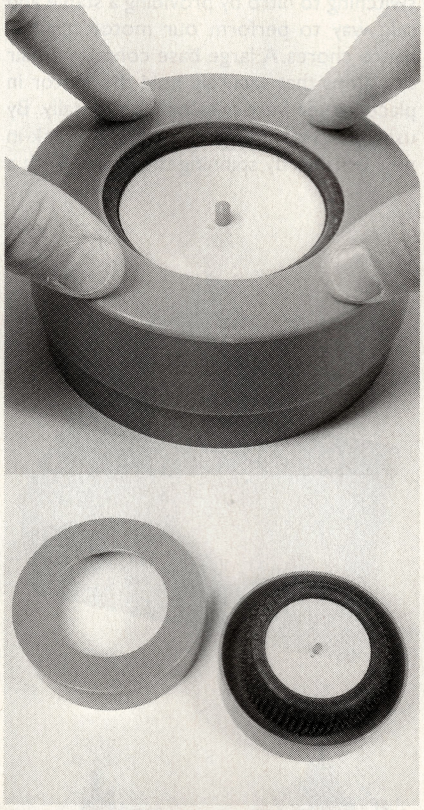
Serious on-road racers use elaborate setup fixtures to set their car's toe-in or toe-out angle. The rest of us must rely on the old eyeball method. Unfortunately, this is a very imprecise practice! RPM's Toe-in Gauge bridges the gap between expensive equipment and inaccurate visual settings. The gauge simply measures the distance between your vehicle's front wheels; if the distance between the rear of the wheels is greater than that of the front, then you've got toe-in. If the fronts of the wheels are farther apart than the rears, well, guess what? You've got toe-out. A graduated scale on the gauge is meant to represent degrees of toe-in or toe-out, but because a precise reading would require a mathematical equation using the exact diameter of the tires, this reading is more of a benchmark than anything else. Still, the gauge provides a much more accurate method than eyeballing, and it can be used with off-road trucks and buggies, plus narrow sedans. Also, the gauge can be used to check the maximum width of your truck or buggy to determine if it falls within ROAR's rulebook.

Part number: 70492

Price: $9.95

***R/C Car* Rating:** The Toe-in Gauge is a pretty neat idea. It is definitely handy when setting your suspension; however, it's more useful in checking that you have toe-in or toe-out than in actually setting the precise amount. We found that adding a bit of lubricant to the sliding halves of the gauge freed the action greatly and allowed for more precise operation. The included riser blocks allow the gauge to be used with vehicles with various tire diameters, such as on-road sedans.

MISCELLANEOUS



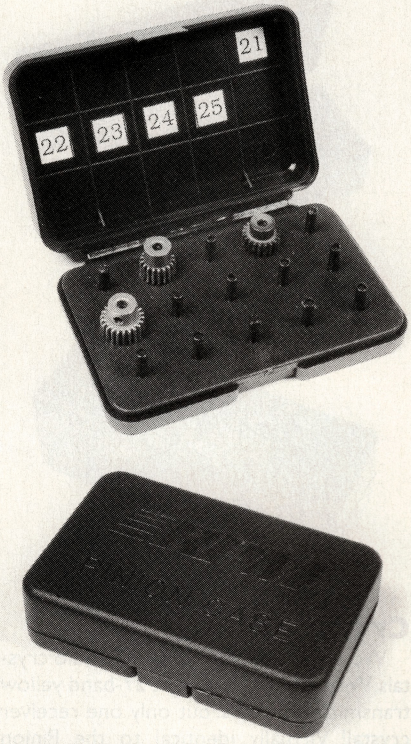
Pro-Bond Tire Fixtures

Along with painting bodies, gluing tires has to be the worst job in all of R/C-dom. RPM's Pro-Bond fixtures can make it easier to get a good glue joint between wheel and tire. There are two fixtures available; one for on-road sedan tires and one for off-road truck and buggy tires. The wheel and tire to be glued are placed inside the main portion of the fixture, which is then covered by a circular ring. Pressing down on the ring pulls the tire away from the wheel at the bead, making it easy to pour glue into the gap. The off-road fixture is designed for truck tires; however, a riser base can be installed to allow the fixture to work with smaller diameter buggy tires. The sedan fixture has a smaller ring that can be added to allow use with mini-sized tires.

Part number: 81270 (sedan/mini fixture); 81280 (off-road fixture)

Price: $8.95; $9.95

***R/C Car* Rating:** To be honest, we don't find the Pro-Bond fixtures to be a necessity. Don't get the wrong idea, however, as the fixtures work awesome with harder-compound rubber tires. But when softer rubber tires are placed inside them, the fixtures don't hold the bead tightly enough and cause a gap. You can fix this by wrapping the tire with rubber bands before placing it inside the fixture, but then again, you could do this without the fixture and save yourself nine bucks. Still, the fixtures allow you to really get glue all the way inside the bead for the strongest joint possible.



Pinion Protector Case

What do you do with your spare pinion gears? If you're like us, they are forever cast into the pit of eternal gunk at the bottom of your toolboxes. Save your pinions from oblivion and save yourself the hassle of buying new ones at each race by getting one, two, heck, even three of these handy Pinion Protector cases from RPM. Each case holds up to 15 pinion gears in total safety. After all, it's easy to lose one tiny gear, but it would be much harder to misplace a 2-1/2x3-1/2 inch case. The cases also come with stick-on gear charts for both 48- and 64-pitch gears and a sheet of pinion identification stickers for inside the case.

Part numbers: 8041 (black); 8041-B (blue)

Price: $8.95

***R/C Car* Rating:** There have been a few pinion holders on the market, but none offer the protection of the RPM case. Even if a pinion should come loose on its shaft, it will still be contained within the case. Also, the RPM case keeps the pinions safe from dirt, debris and damage from being bounced around inside your toolbox.

AFTERMARKET GUIDE TO RPM TOOLS & ACCESSORIES



Crystal Case

We are constantly losing our radio crystals. We seem to have eight 27-band yellow transmitter crystals, but only one receiver crystal! Virtually identical to the Pinion Protector, RPM's Crystal case is designed to hold up to four pairs of radio crystals. The crystals are held by their prongs. Each crystal bay has three holes so that you can stagger the crystals for easier identification of transmitter or receiver crystals.

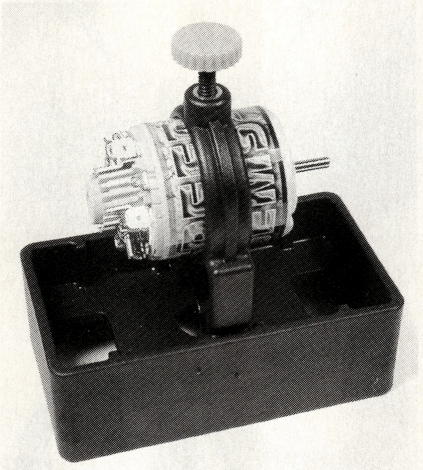
Part numbers: 80392 (black); 80395 (blue)

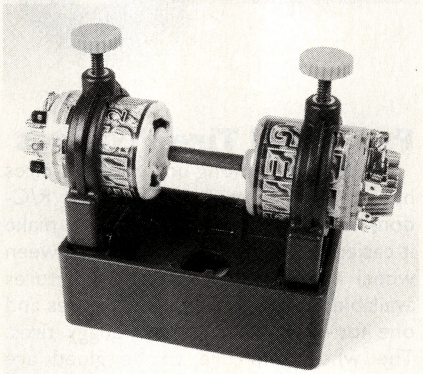
Price: $7.95

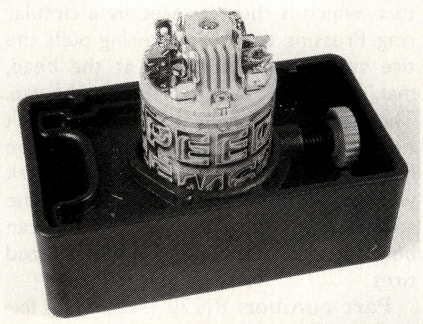
R/C Car Rating: Even if you have just one extra set of radio crystals, you must buy one of these cases. Not only does the case prevent you from losing an expensive and vital piece of equipment, but it protects your crystals from damage. Get one case in black for your 75MHz crystals, and a blue one for your 27MHz.

Motor Work Station

Electric motors need to be maintained in order to provide the best performance and longest life. Brushes need to be replaced, commutators need to be cleaned and capacitors need to be soldered in place. We were getting a little tired of chasing our motors around the workbench with soldering iron in hand as they rolled through a pile of staples, screws and E-clips—all of which got sucked into the motor can by the powerful magnets! RPM's Motor Work Station saved us from switching to nitro by providing a stable and safe way to perform our motor maintenance chores. A large base contains a pair of clamps that securely hold the motor in place either vertically or horizontally. By using both clamps, you can safely break-in new brushes by spinning the motor with a





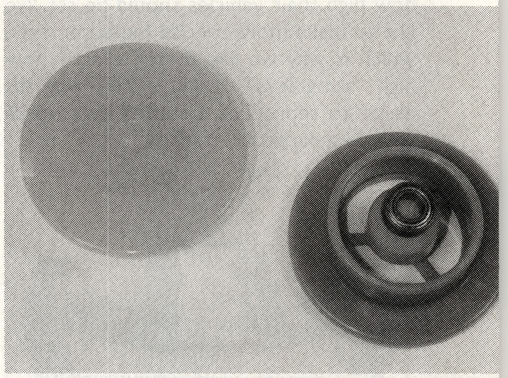


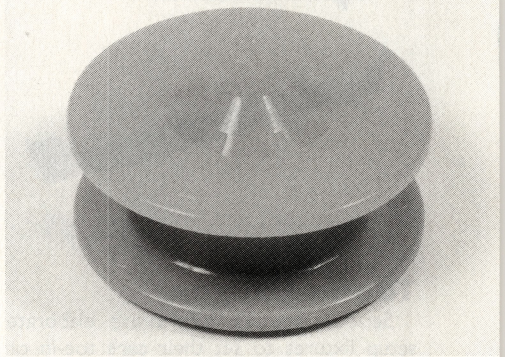
second "slave" motor (a length of rubber tubing is provided to hook the motors together).

Part number: 81292

Price: $12.95

***R/C Car* Rating:** If you just screw around with your R/C vehicles, then you're probably not that worried about your motor's state and the Work Station is therefore pretty useless. But if you compete at any level, motor maintenance becomes more important, and a tool such as RPM's Motor Work Station makes life that much easier. It's worth the dough, plus you can spray it with solvents all day long and it won't even balk! It's like having that extra set of hands you've wished for.





Bearing Blaster

How do you clean your bearings? What's that you say?! You don't! Shame on you! Pull those bearings right now and give 'em a thorough cleaning. Don't know how? Well, RPM has just the thing to make cleaning ball bearings about as painless as possible—the Bearing Blaster. Based loosely on the principles behind Robinson Racing's bearing cleaner, the RPM Blaster speeds up the whole job by not requiring you to unscrew a cap to flip the bearing and clean its other side. Made of RPM's "bulletproof" molded plastic, the Bearing Blaster is the best way to clean bearings.

Part number: 81170

Price: $8.95

***R/C Car* Rating:** Place your bearing (up to 3/4-inch diameter) inside the Bearing Blaster, insert the tube from your motor spray into the Blaster's lid, and spray away dirt and grime from the bearing. Nothing does a better job, and no tool is easier to use. Highly recommended for any R/C vehicle that has ball-bearings. ◆

SOURCES

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To say that Traxxas' T-MAXX has caused a stir would be an understatement. To say that the T-MAXX is a phenomenon is more accurate. At every hobby shop and track we visit, with everyone we talk to, it seems as if the T-MAXX is the main topic. The T-MAXX is so competent on so many levels that we decided it was high time to showcase this truck's many abilities, and at the same time, prove once and for all which staff member has the least amount of sanity when it comes to driving.

T-MAXX OLYMPICS

The stage was set for *R/C Car's* first non-annual T-MAXX Olympics. We had three trucks, three drivers (Frank, ad-sales guy Harvey and tester/painter/-waiting for free stuff guy Robert). Frank was the odds-on favorite, as he has had years of experience building and crashing big trucks. Harvey was also considered to be in contention because of his inexperience—he just doesn't know any better. And finally, Robert was the enigma; he is a very talented racer, but perhaps a bit too fastidious to actually push a truck too hard for fear that he might have to buy a part. All we needed were cool events. As you can see, we're still waiting for that last part. Somebody light the torch!



Wasteland warriors: Okay, would you believe "weekend wussies"? Representing the United States in the first ever T-MAXX Olympics; from left, Robert, Frank and Harvey. No animals were harmed during the filming of this article.





Robert's T-MAXX proved part mountain goat as it came closest to cresting the peak of Mt. Traxxas. The photos don't quite capture the steepness of the incline—the top of the hill was a near-vertical wall!



Robert storms the hill. Getting a good run meant building a head of steam before the base of the hill, then trying to maintain speed as the truck clawed upward toward the top. The T-MAXX's plush suspension allows its tires to stay in contact with the dirt even over huge rocks and bumps.

Frank makes his "ahhh" face as he takes another stab at beating Robert's climb. Harvey passes a kidney stone in the background.



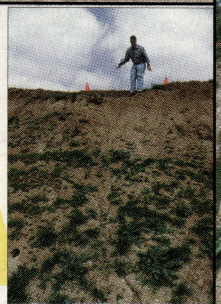
Frank's T-MAXX came close, but couldn't quite match the performance of Robert's in the hill climb. It was really tough to keep the truck from spinning off to the side as it neared the summit.



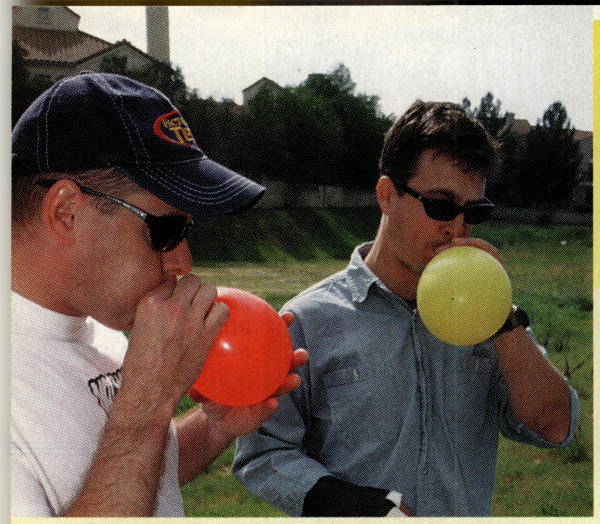
Another Harvey attempt ends in failure. Even more spectacular than the climb itself was the tumble back down the hill. The T-MAXXs took a beating, but never broke.

Event One: Hillclimb

RULES: The rules of this event were simple: We picked a gnarly hill by Doogie's house that no other truck had ever successfully climbed. Each T-MAXX driver took three runs at the hill. The guy who made it the highest on the hill was declared winner and received 10 points. Second and Third Place finishers received five and three points, respectively (this would be the scoring system used for the remaining events as well). Bonus points were awarded for the following: Best cartwheel back down the hill; missing the hill completely (yes, it happened).



Harv climbs the hill just to show how easy it is. Funny, his truck never made it that high. Unfortunately, the photographers were snoozing when Harv made his head-first descent.



But officer: After observing erratic driving technique, local sheriffs administer field sobriety tests. No staff member was found to have a nitro content above the legal limit for R/C operation. Thank you and have a nice day.



We thought this would be goofy, but balloon-tag turned out to be a blast! Frank's truck chases Robert's through the wasteland. Just like an aerial dogfight, winning balloon tag takes nerves of steel (yeah, right) and careful flanking.

EVENT TWO: BALLOON TAG

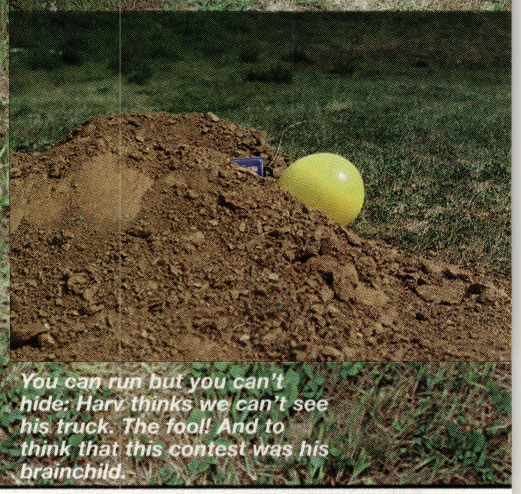
RULES: Three trucks, three little party balloons affixed to each rear bumper. The object? Ram the other driver's balloon and break it (the balloon, not the truck). Added stipulation (caused by Frank): All balloons must be inflated to approximately the same size. Also, balloon must be inflated and not just dangle from the truck's grill.



Bam! Frank's T-MAXX nails Robert's balloon. Our cunning editor made short work of the other two competitors. Makes you wonder what he's like on the I-5!



All right, all right! Game's over man, so quit ramming us!



You can run but you can't hide: Harv thinks we can't see his truck. The fool! And to think that this contest was his brainchild.



Our first attempts at balloon tag had the balloons tied to the front of the trucks. This turned out to be a bad idea, as the only way to pop a balloon was to have a head-on collision. We ended up tying the balloons to the rear bumpers instead; this was safer and more fun, as you had to chase down your opponent. Frank won this round, with Harvey in second and Robert a dismal third.

EVENT THREE: SLALOM

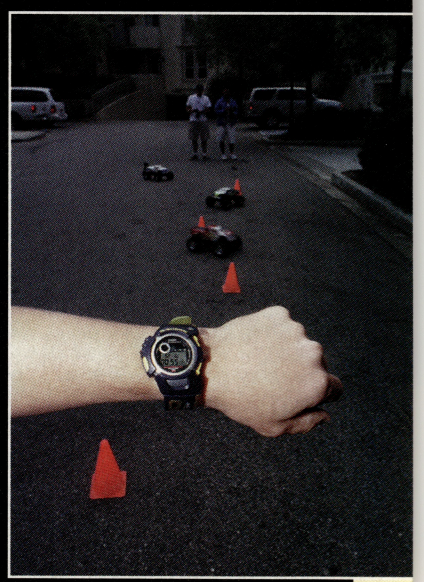
RULES: The object of this event was to see who could pilot his T-MAXX the quickest through a series of pylons. The driver with the fastest time earned the most points. Each driver was granted three tries at the course. Bonus points awarded for the driver who took out the most pylons during his attempt.



Frank's T-MAXX on its way to its 7.8-second run through the slalom. The record would hold, as Robert's best time of 8.6 seconds relegated him to second place. Harvey registered an impressive sub-10 second run, but was disqualified for taking out six of the eight pylons in the process!



As tall as it is, the T-MAXX is surprisingly nimble on pavement. Even with its huge paddle tires, it was fairly easy to weave the T-MAXX through the pylons.



Tale of the tape. R/C Car uses only the most high-tech and accurate measuring devices for its tests. At least the battery was fresh.

T-MAXX OLYMPICS

EVENT FOUR: BACKWARD SLALOM

RULES: Why not? The T-MAXX has reverse, plus it's much harder to steer when the front wheels become the rear wheels!



In case you had forgotten, the T-MAXX goes backwards, too! Trying to navigate the tricky slalom course in reverse was challenging to say the least. Getting the right amount of steering was the key; driving in reverse with the "rear" tires now doing the steering was like trying to maneuver a shopping cart through the baked-goods isle at 40mph.

T-MAXX OLYMPICS



Pull up, pull up! Lucky for us that the T-MAXX is nearly indestructible. No, actually lucky for Traxxas—they didn't have to receive a whiny phone call on Monday morning from an editor asking for spare parts.

EVENT FIVE: FREESTYLE JUMP

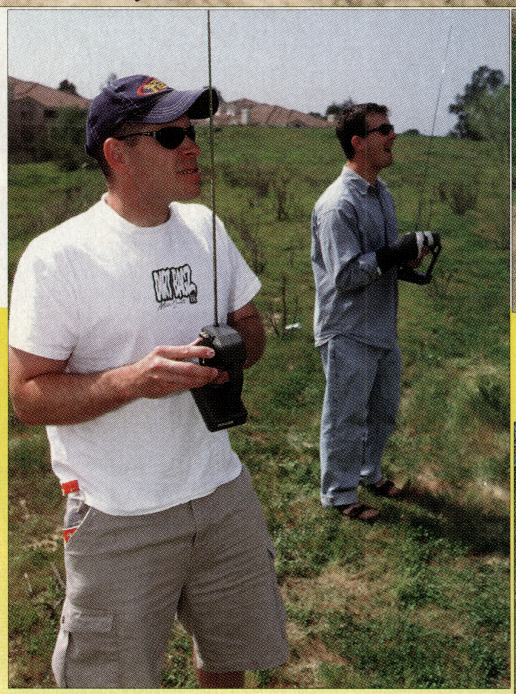
RULES: This was a two-part contest. The first portion involved distance, with the most points awarded to the driver who could launch his T-MAXX the furthest distance. The second "freestyle" portion was added after we watched Harvey perform his first jump. The boy just has style. He might not land it, but he can get his T-MAXX pretty darned sideways. Does he mean to do this? Probably not, but it sure looks cool. Bonus points for loop-de-loops (no driver successfully attempted this stunt. Did I say "successfully"?).





Robert's T-MAXX looking good.

Frank's only "good" jump. The rest were just plain ugly!



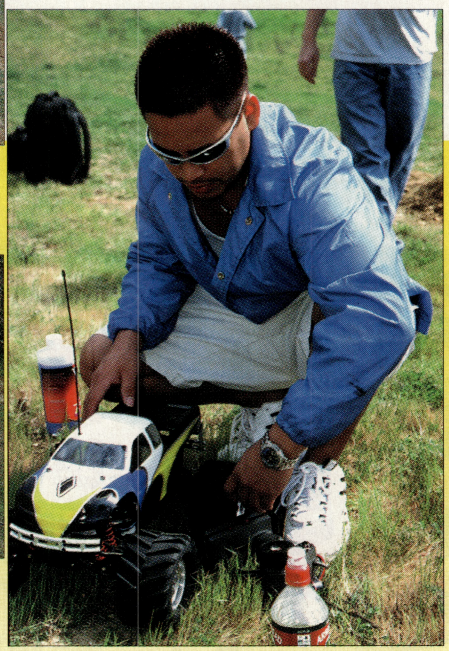
"I'm so much better than you!" screams Harvey. "I'll get you, and your little dog, too!" replies Frank.



Harvey's truck on its way to another perfect landing. T-MAXXs are good jumpers, but you really have to be careful not to grab too much throttle on takeoff; those four large tires spinning can easily send the truck's nose skyward.

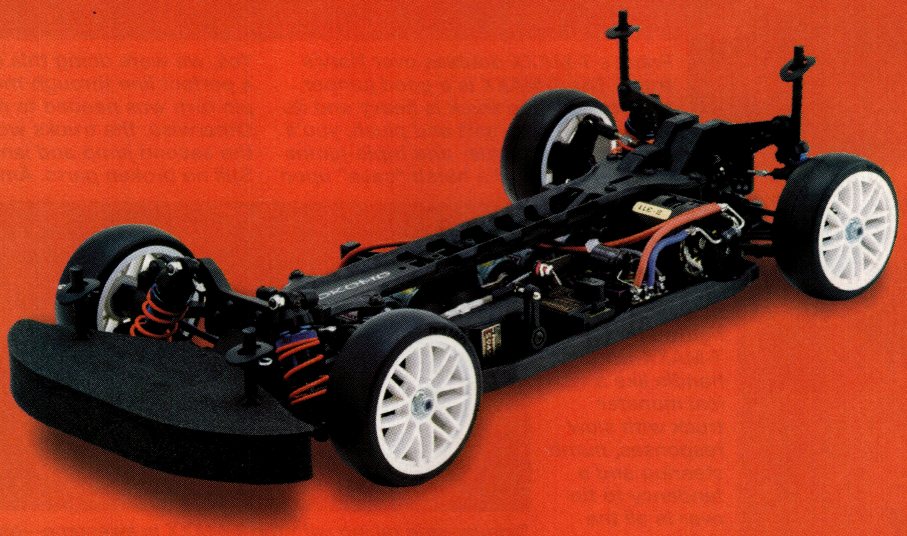


Adrenaline pumping, Harv tops-off his fuel tank and heads for the ramps. For a guy who had just broken his hand jumping a motorcycle, Harvey was amazingly brave on the T-MAXX ramps. Oh, right, you don't actually sit in the T-MAXX. Regardless, Harv smoked everyone in the freestyle jump contest.



You may recognize test-driver Robert from his work in "Guys with Really Big Shorts" magazine. Seriously, we thank Robert for helping us out with this article and for painting all those bodies for us over the years.

Ready To Win?



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Experience Yokomo's latest RTW(*Ready-To-Win*) touring car kit, the MR-4TC PRO. Race-tuned for all out performance, the PRO comes with all the lightweight option parts, plus an all-new upper deck and graphite chassis for optimum chassis rigidity. Suspension components were specially selected by the Factory Team Drivers, and Yokomo Engineers have fine-tuned the drivetrain for even smoother and quieter performance. So if you're looking for that elusive race-winning package, look no further. Get the MR-4TC PRO from Yokomo.



Battery, motor and electronics not included in kit.

Congratulations to new Yokomo team driver Chris Tosolini for winning the PRO Modified Class at the 2000 Novak Midwest Touring Car Championship!

Also, congratulations to the 'Fabulous One' - Barry Baker for winning the 2000 Millenium RC Touring Car Race in Hong Kong.

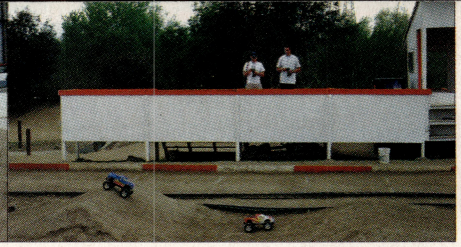
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T-MAXX OLYMPICS





Frank's T-MAXX doubles over Harv's truck. The T-MAXX is a good jumper, but because the truck is heavy and its suspension is so soft and plush, you'll need to time double- and triple-jumps perfectly to avoid a harsh "case" upon landing.

Yes, we were doing this double jump, but a perfect line through the preceding hairpin turn was needed to make a good run. Otherwise, the trucks would bounce off the second jump and land in an ugly pile. Still no broken parts. Amazing!

The biggest surprise of all happened during the off-road race. We figured that the T-MAXX would handle like a typical monster truck with slow responses, numb steering and a tendency to tip over in all the tight corners. Nothing could be further from reality. The T-MAXX was hooked!



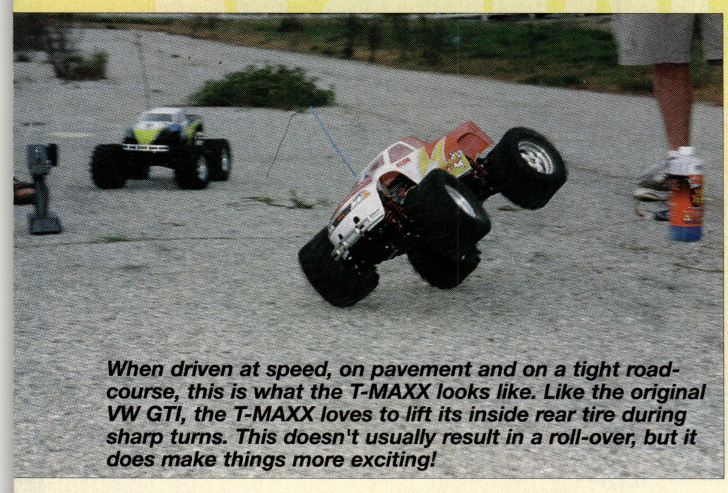
Side-by-side racing with the T-MAXX is awesome—especially when drag-racing down the straightaways as the trucks' transmissions simultaneously shift into second gear. Track owner Rod Weisbaum now includes a T-MAXX class during his weekly club races. The night before our tests, seven trucks showed up for the first T-MAXX club race!

EVENT SIX: OFF-ROAD RACE

RULES: This was to be the first of the "serious" tests of driving skill. Why then, did this event turn out to be the most silly? We contested a formal eight-minute main event at Hot Rod Hobbies' off-road track here in Saugus, California. Rod has sold so many T-MAXX's at his shop that he is working on incorporating a separate spec-class for these monsters in his weekly race program. We'll be there, Rod!

EVENT SEVEN: ON-ROAD RACE

RULES: If racing the T-MAXX off-road created carnage, then pitting these three moro...I mean, skilled professional drivers against each other on an asphalt road course made perfect sense. Right? Bonus points awarded for: Best head-on collision (it happened) and best road-rash (if the body was completely worn away, you earned one additional bonus point).

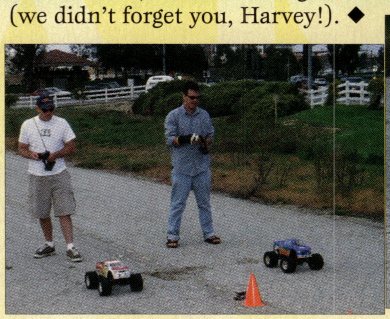


When driven at speed, on pavement and on a tight road-course, this is what the T-MAXX looks like. Like the original VW GTI, the T-MAXX loves to lift its inside rear tire during sharp turns. This doesn't usually result in a roll-over, but it does make things more exciting!

EVENT EIGHT: DRAG RACE

RULE: This finale consisted of a series of "heads-up" runs down a marked section of pavement. This event would not only test each drivers skills and reflexes, but also his ability to tune his truck's TRX-Pro 15 engine for maximum power and rpm. Why these guys had a hard time keeping in a straight line, I'll never know! Bonus points awarded for crossing into your opponents lane, taking your opponent out into the wall, and for stalling at the line (we didn't forget you, Harvey!). ◆

The T-MAXXs' rear-ends squat under acceleration. The trucks are actually wicked-fast once they shift into second gear. We estimated their top speed to be in the neighborhood of 35-plus mph.





In R/C drag racing, we learned that body posture is just as important as having a fast truck. As demonstrated by Frank (left), an aggressive sideways battle stance always translates to a faster E.T. in the scale quarter-mile. Harv just wasn't serious enough, and his times showed it.

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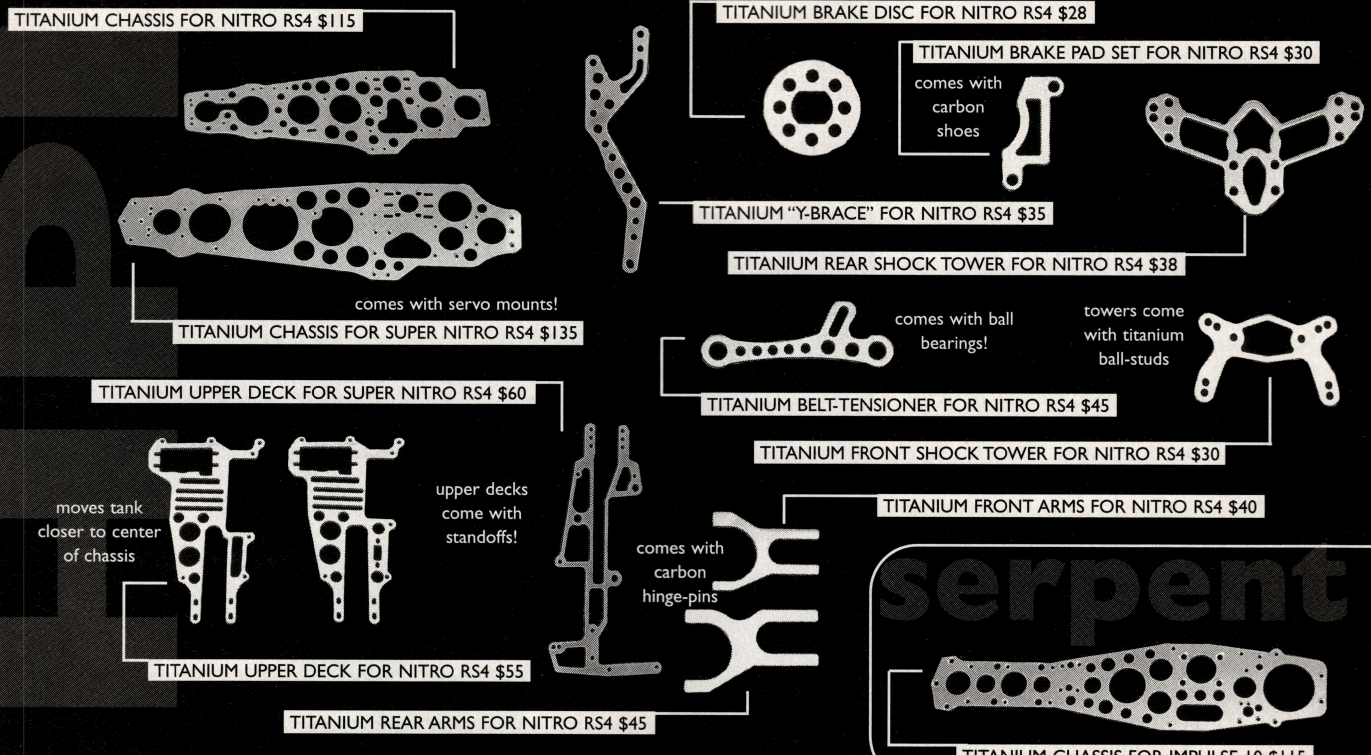
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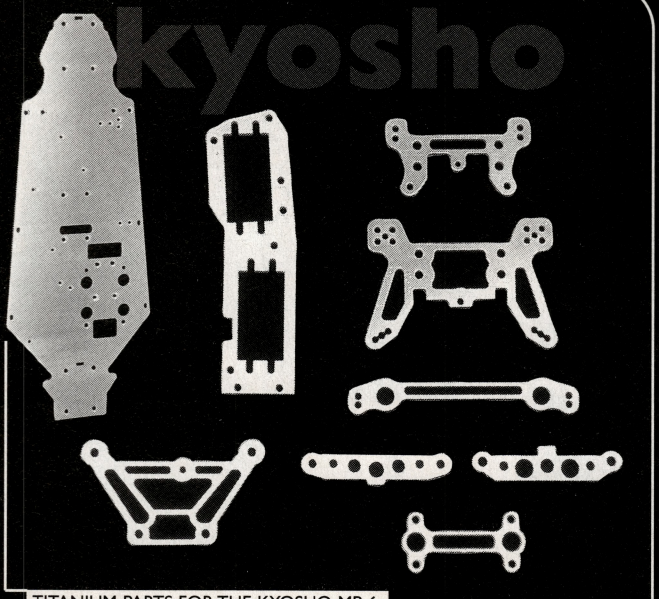
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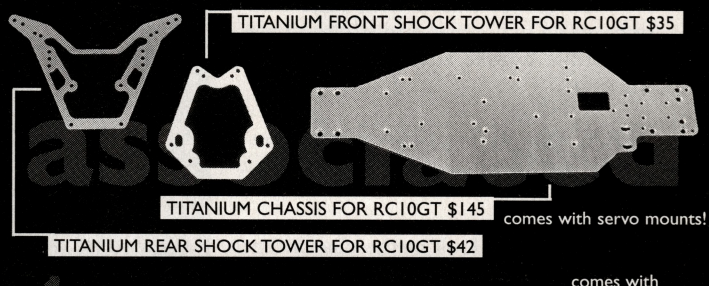
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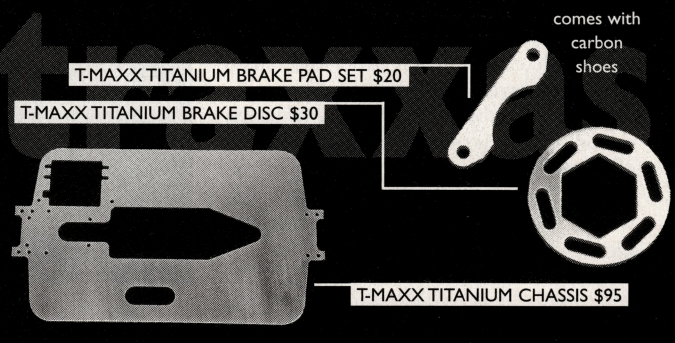
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MODIFIED MOTOR BASICS

This month we turn our attention to electric motors, those beautiful (and sometimes pesky) devices that power our electric cars. We decided to go to a man who really needs no introduction, Mike Reedy of Reedy Modifieds. With many years of experience under his belt and more National and World titles than you can shake a stick at, he is recognized as the godfather of motor building. We picked his brain a bit to find out some general tips, a few tricks, and to get his take on the current state of the racing scene.

R/C Car: *Can you give us some general guidelines for what number of turns to use for a particular application?*

Mike: Off-road seems to be governed by how much power you can actually use on the track. Our most popular motors are 11-turns. As far as on-road classes go, for 12th-scale, with the advent of 3000mAh cells, we're now using 11- and 10-turns also, like at the recent 4-cell Nats, without any dumping. For touring cars we're going with 9 and 8 turns—probably more than we should be with those platforms. In Europe, were using 10 and 11 turns because they run five minutes over there.

R/C Car: *How do the number of strands come into play?*

Mike: Well, for 12th-scale I would go with a quad (four strands) or a quint (five strands) on smooth tracks that don't have a lot of drag. For off-road we're doing the same thing. These higher strand counts smooth out the powerband compared to less strands. Now on carpet tracks with high traction, we go to doubles and triples to use the torque to take advantage of all the traction.

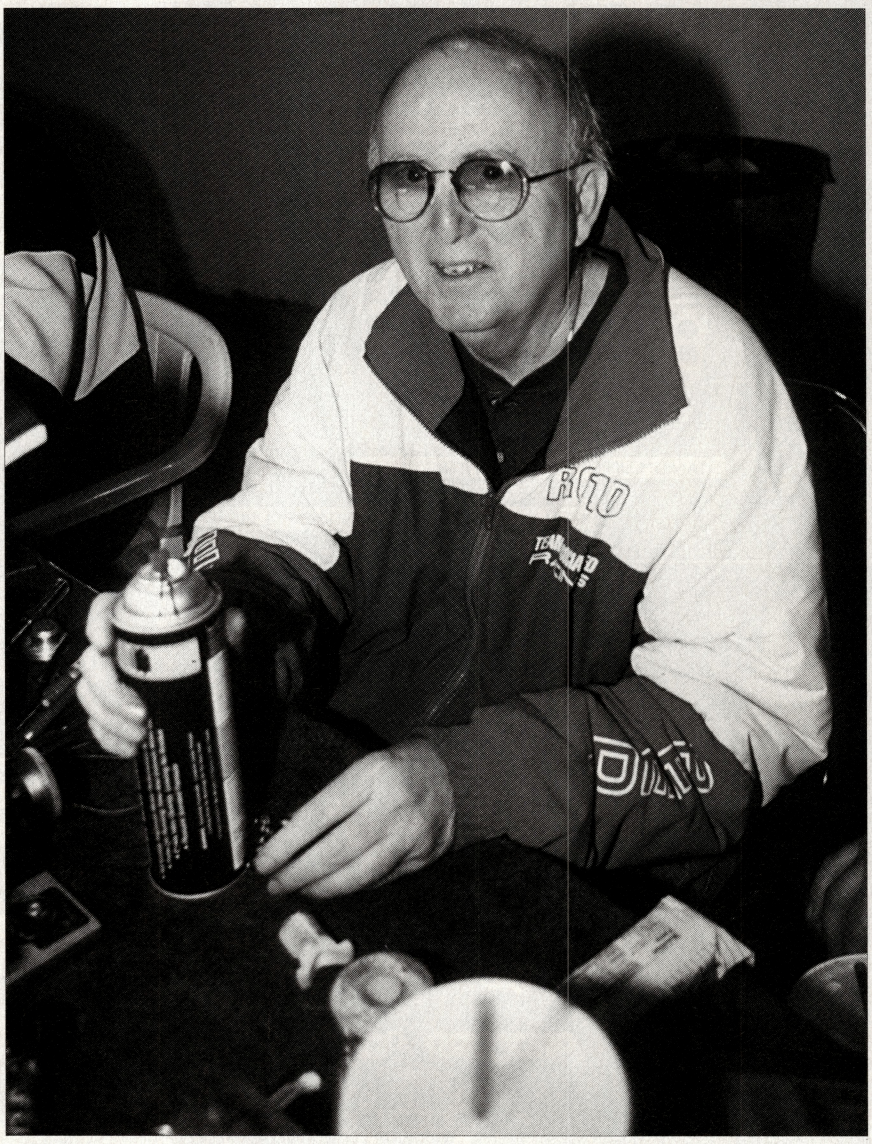
R/C Car: *With so many brush compounds available, how does a racer know where to start?*

Mike: If you look at the charts that Trinity (*www.teamtrinity.com*) has and that we have on our website (*www.rc10.com*), you'll find the basic places to start. For club racing I recommend brushes that have plenty of lubrication (higher graphite content); they'll give you 98 percent of the power of the harsher compounds, but will last the whole evening without ruining the motors. Our team drivers use high-lube brushes for practice so we don't have to true the commutator as often. For qualifying we do use more aggressive brushes for that extra 2 percent that we need at the higher levels of racing, but they require more maintenance on the comm.

R/C Car: *And how about springs?*

Mike: The stronger, or higher tension, the spring, the more bottom end you will have, but that also cuts into the car's run time. One trick we use is to run a standard spring on the positive side of the motor, but to reduce the tension on the negative side by either bending the spring or using a thinner spring wire. This trick doesn't appear to change the power at all, but it does reduce the amp draw for better run time.

R/C Car: *Many advancements in motor technology have been made in the past few years, with something new coming around almost every six months.*



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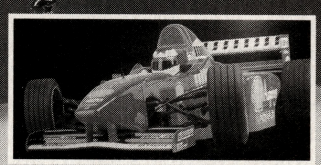
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Have we reached a plateau or is there still room to grow?

Mike: There are going to be some surprises.

R/C Car: *From you or from other manufacturers?*

Mike: Hopefully, some of them from me! Trinity is always coming up with something, and the other builders have some tricks too. Not everything that everyone comes up with works, and those that don't tend to naturally fall by the wayside. Some things are just cosmetic, some are marketing, and some truly affect performance. We're coming to a point where everyone's motors are so alike that it's getting ridiculous! It's kind of like Formula One, where just about everyone has the same technology and advancements.

R/C Car: *Do you feel that the stock class has become a battery war?*

Mike: No, but I don't think that the stock class is run like it should be. It's very hard on the novices because of all the tricks that go on out there. It's sort of become a "stretch the concept of the rules" class, which I hate to see.

R/C Car: *With the incredible performance of current stock motors, do you feel that maybe they have too much power for the beginning racer?*

Mike: I think that we are giving beginners a motor that doesn't last. Less timing would make things more fair and be easier on racer's wallets.

R/C Car: *Surface mount capacitors are now coming on some manufacturers' motors. Why not sooner?*

Mike: Actually, the idea came up about 10 years ago from Kyosho, but they never really followed through with it. I guess they didn't really want to seriously enter the motor business. I give Orion and Trinity credit for bringing the idea to the market. It's not a performance issue, but more for convenience. They don't burn out or get broken off, and the racer doesn't have to do any more soldering.

R/C Car: *Looking through the equipment list of A-main drivers at Mod National or even regional events, we're seeing lower and lower turns being used—winds that were formerly reserved for drag racing. Has the advent of high-capacity cells taken batteries out of the equation for mod classes?*

Mike: I think it really has for 12th-scale. They can't use any more power anyway, and that's the same with 10th-scale (on-road). Batteries were never really in the equation for off-road. Most of the time you overpower the car. But if things keep going the way they are, with new cells coming out every year, we will eventually go back to a battery war, and that isn't good for the racers. They (the racing organizations) should fix the rules as far as battery capacity goes so they aren't a deciding factor in who wins races.

R/C Car: *Finally, comm drops: some swear by them, some swear at them. What's your take?*

Mike: I don't believe in them. They artificially increase power for the first lap or two, then they just gum up the armature after that.

R/C Car: *Do you have any new developments on the drawing board that you can share with us?*

Mike: It may be a little too early to say, but we are working on our next series of motors. We take up to a year or two to get the designs right before we release something. Other companies sometimes take six or nine months to get a product out. But right now it's too early to tell because we're still finalizing what direction we're going to take. You'll see it when it's done!

R/C Car: *Thanks for all your time, Mike!* ●

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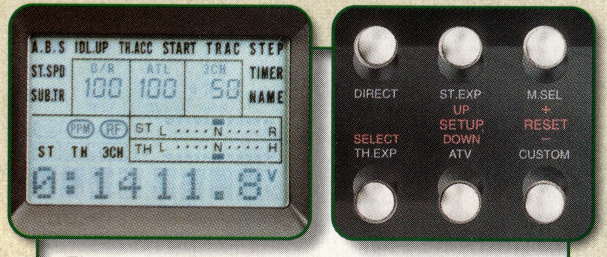
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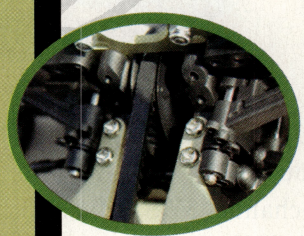
Introducing the TS4

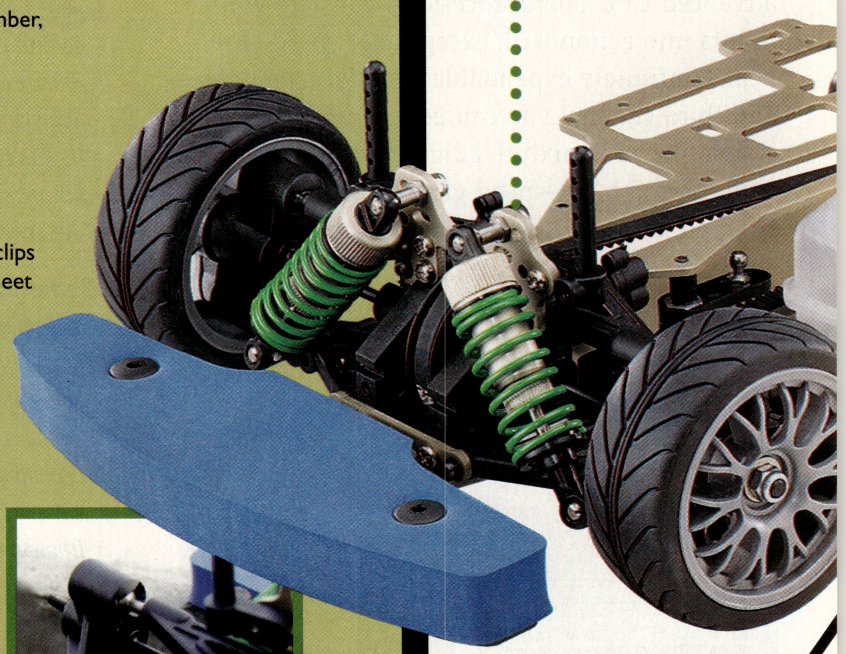
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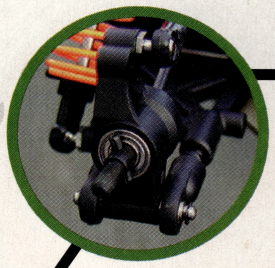
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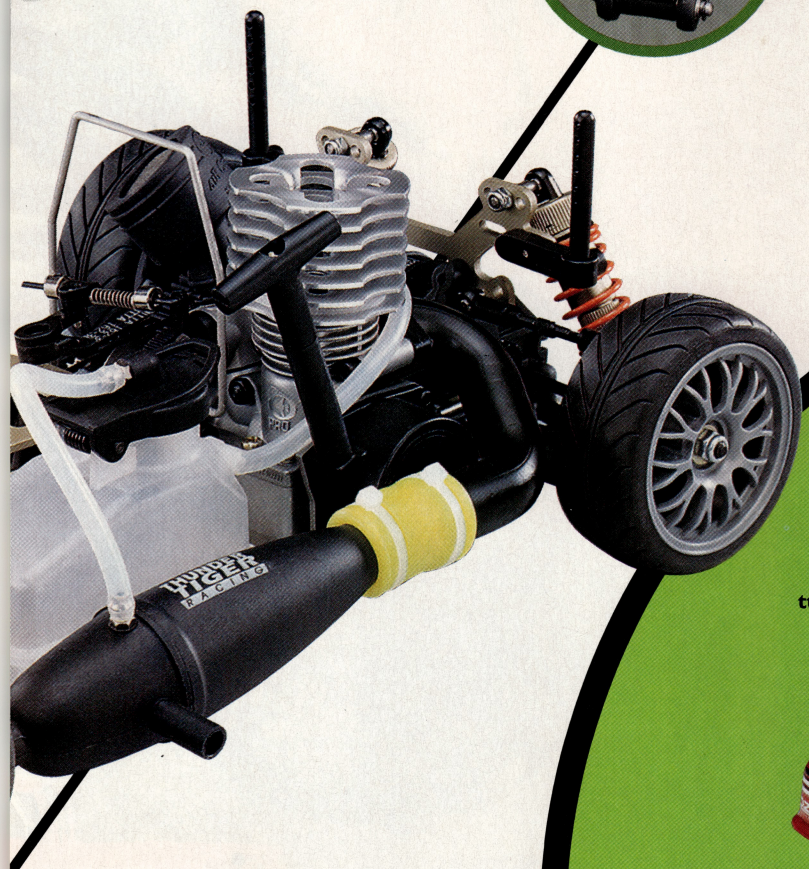
future: TS-4n

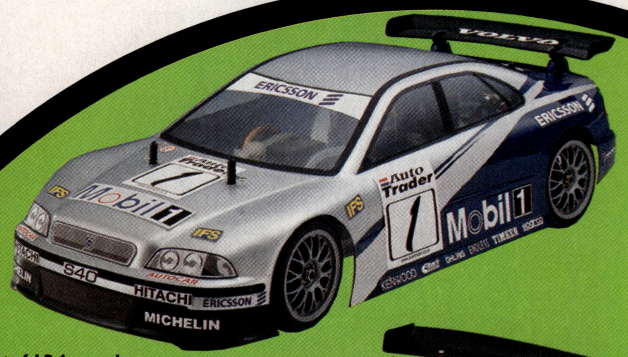
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- Front universal drive shaft.
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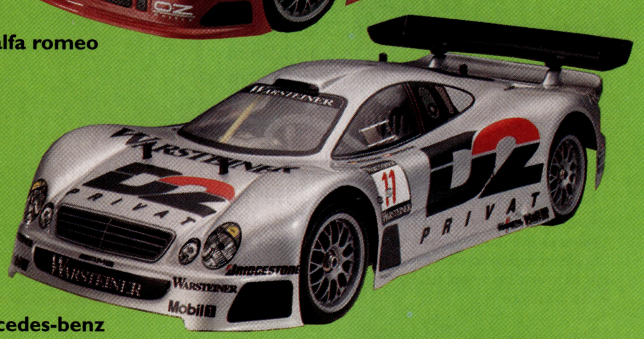




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SPECIFICATIONS

Length	18.75 in./483mm
Width	14.6 in./372mm
Wheelbase	11 in/280mm
Track	10.6 in/272mm
Weight (RTR)	11 lb., 2.8oz..
SKILL LEVEL*	2.5
PRICE	
Retail	$589.00
Average hobby shop	$390-400

* Indicates skill needed to satisfactorily complete kit. Level 1 kits are the easiest to complete, Level 4 are the most difficult and shouldn't be attempted by beginners without experienced assistance.

Tamiya Juggernaut 2

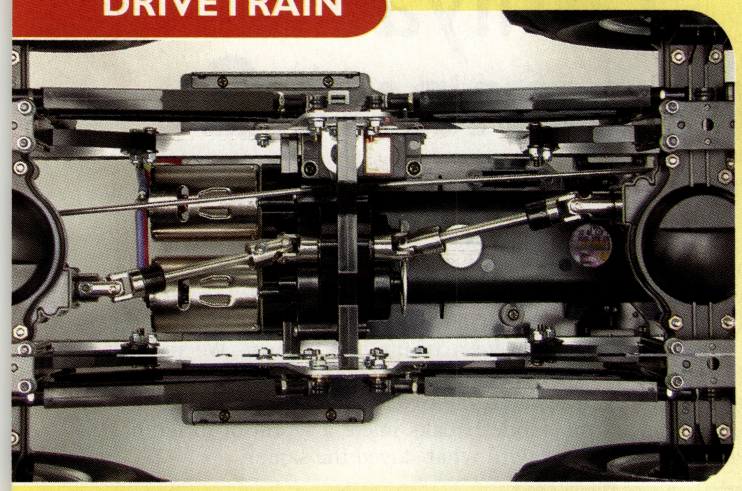
When we tested the Tamiya Juggernaut monster truck, we put it on our August '99 cover with a coverline that read "Big, Bad, Unstoppable!" Well, the truck proved to be big and bad, but unfortunately, it was stoppable. Due to an unforeseen drivetrain problem—easily stripped gears—production of the Juggernaut was put on hold until this problem could be properly addressed. Tamiya was extremely upset when the truck had to be pulled off the active duty list and vowed that the truck would soon make a triumphant return. We recently received the updated kit, the Juggernaut 2, and we're pleased to announce that the drivetrain problem is now gone. At face value, the two trucks look nearly identical. We've been assured, though, that the subtle tweaks make a world of difference! Let's take a look at what changed, along with what stayed the same!

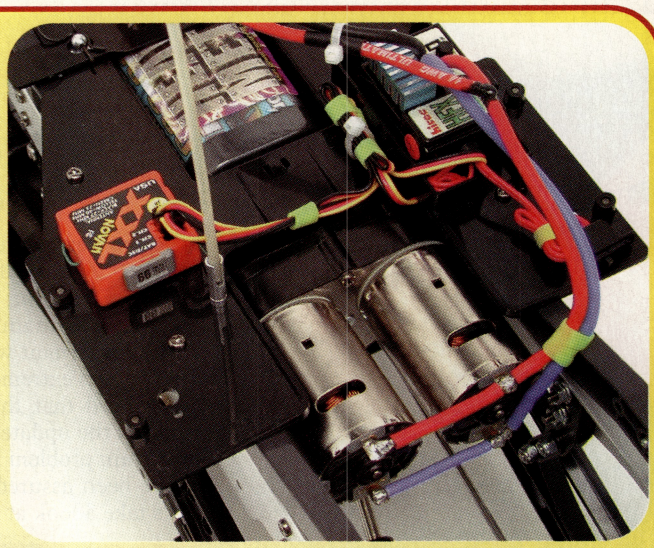


Running Gear:

Hitec 945MG Steering Servo
Hitec Lynx 3D FM
Hitec HFX ESC
2 Trinity P2k rebuildable stock motors
Trinity 3000 NiMh battery pack

DRIVETRAIN

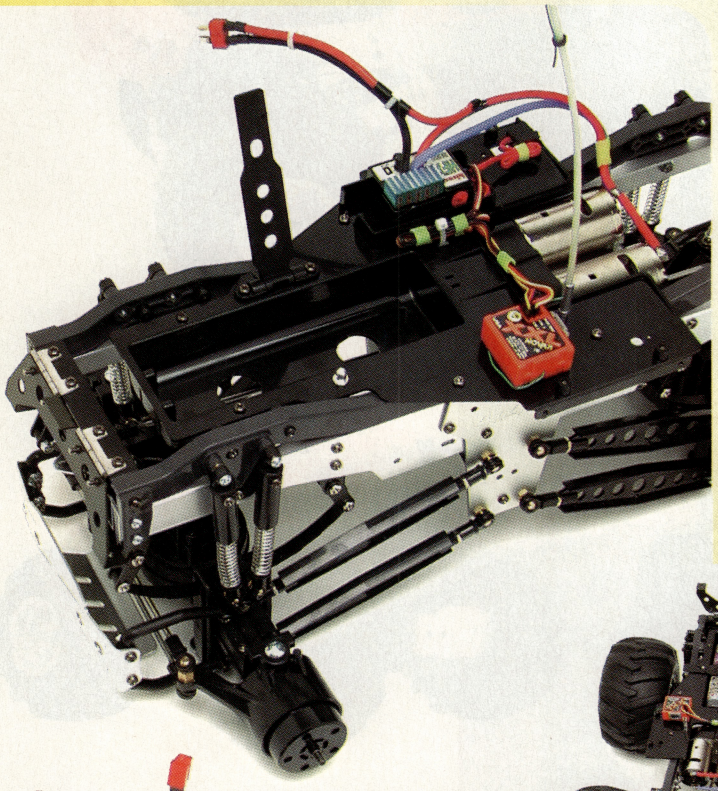


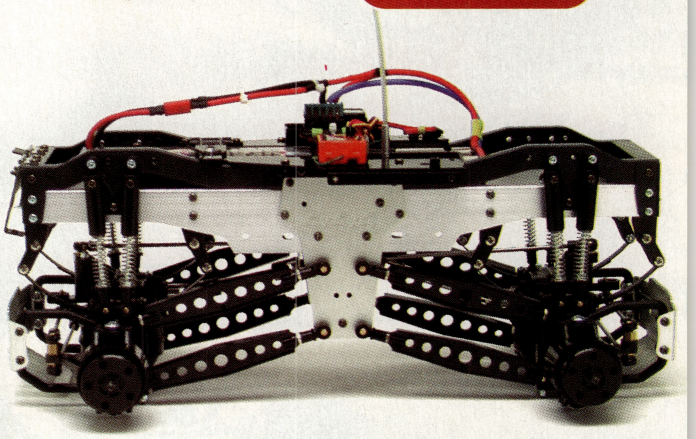


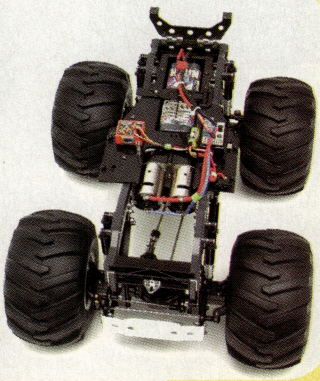
As we have said, the original Juggernaut suffered from premature drivetrain failure. Under certain conditions, the nylon tranny gears in the center transmission and the bevel gears in the front and rear sealed gearboxes would strip out. The new truck has fired right back with a minor, yet significant redesign—all new heavy duty nylon gears can be found in the center transmission, and larger heavy-duty die-cast bevel gears can be found in both the front and rear gearboxes/axle assemblies.

For those of you who are not familiar with the Juggernaut platform and are seeing it for the first time, we'll recap. The truck's shaft drive system is very intricate—a mid-mounted transmission is powered by two RS540 electric motors. The motor/transmission system is placed high in the center of the chassis, out of harm's way. The transmission case (which looks similar to a full-size truck transfer-case) powers two steel universal driveshafts—each going to separate front and rear gearbox/axle assemblies. Inside each gearbox/axle assembly is a set of steel bevel gears—as mentioned, the Juggernaut 2 features much "beefier" gears that are less prone to stripping.

CHASSIS





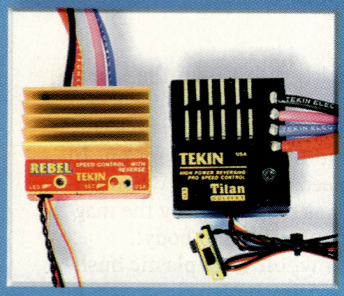




The Juggernaut 2 is equipped with the same aluminum and ABS plastic chassis configuration found on its predecessor. The critical areas in the chassis are comprised of aluminum while the less-stress-prone areas are plastic. Four-wheel steering is accomplished via one steering servo and two steel steering rods connecting the two gearboxes. Both the front and rear axle assemblies have steering arm brackets at each end. The "crab-steering" system works very good on a truck like this—its turning radius is quite tight! To help steer the truck more effectively, a high-torque steering servo is recommended. We used one of Hitec's new 945 Metal Gear servos to help turn the massive truck tires more quickly and accurately.

R/C PERFORMANCE GEAR

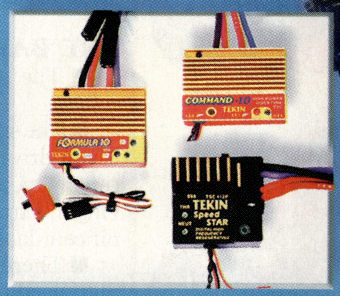




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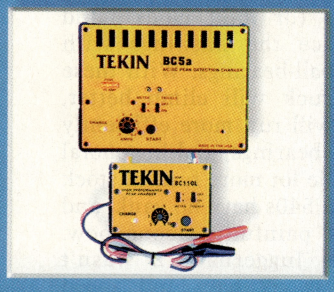
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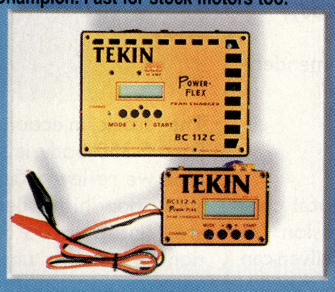
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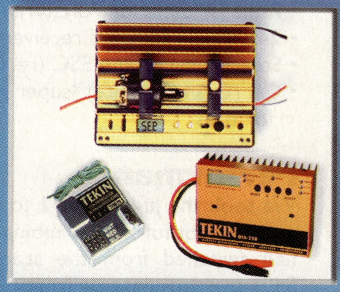
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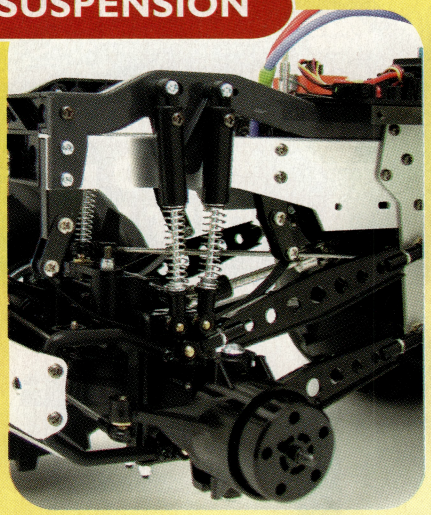
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SUSPENSION



One of the most innovative features on the Juggernaut 2 is its suspension system. A coil-spring/leaf-spring combo helps the truck tackle rough terrain. Oddly, though, we found the truck to be quite "oversprung." The suspension is so stiff and rigid that the truck bounces over terrain more than it drives over it. One of our next projects is to soften up the suspension a little bit.

BODY, WHEELS & TIRES







The stock injection-molded polystyrene Ford F-350 body is simply amazing. Every time we review a Tamiya product we rave about how highly-detailed their body sets are—and there's a reason. Tamiya's attention to detail is unsurpassed in the R/C industry, and the Juggernaut 2's body is among the best they've produced!

The F-350 body is attached to the main chassis with screws—no body clips are used to hold it in place. In fact, the only body clips used on the truck are the two positioned in the bed of the body, which when removed allow the bed to tilt upwards on a hinge. Access to the battery compartment is also gained when you lift up the rear bed. To get to the motors, or speed control, the front cab portion of the body must be removed by backing out a few screws.

The wheels and tires found on this beast are equally impressive.

What you get

- Complete rolling chassis
- Highly-detailed Polystyrene Ford F-350 body set
- Two 540 motors
- Three-step mechanical speed control

What you need

- Paint (suitable for Polystyrene body)
- 2-channel radio and receiver
- Steering servo and ESC (recommended)
- CA (Cyanoacrylate) "super glue" for tires

Performance

We took the Juggernaut 2 to a local construction lot for a hill-climbing session. We had switched from the stock silver-can 540s over to a set of Trinity P2k rebuildable stock motors for the test—what a difference! The P2k stock motors really helped the almost twelve-pound truck get up, over, and through ruts and bumps with ease! One of the most unique attributes of the Juggernaut 2 is the 4WS system—tight turns are made with ease. The other thing we noticed with the truck is its ability to climb over awkward obstacles such as deep, narrow ruts. It climbs and crawls over stuff in a fashion very similar to full-size trucks. Performance-wise it's very realistic! We had a blast driving the truck and didn't notice one hint of any drivetrain problem. Looks like the beast is back!

THE GOOD

■ The updated drivetrain seems to be the answer to the original Juggernaut's headache. We pounded on the Juggernaut 2 and it held up to our constant pounding just fine.

■ The truck's scale look is absolutely amazing. We were originally blown away when we first saw the Juggernaut, and here, almost a year later, we're still awestruck at how fantastic the truck looks.

THE BAD

■ The truck is a little on the heavy side.

■ The side mirrors can snap off easily if you drive the truck with them on. In general, you need to take care when driving this truck as to not destroy the magnificent-looking Ford F-350 body!

■ There's a whole lotta plastic bushings needing to be replaced...a whole lot...

THE VERDICT

We're awfully glad that Tamiya didn't scrap the Juggernaut program—it's definitely a fun truck! If you're interested in scale looks, and love monster trucks, then the Juggernaut 2 is the truck for you. It is a tad expensive, but the overall quality of the kit is quite high. If you plan on purchasing this vehicle, and are not particularly interested in keeping it bone stock for any "appreciative value" program, our recommendations are, in this order: ditch the three-step speed control and replace it with an ESC, add two hot stock motors (or mild mods), and finally, replace the bushings with high-quality ball-bearings. With these mods, the truck will climb better, drive faster, will run more efficiently thanks to the bearings, and in general will be a whole lot more fun. In stock trim, the twin 540s have no yank, and the truck is painfully slooooooow. Granted, the Juggernaut 2 wasn't designed to break any land speed records, but having a little more speed will prove to be a lot more fun! ◆

SOURCES

Hitec RCD, 10729 Wheatlands Ave., Ste. C, Santee, CA 92071 • (619) 258-4940; (610) 449-1002 (fax)

Trinity Products Inc., 36 Meridian Rd., Edison, NJ 08820 • (732) 635-1600; (732) 635-1640 (fax)

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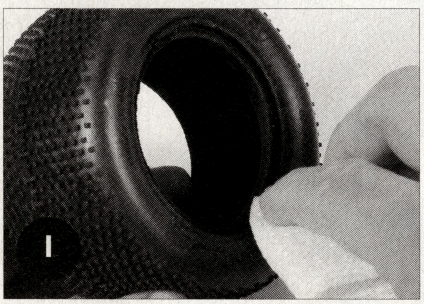
HOW TO GLUE



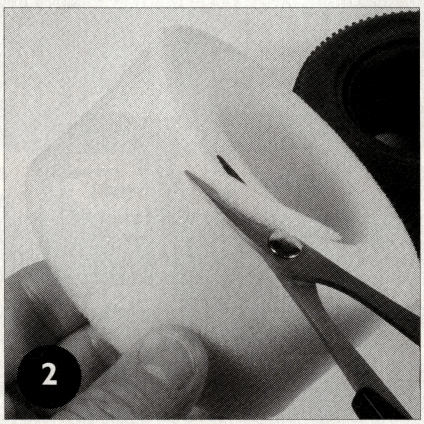
In the earlier days of R/C, the rubber from which most off-road tires were molded was so hard that it was rarely necessary to glue the tire to the wheel. But as tire technology progressed and tires began being molded from softer and stickier rubber, the task of gluing tires evolved into a science.

I have to admit that my own tire gluing skills had become obsolete; I thought I knew what I was doing, but I kept ending up with tires that just wouldn't stay on their wheels (especially big off-road truck tires molded of Pro-Line M3 and Losi Silver and Red compounds).

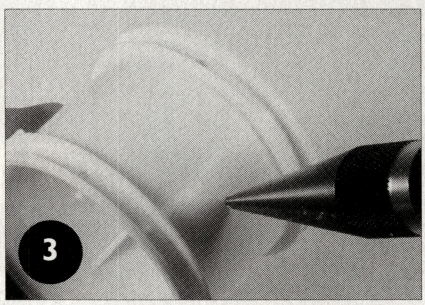
With the price of tires being what it is today, it makes no sense to spend money on the latest and greatest treads only to do a poor job gluing them to the wheels. Even if only a small portion of the tire becomes unglued, you'll have lost valuable performance. Follow these instructions to ensure that your tires stay where you put them—on the wheels.



The first step is to prep the tire and wheel by removing any residual oils or mold-release compound which could prevent the glue from making a good bond. There are several ways to clean the tires and wheels, but I have found that a quick wipe with a rag that's been moistened with solvent such as motor-cleaning spray does the trick quite well. When working with any solvent, protect your skin by wearing latex gloves. Clean the bead area of the tire and wheel thoroughly. You'll probably be surprised at how much dirt comes off.



Next, you'll need to install your foam insert into the tire. There are many types of insert, and there are many ways that the insert can be used to tune the performance of the tire. We won't get into this subject here, but you can reference the March '00 issue's article on foam inserts for added information.



One more step before we get to the sticky stuff: you'll need to make sure that the tire and wheel are properly vented. Without some type of hole to allow air to pass freely into and out of the tire, the ability of the tire to conform to the ground and make traction will be severely compromised. Fortunately, most wheels come with pre-drilled vent holes. If not, we recommended that you drill or poke about two or three 1/16 to 1/8-inch diameter holes in the wheel (spacing them equally).

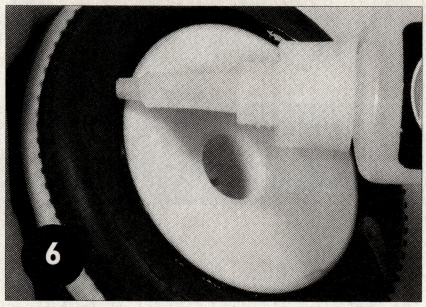
TIRES *Drawing a bead*



Now you're ready for some awesome modern tire gluing technology. It's not some wild, expensive and complicated jig—it's plain old rubber bands! That's right: when it comes to gluing tires, nothing beats a good rubber band. Stretch the tire and insert over the wheel and make sure that the tire's bead fits snugly into the wheel's channel. It may take a few minutes for the tire to shrink back to shape after having been stretched, so be a little patient. Once you're satisfied that the bead is tight and even, stretch one or two large rubber bands over the edge of the tire (do one side at a time to avoid distorting the tire). Hint: the tighter the fit between the tire and wheel, the stronger the glue-joint will be—there should be no gaps.



For the strongest bond, we recommend that you use a combination of thin (faster setting) and thick (slow drying) CA (cyanoacrylate). Pull back one small section of the tire, place a drop of thin CA on the tire's bead, and let it fall back into place. Work your way around the circumference of the wheel until the bead is completely glued. Caution: never use too much thin CA! It can easily drip onto the foam insert and cause a lump that will destroy handling.



The thin CA should have set almost immediately. Now it's time to use the thick CA to form a strong yet pliable joint between the tire's sidewall and the rim of the wheel. This is the most important step because it will prevent the forces of cornering from pulling the sidewall away from the wheel. Take your time and form a seamless "fillet" of thick CA all the way around the tire bead. It won't be the prettiest glue-joint of all time, but it will be the strongest.

Conclusion

I used to pride myself on my neat glue jobs; you couldn't see a hint of CA anywhere on the tire. But I learned my lesson: pretty doesn't necessarily cut it when it comes to gluing tires. The thick CA stands up where the thin CA cracks. And the force of cornering is what breaks the tire's bead. I've been amazed at how well these tire/wheel joints hold up—even with soft truck tires on a blue-grooved track. ◆

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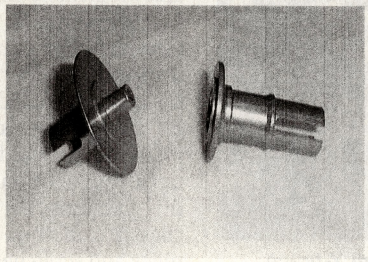
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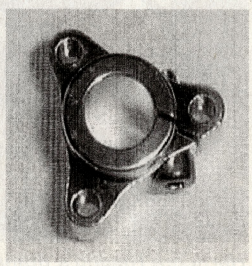
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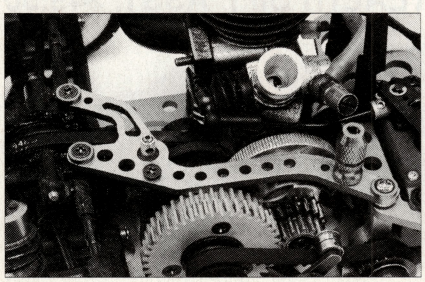
Titanium Chassis Parts for HPI's Nitro RS4

Hardcore Racing Components has something for you HPI Nitro RS4 owners—titanium. And plenty of it.

Most of you are probably familiar with titanium from its use in hingepins and tie rods or the occasional differential outdrive. The most well-known property of Ti (pronounced "tie" by machinists) is its light weight and strength compared to a more commonly used metal, steel. Ti's second most known characteristic is its price. But how can the Earth's ninth most abundant element be so expensive? In its pure form, Ti is very brittle at room temperature, so it must be alloyed with other elements to be usable. Aluminum and vanadium are the most common metals that are used in titanium alloy. There are at least a couple of dozen formulas for combining other metals with Ti to make a usable alloy. The process of making the raw stock makes up most of the high cost.

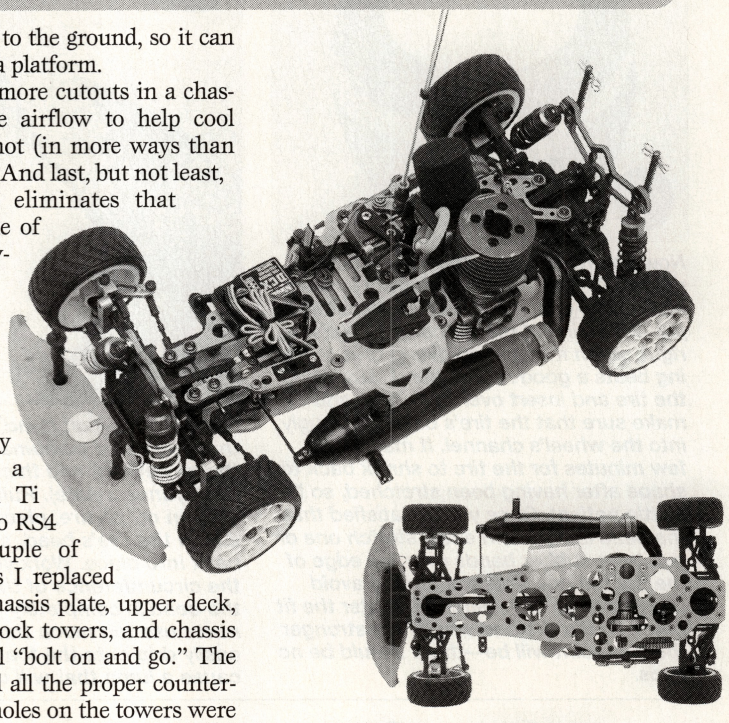
Now, once it's used in an alloy, Ti has a whole new set of properties. Titanium alloy can be as light as one-third the equivalent volume of steel, is much more rigid, and has better shape memory than steel or aluminum, but is still ductile and malleable enough to be machined using traditional methods. It can be water-jet cut, milled, or laser cut, just like aluminum or steel.

Now what about using it to replace an aluminum chassis? Well, if you break out that good old periodic table of the elements, you'll see that Ti is heavier than Aluminum. But there are many advantages to "going Ti." First off, because Ti is so much stiffer than aluminum, less material can be used to make the same part and still be within a couple of ounces of weight. Because less material can be used, this opens up the opportunity for the designer to use some creativity. Intricate patterns can be milled into a chassis for weight reduction, or a part can be "Swiss-cheesed," giving it an "industrial" look. Even if the part is heavier, that weight is centered and low to the ground, so it can actually stabilize a platform.



Hardcore Racing's titanium Y-brace.

Furthermore, more cutouts in a chassis plate promote airflow to help cool down that ultra-hot (in more ways than one) powerplant. And last, but not least, a stiffer chassis eliminates that unknown variable of chassis flex, allowing the suspension components to do their job.



Okay, enough with the theory—how does it really perform? I ran a full-option 3mm Ti setup on my Nitro RS4 Racer for a couple of weeks. The parts I replaced were the main chassis plate, upper deck, front and rear shock towers, and chassis Y-brace. It was all "bolt on and go." The lower chassis had all the proper countersinks, the screw holes on the towers were tapped with the right Metric threads and every part was lightened. The first thing I noticed was that the car felt more solid and tracked straighter than before (I did check the chassis I removed, and it wasn't tweaked). Then I noticed that my shocks, which were perfectly fine a hour before, needed a rebuild. With the older chassis setup, the more flexible chassis absorbed variations in the shocks. Now that the suspension was forced to do more work, changes in geometry or dampening were much more pronounced. The car was more sensitive to my wrenching, and I could actually fine-tune the setup better.

With fresh shocks in place, I headed out to the track the next day to gauge the chassis some more. It felt like I was able to carry more speed through the turns than before, and the car was more "sure-footed." Without any major changes to the base setup I had been using for the past year it was reacting more sharply and predictably than before.

Unfortunately, I had my share of bobbles and biffs and mishaps. Hardcore Racing guarantees against bending a chassis under race conditions, and I did get my car to do a couple of cartwheels (aren't road cars supposed to do cartwheels?) and tap a couple of immovable objects to test this guarantee. As luck would have it, the chassis came out with only a couple of nicks and scratches, mainly from running a really low ride-height to see the bright white flashbulb-like sparks come from underneath the chassis when hitting a bump.

Some of the other platforms that Hardcore Racing Components supports are the Kyosho MP-6, the Traxxas T-Maxx, and Associated Electrics RC-10GT. Also in the works are chassis plates for the Serpent Impulse, and arms and bulkheads for the Nitro RS4.

Yes, this stuff is pretty expensive, but those of you out there who have thoroughly explored all other tuning options may want to give some of these components a look to further refine your setup. An added benefit is the gobs of "cool factor" this stuff carries. We are really looking forward to trying out more Hardcore Racing Components and we sure we'll be seeing their presence on the track. ◆

info

Manufacturer: Hardcore Racing Components, 4525 E. Industrial St., Unit 4R, Simi Valley, CA 93063 • (805) 522-1800; fax (805) 579-9651
Part no.: Nitro RS4 Complete Kit
Price: $185.00 retail (street price-tba)
Recommended for: Nitro RS4 owners/racers.
Rating: ⊛⊛⊛⊛●



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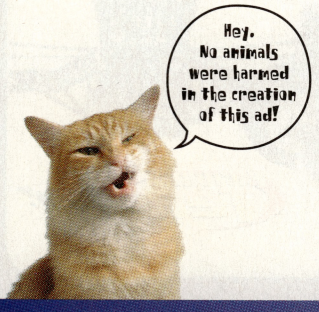


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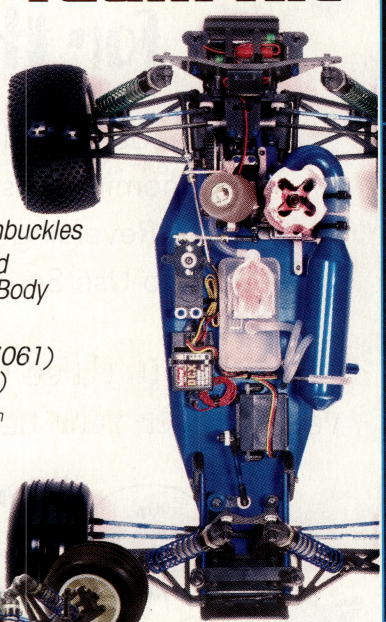
The new RC10GT "Factory Team" kits also include a Factory Blue Tuned pipe and manifold, Factory Blue Titanium turnbuckles, graphite shock towers, blue screws and more... it's the full "factory ride" GT!

The RC10GT is also available in a fully-assembled Ready-To-Run version, kit #7090, complete with .15-size engine and 2-channel radio.

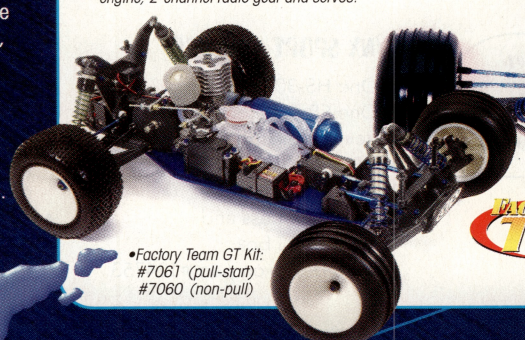
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- *MIP CVD's*
- *Available in Pull-start (#7061) or Non-pull Start (#7060)*



RC10GT Factory Team Kit #7060 shown with items not included in kit: .12 to .15 size engine, 2-channel radio gear and servos.

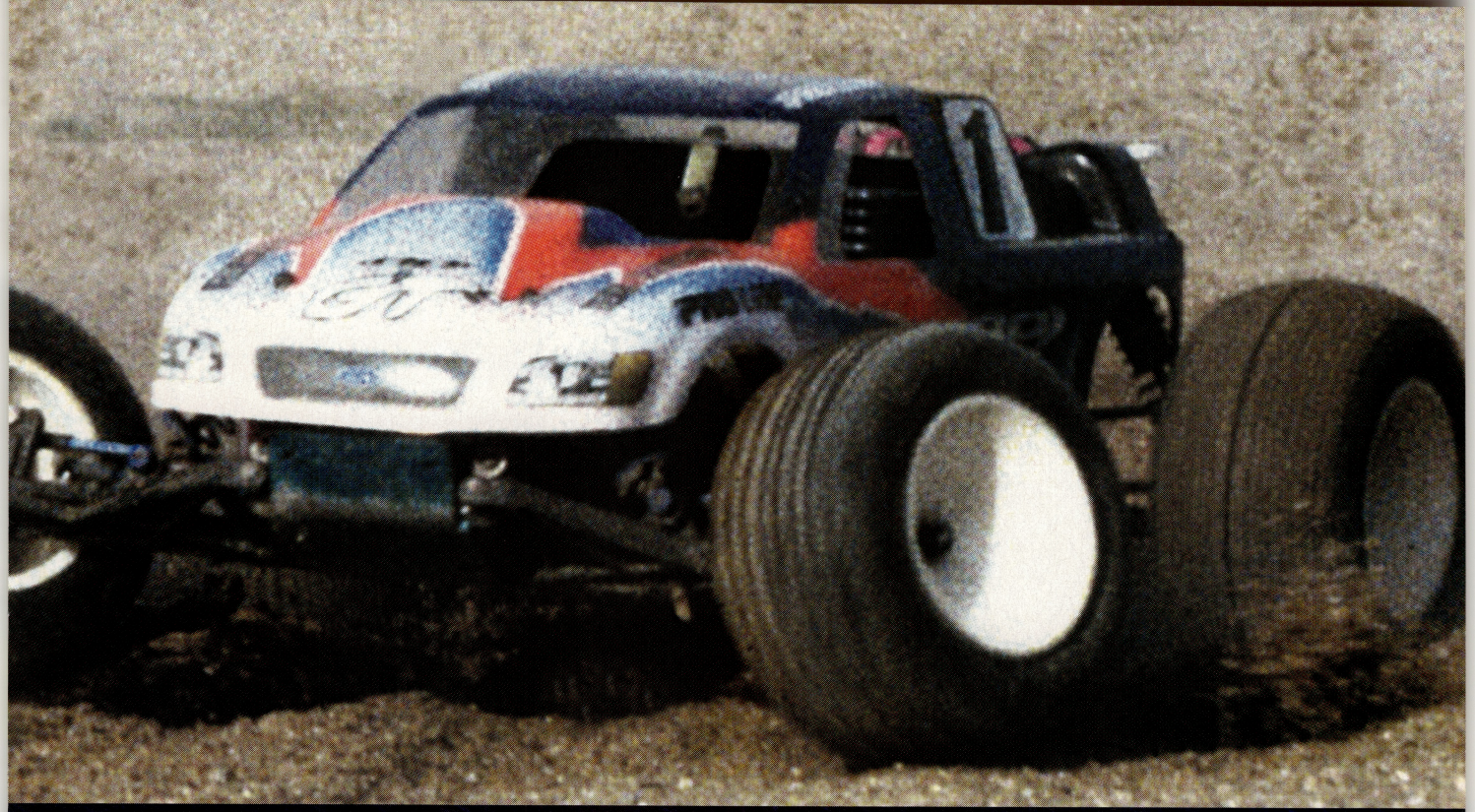


•Factory Team GT Kit:
#7061 (pull-start)
#7060 (non-pull)

FACTORY Team GT

RC10GT

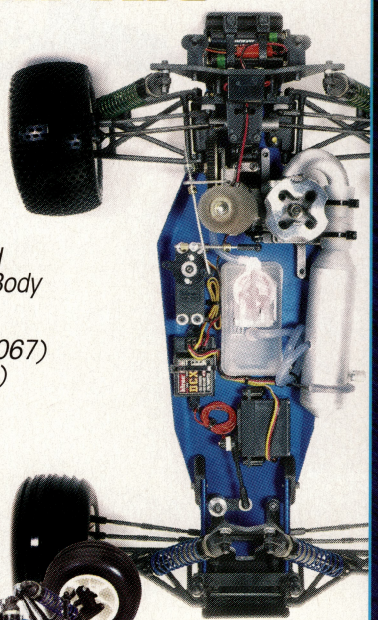
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RC10GT Team Kit #7068 shown with items not included in kit: .12 to .15 size engine, 2-channel radio gear and servos.

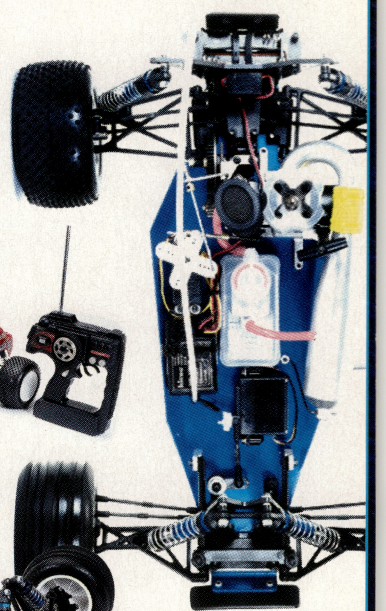


•RC10GT Team Kit:
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2000 W
NITRO C

by John Howell

This year's Silver State Nitro Challenge saw a few ups and downs. Many racers complained about the extremely rough track conditions, the inconsistent qualifying scoring methods, and especially all the dirt and dust that was flying around! On the flip side, there were quite a few high points. This race saw two new gas trucks hit the scene—Losi's brand-new XXX-NT, and a few prototype Factory Team GTs from Team Associated. A few new up-and-coming racers grabbed some much-deserved attention, and Team Kyosho showed that they were back in full-force and that they mean business. In addition, we saw some really close, competitive racing action!



VEGAS SILVER STATE CHALLENGE



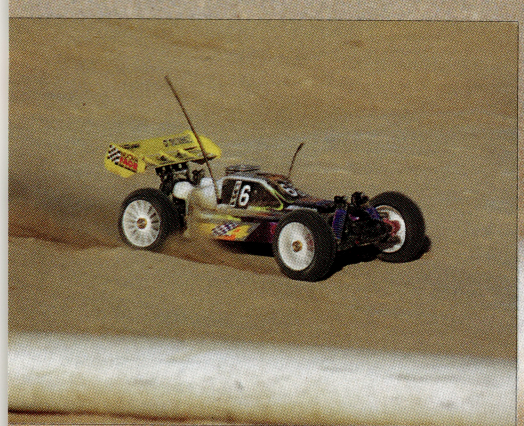


The Western R/C track can best be described as a minefield. If any manufacturer wants to do any durability testing on their cars, this is the place to race!

1/8-Scale Buggy

In what had to be the most exciting race of the day, TQ Richard Saxton grabbed the lead early with his Thunder Tiger buggy and led for close to half the race until he ran into a few problems—first he stalled his engine when a rock hit his flywheel, then he had problems with his steering linkage. After spending some time in the pits, Saxton rejoined the race, a few laps down from the leaders. Once Saxton started having trouble, second-place Easton took over the lead and never looked back. He kept his buggy on all fours and kept it together until the very end. Amazingly, the hour-long buggy A-main only saw one car drop out! With the track conditions getting rougher minute by minute as the race progressed, many thought that there would be more than that! Easton went unchallenged, and as the hour-long race wound down, he finished a lap over second-place finisher Adam Drake, who was racing his first-ever 1/8-scale race!

At the end of the race, Saxton crossed the line in third place, but later after some discussion in the pits between himself and a few other racers in the main, he went to the race directors and told them that there was a mistake and that he actually was a lap down from where he finished. Afterwards we learned that when Saxton's steering linkage let go, he inadvertently cut the track in two places before he came into the pits to fix the car due to the technical problem, and was accidentally counted as completing the lap. This change in finishing order gave Mike Dunn third place as Saxton dropped to fourth.



Richard Saxton led the 1/8th-scale buggy A-main until he ran into some technical trouble.

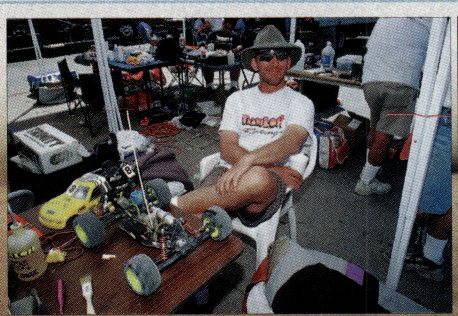
1/8-Scale Truck

The 20-minute long 1/8-Scale Truck class A-main can be summed up in one word—domination! Jim Williams got a good start off the line, and led all but one lap. Chris Smith worked his way from the back of the starting grid to second place by the ninth lap, and held on to his position until the very end. It was a close finish, but not close enough for Smith—he finished on the same lap as Williams, but was roughly 19 seconds back. Felix Racoma put in some good laps towards the end of the race to clinch the third-place position.



NITRO CHALLENGE

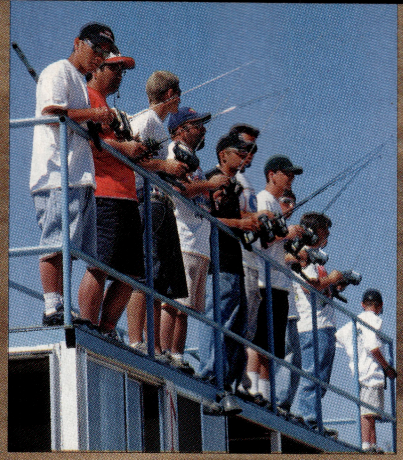




Gil Losi Jr. was a very busy man all week—he was thrashing to make sure that the new hand-built trucks made it to the track on time for the event!



Team Kyosho is back and out in force. These Kyosho T-shirts were seen on more than a few top racers in the pits.





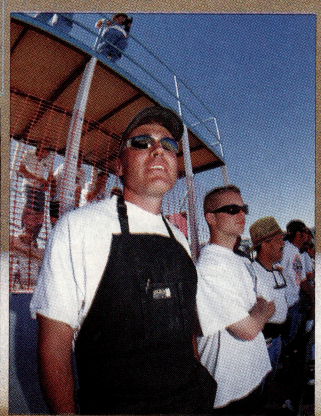
Pitman Regan LeBlanc checks out Scott Hughes' winning prototype Factory Team RC10GT after the hour-long A-main event.



Losi showed up at the race with an all-new prototype gas truck. Here, Todd Hodge rounds the corner at the end of the long straightaway.



Mark Pavidis has had a string of bad luck in 1/8th-scale, but finished third overall in the truck A-main.



Regan watches his driver Scott Hughes as the clock winds to the final minutes in the 1/10th-scale gas truck A-main.



While walking through the pits, we happened to take notice of this cool-looking paint job done by Vegas native Mark Magee.

RS4 SPORT 2

#263 DODGE Stratus



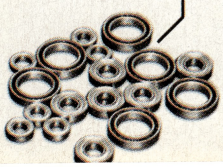
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Durable fiberglass chassis and upper deck.

The RS4 Sport 2 features our race-proven "equal length" suspension geometry and shares many of the same parts with our high level Pro 2 car. Affordable performance, tons of hop-up potential, great looks... the Sport 2 is a the perfect way to get into R/C Touring Cars! A long list of standard features include a full set of precision ball bearings, 26mm Racing Slick Belted tires, and full-time four wheel drive for awesome traction on any paved surface. Choose the popular Stratus or the cutting-edge Netz/Castrol Altezza body. Need some variety? HPI offers a huge variety of body styles that bolt right on the RS4 Sport 2 for a completely new look.

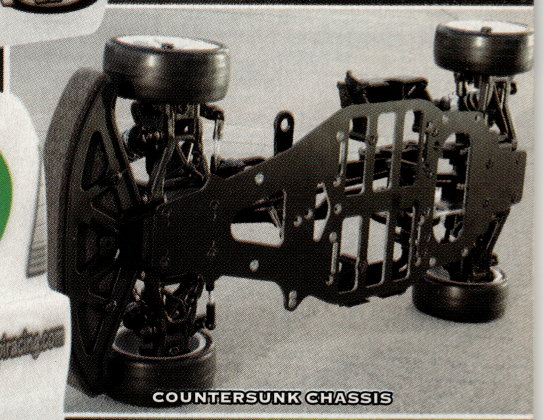
PRO 2 TYPE SUSPENSION

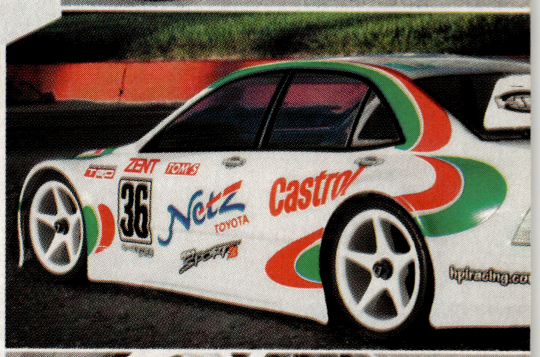
- EQUAL LENGTH SUSPENSION ARMS
- ADJUSTABLE CASTER AND CAMBER
- REINFORCED FOR MORE STRENGTH

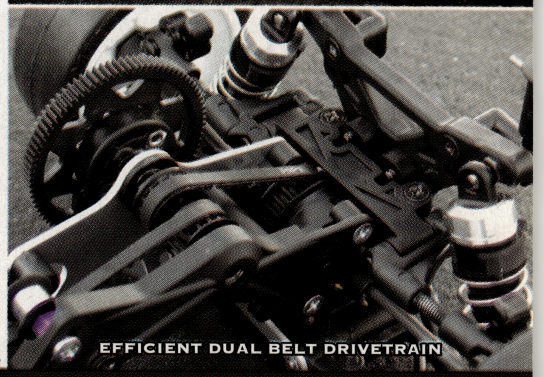




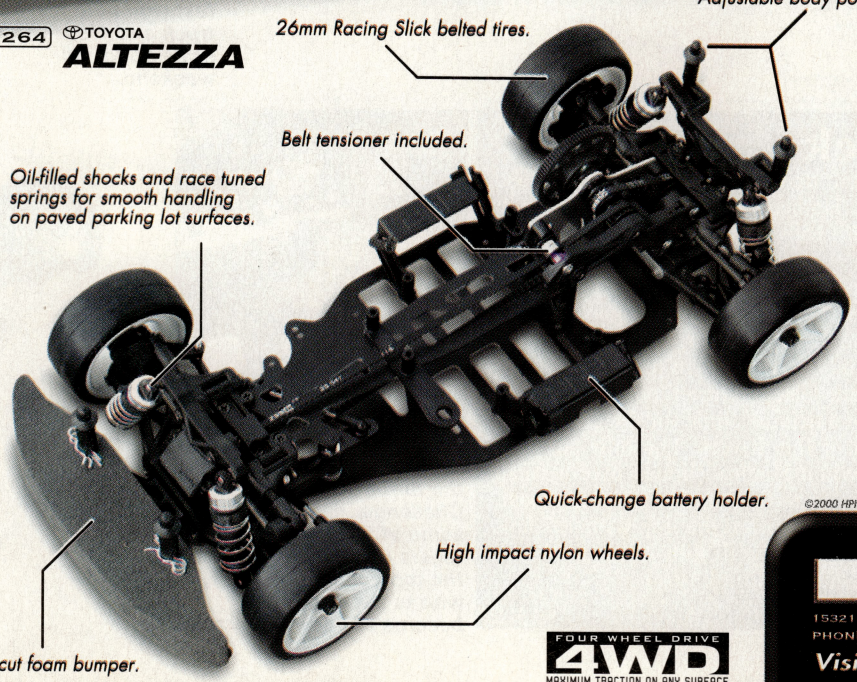








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Here's a perfect example of why you want to make sure you stay out of the racing lane if you're going to get sideways!

NITRO CHALLENGE



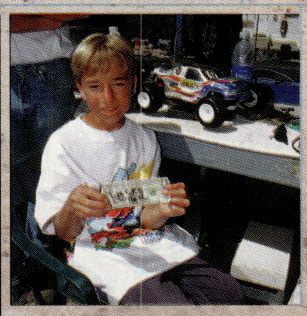
Jeremy Kortz had his Kyosho Ultima hooked up! Newest team member Kortz looked extremely fast with both his truck and 1/8th-scale buggy all weekend.

1/10-Scale Gas Truck

Through an amazing feat of focused, consistent driving, 13-year-old Jared Tebo TQed the highly competitive gas truck class. He beat out the likes of such top factory drivers as Mark Pavidis, Scott Hughes, Billy Easton, Matt Francis, and Jason Ruona!

At the start of the hour-long A-main, Tebo grabbed a great start with his RC10GT and stayed out front early on. Eventually, though, Tebo dropped back in the pack as the veteran factory pilots started pulling from their years of gas racing experience. Pavidis and Hughes started battling back and forth for the lead, and around the 15-minute mark, Hughes grabbed the lead and never looked back. Not long after taking over the lead, Hughes put on a driving clinic for the crowd and put a few laps between himself and the rest of the drivers. The only stressful moment came towards the end of the race when Hughes flipped over a small triple section and flamed out. Hughes was quickly re-fired and didn't skip a beat.

At the end, Hughes went unchallenged and he crossed the line with 107 laps while teammate Billy Easton finished a lap behind with 106 laps completed. Pavidis rounded out the top three, only 10 seconds behind Easton.



Thriteen-year-old Jared Tebo (pictured here with his lucky dollar) was on fire at the Silver State Nitro Challenge. He outqualified some of the best factory racers in the world to take the top honors. We can't wait to see what will become of this young racer!

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Mega 3™
Mega-versatility! Adjustable output AC/DC allows you to charge 4–7 cell batteries at 0–5 amp rate. Handles packs from 100 up to 4800mAh!



Mega Peak™
Charging doesn't get any easier! Charges at 4 amps until the peak detector circuitry says it's ready to roll. Internal fans keep components cool. This AC/DC charger also has 1 amp charge rate for 4–5 cell receiver packs.

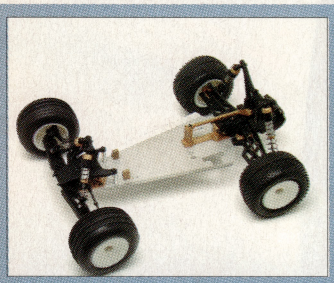
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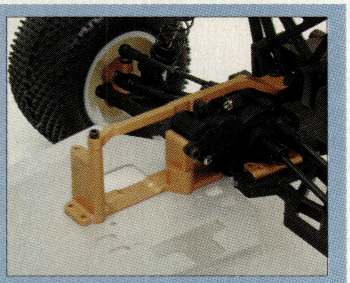
osi stunned everyone in the gas racing community when they brought out this new XXX-NT prototype as truck. The new truck features slightly modified Triple-XT suspension geometry as well as all-new eatures that make the truck easier to work on and tune. Contact Team Losi at (909) 465-9728



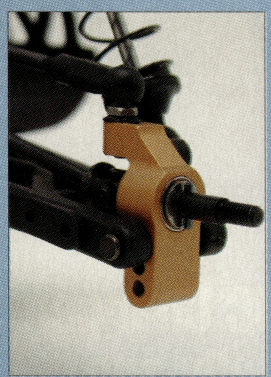
Pro-Line also had a new prototype tire used by factory drivers Mark Pavidis and Scott Hughes. The new unnamed tire will come in XTR compound, and should be available (and named) by the time you read this! For more info, contact Pro-Line Racing at (909) 849-9781.



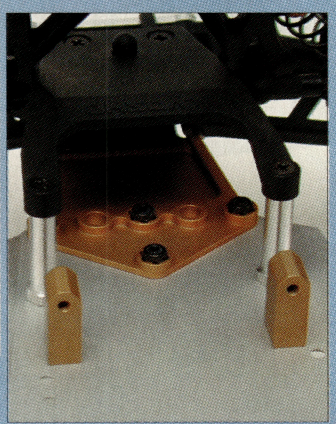
Trinity had a few much-needed hop-ups on display for the new Kyosho Ultima GP.



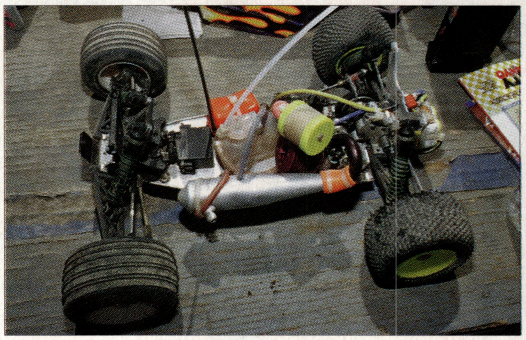
This rear chassis/tranny brace helps stiffen up the rear end of the truck. Also note the new aluminum rear arm mounts! This is a great mod and should be a racer's first choice!



This aluminum rear hub features the same geometry as the stock pieces, but is much more durable. Note the hub has three mounting holes available.



Up front is a set of aluminum servo mounts, and an aluminum front nosepiece. For more information, contact Trinity Products Inc., at (732) 635-1600.



Just to show you that there still are a few innovators at work out there, we wanted to show you this truck. This prototype gas truck was produced by one of our local racing pals Todd Tanner, who came to us one day and said, "I think I'm going to make my own gas truck." Sure, Todd, we thought. Well, he proved us wrong! This truck (which is still in the very early development stages) most importantly features a laid-down motor design which helps provide a low center of gravity.

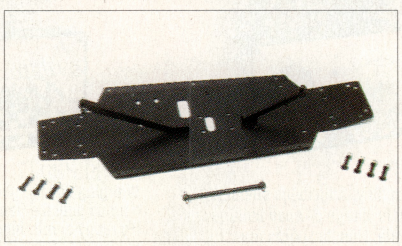


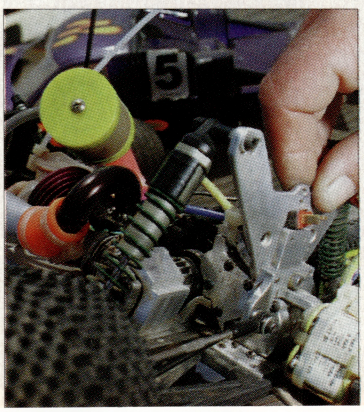
Richard Saxton and Billy Easton used Champion Racing's new tires in 1/8th-scale buggy qualifying and in the mains. Saxton TQed by 11 seconds over the field using these new tires! For more information on their 1/8th-scale and all-new 1/10th-scale tires, contact Champion Racing at (660) 584-7121.



"Before this became a chassis, it used to say Flooded on it," adds Todd. Way to be creative!

Jammin' Products has an all new, heavy-duty aluminum chassis for the Mugen MBX-4. The kit comes with alloy braces as well as all the hardware needed to complete the conversion. For more information, contact Jammin' Products at (909) 272-9447.



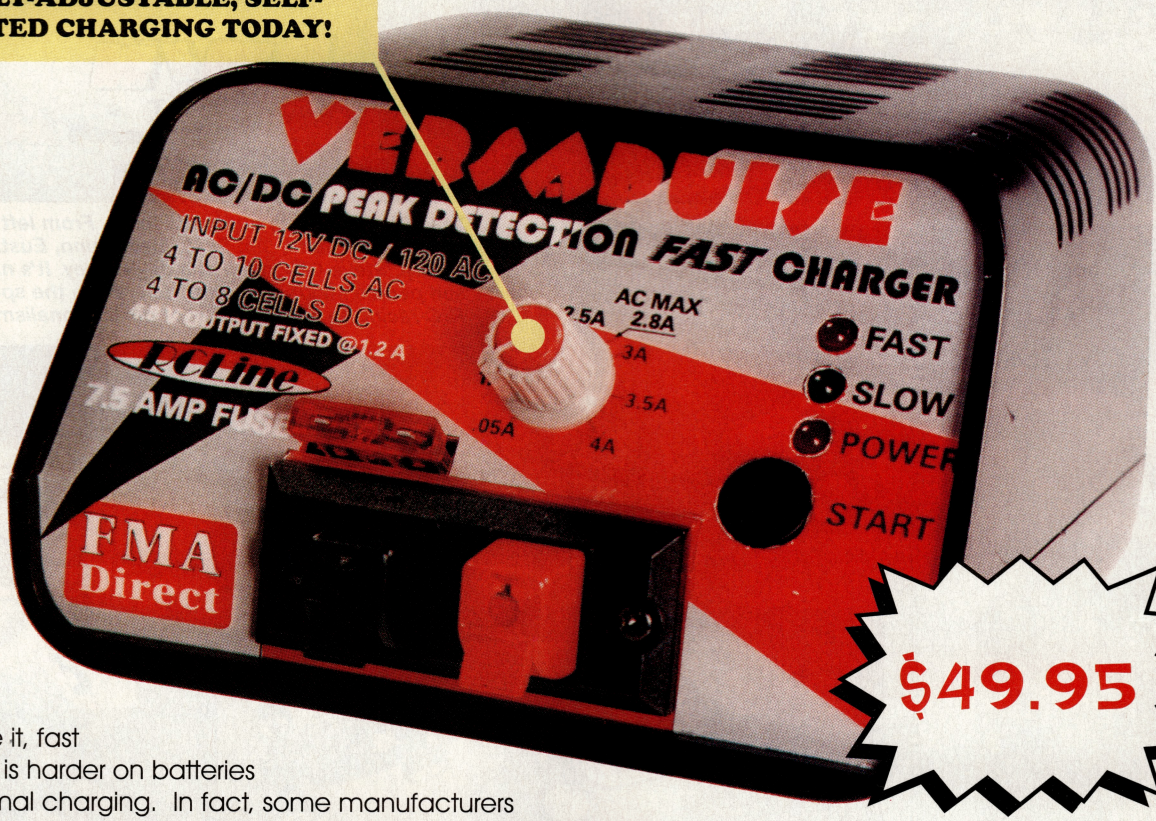


The prototype alloy gearbox houses Associated gears for now to help speed up the testing process, but different ones will come with the production version. We'll pass along more info as the truck nears final production.

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Let's face it, fast charging is harder on batteries than normal charging. In fact, some manufacturers don't even sell batteries that can be fast charged and most would cringe at the thought of 2C or higher charge rates. But in this hobby, sometimes you need to fast charge, or you'll miss out on the best flying day of the season! That being the case, you are looking for a fast charger that will provide you with unlimited charge rate capabilities so that *you* can determine the precise amount of current to put through a given battery. Most fast chargers in this price range give you 2 or 3 different, generic charge rates that are supposed to work for all the different capacity batteries on the market. At the same time, the manufacturer is telling you how safe his charger is for your batteries. Don't believe it! Check out the Versapulse - The only full-featured, AC or DC powered, peak detection charger in it's price range, with variable charge rates from 0.5A to 4.2A and current limiting for smaller packs! A rugged plastic enclosure, fuse and reverse polarity protection make this charger a great value!

SPECIFICATIONS:

DIMENSIONS: 4.93" x 5.60" x 3.42"

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OUTPUTS:

USING 110V AC INPUT -
4 - 7 CELLS (0.5A - 2.8A); 8 CELLS (0.5A - 2.2A); 9 CELLS (0.5A - 1.5A); 10 CELLS (0.5A - 1A)

USING DC INPUT -
4 - 6 CELLS (0.5A - 4.2A); 7 CELLS (0.5A - 3.0A)

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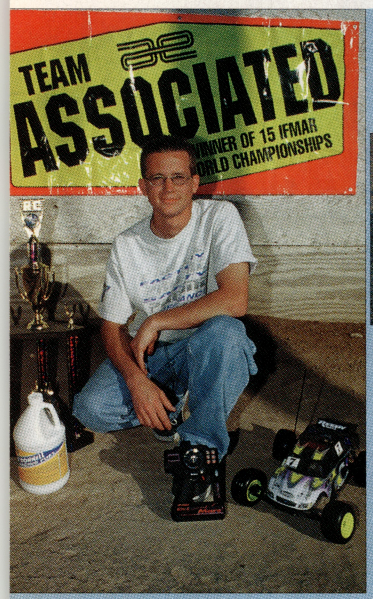
FMA Direct
RCLine

NITRO CHALLENGE



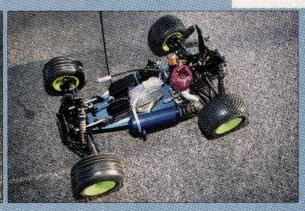


Team Jammin' was out in full force. From left to right: Steve Dunn, Jim Silva, Mike Dunn, Eustace Moore, Steve O'Donnell and Jay Halsey. It's nice to see people making an effort to elevate the sport of R/C racing to another level of professionalism!



1/10th-scale Gas Truck A-main winner Scott Hughes.



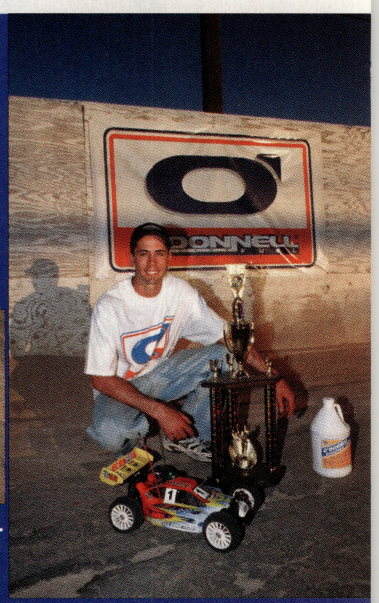


Scott Hughes' Associated Factory Team RC10GT.





Billy Easton's Thunder Tiger EB4.



1/8th-scale Buggy A-main winner Billy Easton.



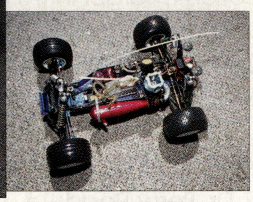
Team Kyosho Japan (from left to right) , Takahiro Akiyama, Yuichi Kanai, and Manabu Mizota. These three gentlemen made sure their cars and the team were up to speed!



1/8th-scale TQ Richard Saxton and 1/10th-scale TQ Jared Tebo.



Richard Saxton's Thunder Tiger EB4.



Jared Tebo's Team Associated RC10GT.





1/8-Scale Buggy

F	Q	Name	Car	Engine	Fuel	Pipe	Tires (F/R)	Body	Radio/Servo
1	4	Billy Easton	Thunder Tiger	O'Donnell TOP	O'Donnell	O'Donnell	Champion	Jammin	Airtronics
2	2	Adam Drake	Kyosho	Picco	Trinity	Picco	Kyosho	Kyosho	Airtronics
3	10	Mike Dunn	Mugen	Jamin	O'Donnell	TOP	Pro-Line	Mugen	KO(not sure)
4	1	Richard Saxton	Thunder Tiger	HPI Nova Rossi	O'Donnell	Nova Rossi	Champion	Pro-Line	JR Racing
5	3	Greg Degani	Kyosho	O.S.	O'Donnell	Nova Rossi	Pro-Line	Kyosho	Futaba
6	5	Greg Waller	Kyosho	RB Conepts	O'Donnell	RB Concepts	Pro-Line	Kyosho	Airtronics
7	8	Jay Halsey	Mugen	Jamin	O'Donnell	TOP	Pro-Line	Mugen	Airtronics
8	7	Steve Hale	Thunder Tiger	Fiorni	FSR	Nova Rossi	Champion	Thunder Tiger	JR/Airtonics
9	6	Dave Henry	Kyosho	O.S.	O'Donnell	Kyosho	Pro-Line	Kyosho	Futaba
10	9	Jeremy Kortz	Kyosho	O.S.	Thunder Tiger	Kyosho	Kyosho	Kyosho	JR Racing

Truck

F	Q	Name	Car	Engine	Fuel	Pipe	Tires (R/F)	Body	Radio/Servo
1	9	Scott Hughes	Associated	Mugen Nova Rossi	O'Donnell	Associated	Pro-Line/Pro-Line	Pro-Line	KO Propo
2	10	Billy Easton	Associated	Nova Rossi	O'Donnell	Associated	Pro-Line/Pro-Line	Associated	Airtronics
3	2	Mark Pavidis	Associated	Mugen Nova Rossi	O'Donnell	O'Donnell	Pro-Line/Pro-Line	Pro-Line	Airtonics
4	6	Austin Dvorak	Associated	Nova Rossi	O'Donnell	Associated	Pro-Line/Pro-Line	Associated	Airtronics
5	7	Matt Francis	Losi XXX-NT	Nova Rossi	O'Donnell	Losi	Pro-Line/Losi	Losi	N/A
6	4	Jason Rouna	Losi XXX-NT	O.S.	O'Donnell	Associated	Pro-Line/Losi	Losi	Airtronics
7	1	Jarred Tebo	Associated	O'Donnell Picco	O'Donnell	Associated	Pro-Line/Pro-Line	Pro-Line	Airtronics
8	3	Andy Smolnik	Associated	n/a	O'Donnell	Associated	Pro-Line/Pro-Line	Pro-Line	Hitec RCD
9	8	Ryan Cavalieri	Losi	O.S.	O'Donnell	Associated	Pro-Line/Losi	Losi	Airtronics
10	5	Sheldon Ko	Associated	Nova Rossi	O'Donnell	Associated	Pro-Line/Pro-Line	Pro-Line	Airtronics

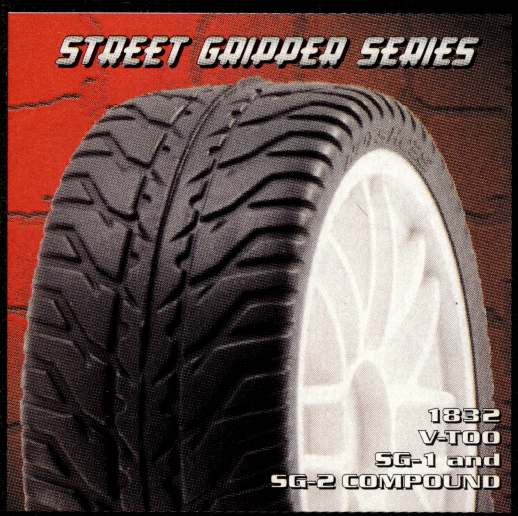






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R/C CAR
MODIFIED MOTOR BUYERS' GUIDE

Feeling the need for speed? If you race in the mod class, then you need to be made aware of all the new mod motors that have arrived on the scene as of late. The "new breed" of mod motors that are out now are the best ever—they're more efficient and they produce even more power than their predecessors! We've gathered the newest hand-wound mod motors from each manufacturer and distributor to give you a look at what's currently available.

Banzai



Banzai Motorsports: $95.00 retail (est. street price: $47.99)—EPIC D4 Based
Winds available: all popular winds

- Hand-wound "in-house"
- Surface-mount capacitors
- Custom winds available at no extra cost
- Matched magnets
- Blue anodized brush heatsinks
- Balanced and tested

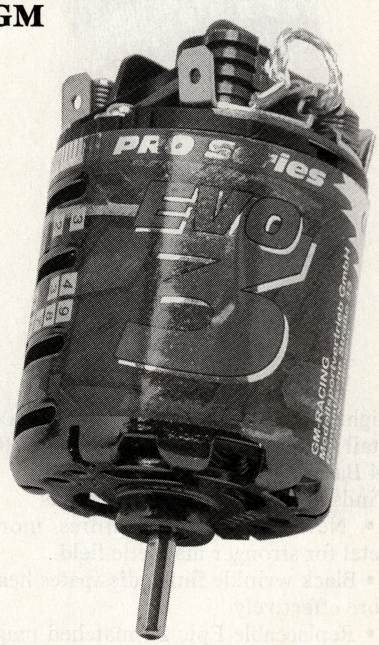
Fantom



Fantom Factory Modified: $95.00 retail (est. street price: $55.00)—EPIC D4 Based
Winds available: all popular winds

- Fantom zaps each motor with their new 3-point magnet zapper for max magnet strength
- New can design features more metal for stronger magnetic field
- Black wrinkle finish dissipates heat more effectively
- Replaceable Epic 2k matched magnets
- Pure copper hoods for less resistance and better cooling
- Three surface-mount capacitors pre-installed

GM



GM Racing EVO3: $95.00 retail (est. street price: $55.00)—GM
Winds available: all popular winds

- New brush stabilizer system provides even pressure between brush and comm
- Swirl Wind technology endbell helps dissipate heat
- Pattern wound with GM's "Teknyque" winding system, then epoxy-balanced and diamond-trued
- New steel race ball-bearings
- Equipped with GMMB09 brush and comes with an extra pair of GMMB03 brushes

When It's Time To Maintain Your Mod!

Today's full-blown race mod motors are maxed out more than ever before—especially since the advent of the new 3000NiMh cells. The new 3000s have lower voltage than the 2000 and 2400 NiCad cells, but obviously have more capacity. To compensate for the lower voltage, racers are now "motoring down," going as low as seven and eight-turns and advancing the timing (usually 16 degrees and above). These hotter motors have a tendency to burn brushes and comms more easily. To keep your motor running strong, here are a few guidelines for the most popular forms of racing.

• Touring car—Most competitive touring car racers run their motors with hot brushes (high silver content), lots of timing, and low winds. This puts a lot of stress on the motor. In highly competitive race situations, it's recommended by many motor tuners to cut the comm and replace brushes after each run. Also check the motor's bearings for "notchiness"—any side impacts during your race could damage the bearings as they are not made to withstand harsh hits from the side like that. In addition, look for hits to the side of the endbell that may have damaged the bearings. In this type of competitive racing, cutting the comm and replacing brushes frequently means everything!

• Off-Road—In off-road, the situation differs greatly. You can go pretty much all day racing with minimal maintenance unless you're racing against Kinwald and need the National-level stuff. Basically, every three to four runs you should consider tearing the motor apart and cleaning it. Check to see if the comm and brushes are in good shape, and because of the debris involved, especially look at the bearings in the can to make sure that there is no grit inside them.

MODIFIED MOTOR

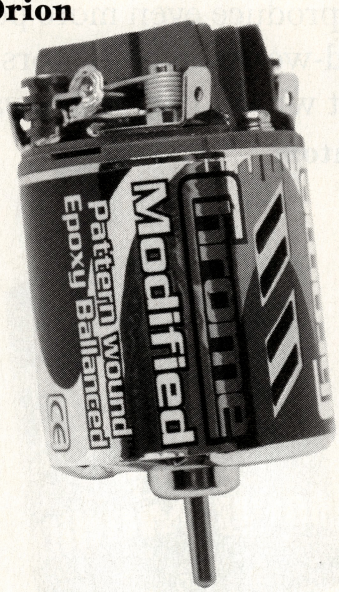
Mighty Motors



Might Motors Team Edition: $95.00 retail (est. street price: $55.95)—EPIC D4 Based
Winds available: all popular winds

- New can design features more metal for stronger magnetic field
- Black wrinkle finish dissipates heat more effectively
- Replaceable Epic 2k matched magnets
- Three surface-mount capacitors pre-installed
- Hemi pattern wound with 100-percent pure copper wire, epoxy-balanced comm

Orion



Team Orion Chrome Modified: $95.00 retail (est. street price: $54.00)—TOP
Winds available: all popular winds

- G9 Magnets
- 1.4mm thick chrome can
- Ultra Flow Can and Endbell
- Dual brush dampeners
- Two surface-mount capacitors
- Color Coded Heat Sinks
- Straight Shank Armature
- Diamond-trued 8mm commutator, pattern wound, epoxy-balanced



Team Orion Chrome Touring: $95.00 retail (est. street price: $54.00)—TOP
Winds available: all popular winds

- G9 Magnets
- 1.4mm thick chrome can
- Ultra Flow Can and Endbell
- Dual brush dampeners
- Two surface-mount capacitors
- Color Coded Heat Sinks
- Straight Shank Armature
- Diamond-trued 8mm commutator, pattern wound, epoxy-balanced

Motor Care Do's and Don'ts



Everyone out there has their own "secret tuning tip" that ads a few thousand extra rpm to their motor—or so they say. You know you've seen them—the guy at the end of the pits breaking-in his motor in a cup of water, or the other guy across from him running his motor on the four-cell pack with the little fan attached to the commutator. Those guys are pretty safe; it's the guys working with welding masks and the third world country's power-supply on their work bench who worry us! Hey, some odd practices work, some don't! While we can't go and give you any tips on oddball schemes that give you massive power bonuses, we can pass along some good tips, along with a few bad ideas that hurt your motor. The following are a few of the best tips from top motor builders that should help keep your motor maxed-out.

DON'TS

• Don't take the armature out of the can while the motor is still hot! Aside from cooking your fingers, this can de-gauss (de-magnetize) the magnets inside the can. Wait until the motor has cooled down properly before performing any maintenance procedures. Also, don't use motor spray as a cooling agent by spraying it into a hot motor! Rapid shifts in internal motor temperature can damage a copper commutator. Also, spraying motor spray into a hot

BUYERS' GUIDE

Hurricane Motorsports



Hurricane Motorsports: $79.00 retail (est. street price: $60.00)—TOP Based
Winds available: all popular winds

- G9 Magnets
- 1.4mm thick chrome can
- Ultra Flow Can and Endbell
- Dual brush dampeners
- Two surface-mount capacitors
- Color Coded Heat Sinks
- Straight Shank Armature
- Diamond-trued 8mm commutator, pattern wound, epoxy-balanced

Race Prep



Race Prep Modifieds: $95.00 retail (est. street price: $59.99)—Yokomo Based
Winds available: 8 through 13-turn available

- Low-maintenance large comm design
- Type M magnets
- Laydown brushes
- Welded wires
- Hand epoxy-balanced, diamond-trued
- Custom winds available at no extra cost

Peak Performance



Peak Performance Aurora: $95.00 retail (est. street price: $55.00)—TOP Based
Winds available: all popular winds

- G9 Magnets
- 1.4mm thick can with black finish
- Ultra Flow Can and Endbell
- Dual brush dampers
- Two surface-mount capacitors
- Color Coded Heat Sinks
- Straight Shank Armature
- Diamond-trued 8mm commutator, pattern wound, epoxy-balanced

motor will surely weaken your magnets! If you need to cool a hot motor, use a fan to bring it back to room temperature.

• Don't hit the motor can on your pit table when taking it apart. Sometimes it's tough to get those shims out at the bottom of the can. Try to remove the motor shims another way (i.e. tweezers!). As with heat, blunt force shock can take its toll on your motor's magnets.

• As odd as this sounds, don't true your commutator with a sandpaper wheel on a Dremel! When we asked around, one motor builder told us that he's actually seen this procedure done in the pits and every time it makes him cringe! This method will surely screw up your comm and put it out of round. Trying to true your comm this way is too inconsistent a method—you need a comm cutter for this one.

• Don't use one of the old style-fiberglass commutator cleaners—they're too stiff and could damage the comm. If you want to clean your comm like that, use a nice soft comm stick.

• Don't use motor spray on your motor when it is running! In case you weren't aware, motor spray is flammable and could ignite if the motor arced and a spark was produced. That lovely can of motor spray could quickly turn into a flame thrower. For the record, this isn't a joke—it's been documented!

• Don't forget your brushes—it's important to check them after each run! One of the biggest troubleshooting areas with mod motors is to make sure the brushes are in top shape. If you notice that the brush is wearing out fast and is much shorter, or if the motor is losing power or turning purple, then it's time for a new set of brushes. Before you put new brushes in, though, for the best performance it's a good idea to "skim" your comm!

• Don't run too many times in a row—especially with touring cars where they get extra hot. Allow your motor to cool between each run. Remember, heat is your motor's worst enemy!

DO'S

• To check to see if your commutator is still in good shape (still round), try this nifty little trick! Take a 4-cell pack and a small jewelers screwdriver and grab your motor. Balance the jewelers screwdriver on the back face of one of the brushes and balance it between your finger and the motor so it stands straight up and down—yes, actually place it inside the hood of the motor and on the back of the brush! Most importantly, *do not* apply any pressure to the screwdriver, just let it sit there with your finger on it as it balances perfectly! If you apply pressure, you will screw up the comm. Next hook up the four cell pack to your motor and let the juice flow. If the jewelers screwdriver stays relatively still and doesn't bounce, then the comm is in good shape. Conversely, if the screwdriver bounces all over the place, that means the brush is being bounced around off your out-of-round commutator, and it needs to be cut! Pretty cool trick, isn't it?

MODIFIED MOTOR BUYERS' GUIDE

Reedy Modifieds



Reedy Fury: $95.00 retail (est. street price: $54.00)—Yokomo Based
Winds available: All popular winds

- Standard comm design
- Stand-up brush style
- Type M magnets
- Welded wires
- Hand epoxy-balanced, diamond-trued
- Comes standard with Reedy 7060X brushes



Reedy Fury Millennium Wind: $95.00 retail (est. street price: $54.00)—Yokomo Based
Winds available: All popular triple-based winds

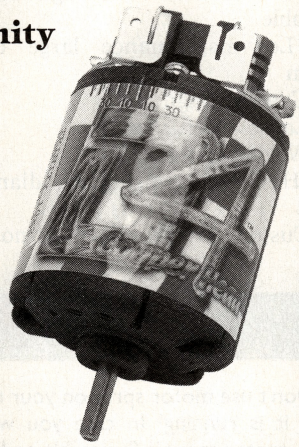
- Millennium Wind wire package (two thin strands, one thick strand increases rpm without decreasing torque)
- Standard comm design
- Stand-up brush style
- Type M magnets
- Welded wires
- Hand epoxy-balanced, diamond-trued
- Comes standard with Reedy 7060X brushes



Reedy Modifieds Tri Sonic: $95.00 retail (est. street price: $54.00)—Yokomo Based
Winds available: all popular winds

- Low-maintenance large comm design
- Type M magnets
- Laydown brushes
- Welded wires
- Hand epoxy-balanced, diamond-trued

Trinity



Trinity D4: $95.00 retail (est. street price: $54.00)—EPIC
Winds available: all popular winds

- New can design features more metal for stronger magnetic field
- Black wrinkle finish dissipates heat more effectively
- Replaceable Epic 2k matched magnets
- Pure copper hoods for less resistance and better cooling
- Three surface-mount capacitors pre-installed
- Two separate armature blanks available—one designed for low turns, one for high
- High Variance Split Double Winds available (one thick, one thin wind)
- Hemi pattern wound with 100-percent pure copper wire, epoxy-balanced, silver brazed connections, diamond-trued comm, and high-temp epoxy used

Integy



Integy JETT Modified Version 7.5: $95.00 retail (est. street price: $45.95)—EPIC D4 Based
Winds available: 8x2 through 17x3

- Subzero temperature-treated can and magnets
- Temperature-treated racing brushes included
- Staggered spring tension setup
- Pre-cut commutator diamond-trued on a Xipp Super Lathe
- Balanced armature
- Undergoes temp treatment to lower copper wire internal resistance

Sources

Banzai Motors, 719 Gaillard St., Glendora, CA 91740 • (626) 963-0422
Fantom Racing, 50201 Silver St., Vicksburg, MI 49097 • (616) 649-9583; (616) 649-9584 (fax)
GM Racing USA, 601 North Main Street, Niles, OH 44446 • (330) 652-1479; (330) 652-1969 (fax)
Hurricane Motorsports, 213 Rethke Ave., Madison, WI 53714 • (608) 243-9430
Integy, 1140 Centre Dr., City of Industry, CA 91789 • (909) 444-2766; (909) 444-2767 (fax)
Mighty Motors, 44 Winding Rd., Hicksville, NY 11801 • (516) 932-1688; (516) 932-3236 (fax)
Team Orion, 15311 Barranca Parkway, Irvine, CA 92618 • (949) 864-1720; (949) 864-1722 (fax)
Peak Performance, 23352 J Madero Rd., Mission Viejo, CA 92691 • (949) 707-4683; (949) 707-4684 (fax)
Race Prep, Feather Mtn. Ranches, Spring Canyon Rd. #3, Paulden, AZ 86334 • (520) 636-1955; (520) 636-1956
Reedy Modifieds, 3585 Cadillac Ave., Costa Mesa, CA 92626 • (714) 850-9342; (714) 850-1744 (fax)
Trinity Products, Inc., 36 Meridian Rd., Edison, NJ 08820 • (732) 635-1600; (732) 635-1640 (fax)

RPM

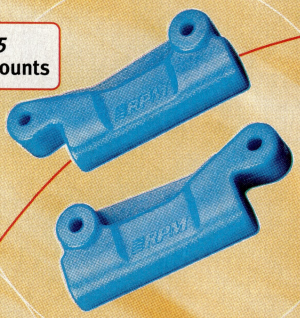
Custom Engineered R/C Products

14978 Sierra Bonita Lane Dept 3
Chino, CA 91710

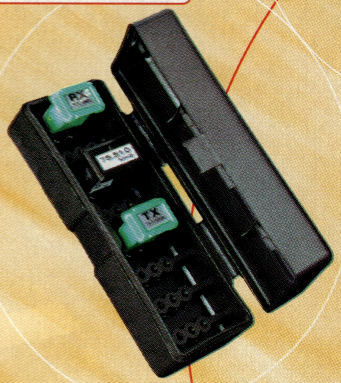
Send $3 for catalog and decals.

www.RPMRCPRODUCTS.com

B3 & T3 • *$5.95*
Rear Suspension Mounts



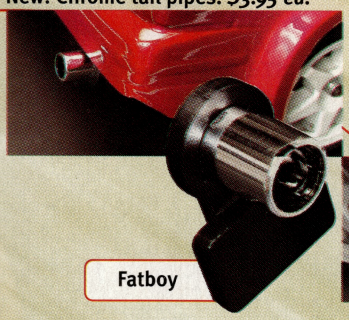
Crystal Case • *$7.95*
Holds 4 Pairs (Crystals Not Included)





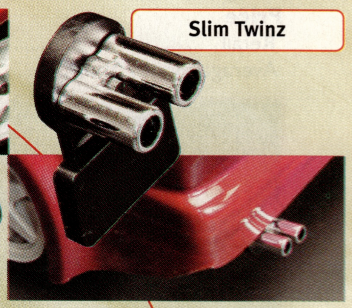
Bearing Blaster • *$8.95*
(Bearings Not Included)

New! Chrome tail pipes. *$3.95 ea.*

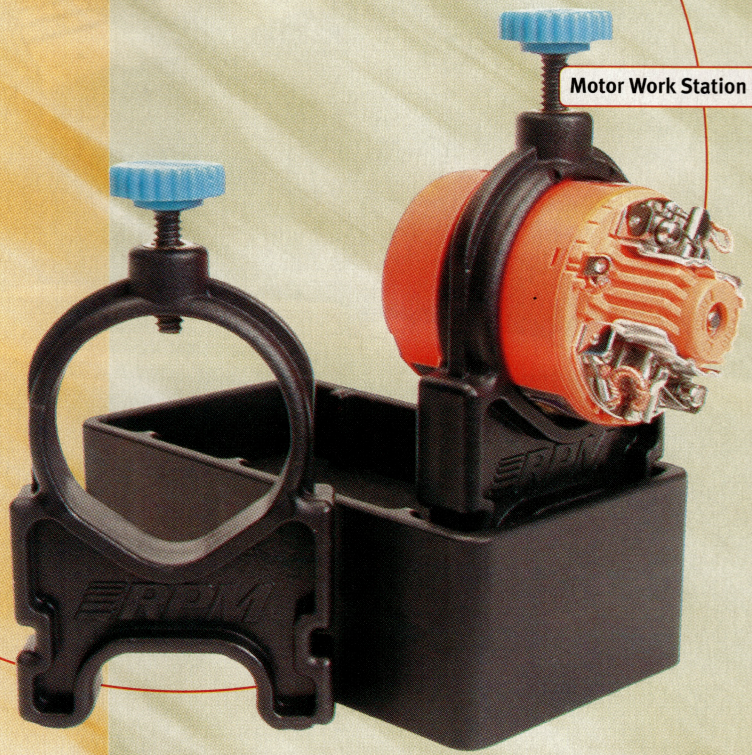


Fatboy

Slim Twinz



Motor Work Station • *$12.95*



RPM CUSTOM TRAXXAS PARTS

ESC Mounting Plates
(esc not included)



Gear Covers
(also available in blue)



Front & Rear Bearing Carriers
(bearings not included, for electric vehicles only)



Spring Retainers & Clips



SPECIFICATIONS

Length	37.7 in./960mm
Width	17.3 in./440mm
Wheelbase	24.4 in./620mm
Weight (RTR)	19lb
Price	
Retail	$1,695
Average Hobby Shop	$TBD



An all-new Formula chassis for boys that love big toys!

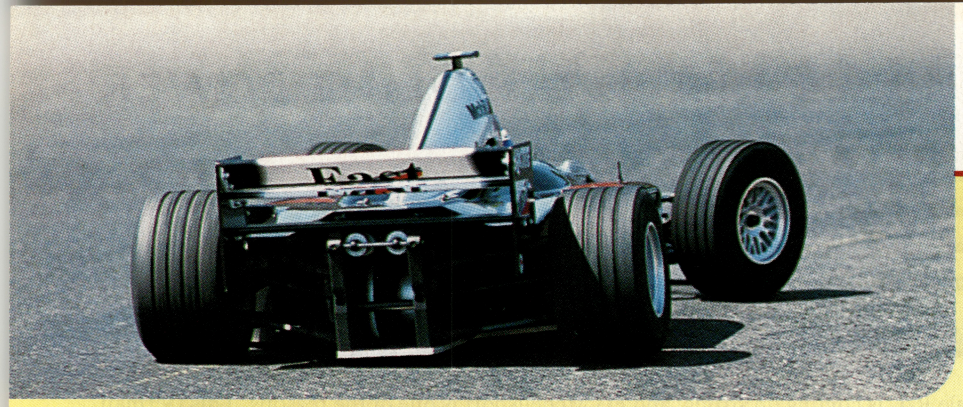
SEI/FG Modellsport F2000 Formula 1

Large-scale R/C is coming on strong, and FG Modellsport is one of the reasons. This German firm is responsible for some of the most sophisticated and exciting 1/5- and 1/6-scale gasoline-powered models we've ever tested. Last month, we tested FG's innovative 1/6-scale off-road Beetle and were thoroughly impressed. But when SEI Racing's Jeff Devlin called and invited us to try out FG's brand-new 1/5-scale F2000 Formula chassis at the newly opened Crystal Park Hotel and Casino's permanent on-road track in Compton, California, we were out the door and in the car before Jeff hung up the phone!

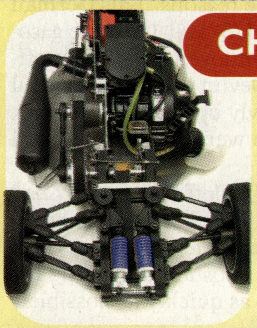
As it turned out, the car we would be testing was the only one in the U.S. Jeff had actually had this early sample on display at SEI's Pasadena, California, showroom, but there had been so much interest in the F2000—and he couldn't yet fill the demand—that he elected to let us test this particular car. As it stands, we've been told by SEI that there is currently a substantial waiting list for the F2000. But don't worry, if you want one, Jeff will get one for you as quickly as possible.





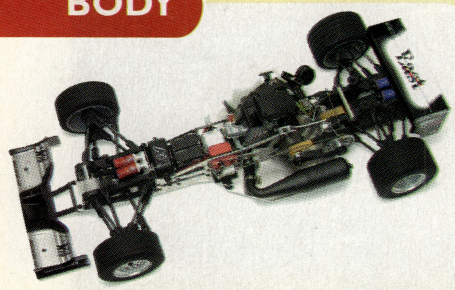


CHASSIS



The F2000 is a very significant release for FG as it is nearly a completely new chassis—roughly 95 percent of the parts used in the F2000 are brand new and are not shared with any other existing FG 1/5-scale chassis. The F2000 was in development for over three years. Originally, the car was to serve as a test-bed for future 1/5-scale chassis; however, FG decided to meet the challenge of creating a true-to-scale F1-type model instead. FG engineers were faced with several problems, not the least of which was the size and placement of the engine, and concealing it beneath an F1-type body without having to resort to typical tricks, e.g., cutting clearance holes or molding un-scale "lumps" in the body to provide clearance.

BODY



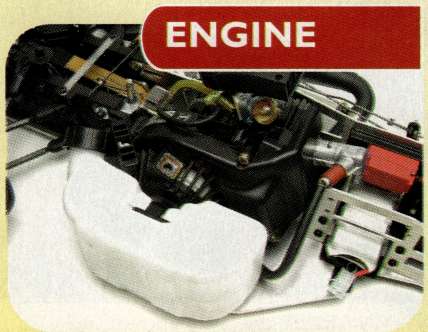
To overcome this obstacle, FG decided to push the size of the body so that it is actually slightly larger than true 1/5 scale—about 1/4.5 scale, to be more accurate. In addition, the car's engine was moved forward in the chassis so that it be closer to the widest and tallest portion of the F1-type body. As a side benefit, the F2000's weight distribution has improved over that of other FG 1/5-scale chassis: 55/45 versus 65/35. The chassis itself is standard 1/5-scale fare: a stout 5mm-thick aluminum plate whose front portion is bent upward at approximately four degrees to provided a more scale-like appearance when high-nosed F1-type bodies are used (you won't see a big ugly aluminum plate poking out under the nose).

DRIVETRAIN



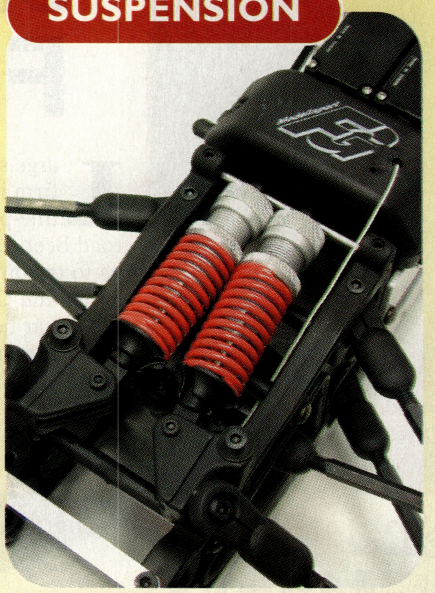
One problem created by the forward-mounted engine is that the engine is now further away from the rear diff. Most 1/5-scale chassis rely on gears to transmit power rearward; however, on the F2000, the use of gears was impractical since they would have been extremely large in diameter, or additional gears would be required to span the distance. The solution for FG was to employ a twin-belt setup using Kevlar-reinforced belts and aluminum pulleys. Belts have seen limited success in several other 1/5-scale chassis. FG, however, views their twin-belt system as a triumph—it is efficient, lightweight and durable. The drive ratio of the system can be altered by changing the main drive pulley that comes from the engine. A sliding engine mount not only allows for different-sized pulleys, but can be used to take up slack when the main drive belt becomes stretched.

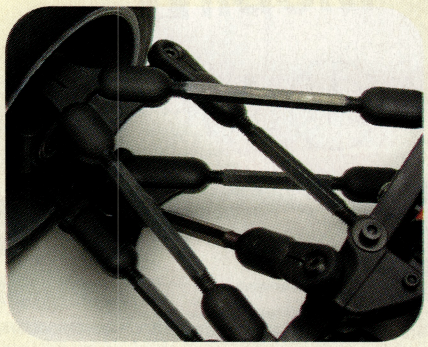
ENGINE



A German-made Solo gasoline engine provides approximately 2.8 horsepower at 19,000 rpm. This is one of the most potent 23cc engines available for competition, easily propelling a large car such as the F2000 to speeds in excess of 50 mph on "lowly" pre-mix pump gas.

SUSPENSION

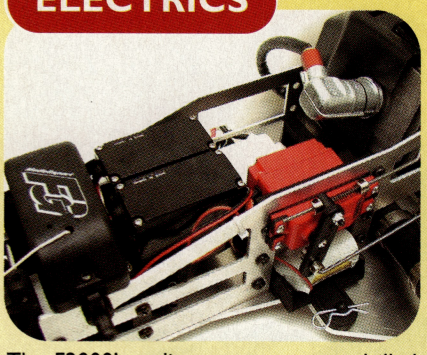




In keeping with the goal to build a scaled-down F1-type chassis, the F2000 gets a fully independent suspension system that uses adjustable upper and lower wishbones and pushrod-activated, inboard-style shock absorbers. Each "leg" of each wishbone is actually a rugged steel turnbuckle. Using a wrench, the lengths of each wishbone can be precisely changed to set the front camber and caster, and the rear-end camber and toe-in. Fortunately, the F2000 comes pre-assembled from the factory, so you won't have to fuss with the suspension until you become accustomed to driving the car. The inboard shocks are also all-new for FG. They are shorter than normal and have special springs that are suitable for the high-leverage/short travel requirements of this suspension setup. All of the molded pieces of the F2000 are made from strong and durable Kydex, a non-exotic material that's relatively cheap should you break anything and need to replace it. Also of note are the ball-ends used for the car's various tie-rods; they are a new design for FG that have a self-tapping screw that can be used to take up any slop that might develop as the ball-end wears.

SEI/FG MODELLSPORT F2000 1/5-SCALE FORMULA-1

ELECTRICS



The F2000's radio tray comes pre-drilled to accept Futaba servos, although a single Multiplex Jumbo will fit with a little work. Our test car was fitted with a pair of prototype Futaba S5301 high-torque servos from Futaba's industrial servo department. Futaba is contemplating the release of this and the S5302 high-speed servo into the R/C market.

WINGS



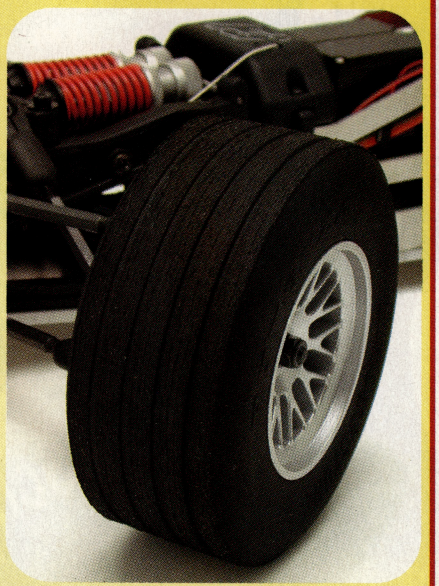
The rear wing of the F2000 is a thing of beauty and function. Made from injection-molded polycarbonate, the rear wing is super-rigid so that it can provide the downforce needed to keep the F2000 sticking to the ground at 50-plus mph. The injection-molded wing is more impact resistant than if it were molded from a nylon composite, plus it's transparent and can be painted to match the body.

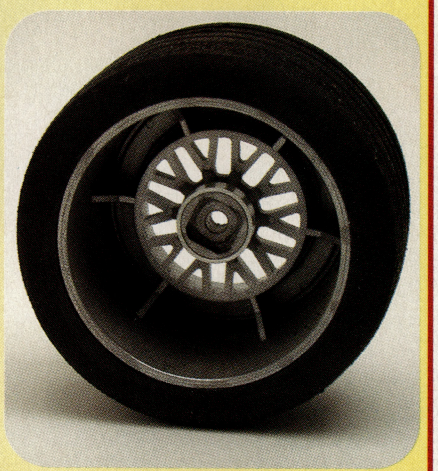
PROTECTION



The main portion of the F2000's front wing is made from standard vacuum-formed Lexan. For greater detail, the side winglets were formed using injection-molded polycarbonate similar to that of the rear wing. Beneath the wing, an energy-absorbing Kydex bumper provides needed protection for the front of the chassis. You can't see it, but you'll be glad it's there should you crash the car!

WHEELS & TIRES





To enhance its scale looks, the F2000 has these innovative "double sidewall" belted tires. When combined with a specially made wheel, the extra outer sidewall gives the appearance of a small diameter F1 wheel and tire, even though the inside of the tire remains a typical low-profile 1/5-scale tire. The F2000 comes with FG's high-grip S1 rear tires and long-lasting M-compound fronts. Both sets of tires feature grooves just like real F1 tires. Under normal conditions, expect the rear tires to last between six and eight hours, while the fronts should last between ten and 12 hours.



Performance

The first time we spent any time with the F2000 on a track was, coincidentally, the first time an F2000 had ever been run on American soil! We met Jeff Devlin of SEI at the newly built permanent road course at Crytal Park Hotel and Casino in Compton, California, for the F2000's first run. Straight from the factory, the F2000 drove very confidently with enough understeer to always keep the rear tires in line. After only a few laps, the F2000 was up to racing speed and could be pushed harder and harder. The car's belt-drive setup felt more smooth than the gear drive of other 1/5-scale cars. Gone was the realistic whine of gears, replaced by nothing but the note of the Solo engine. Overall, the belt-drive system provides smoother acceleration. It's different, more gradual than with gears. Even under full throttle, we noticed little diff spooling when exiting tight turns.

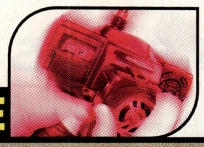
Also interesting was how level the chassis remained during high-speed cornering despite the fact that the car wasn't equipped with swaybars. The new suspension design and spring/damping rates felt spot-on. Initial turn-in was very good. So good, in fact, that the car could be driven at near race-speed without the use of brakes—it is very good at scrubbing speed when entering turns. Mid-turn and exit steering were also very good, with just enough push to keep the rear tires from breaking loose. At no time did the F2000 exhibit a tendency to oversteer violently. Mash the throttle exiting a turn and yes, you'll get the car to slide, but you can also bring the back end in line by letting-off on the gas. Overall, this is a very benign car to drive quickly, and we don't see any reason why even novice drivers shouldn't find success behind the wheel of the F2000. ◆

SOURCES

Futaba, distributed by Great Planes Model Distributors, 2904 Research Rd., Champaign, IL 61826-9021 • phone (217) 398-6300; fax (217) 398-0008

Multiplex USA, 5399 Harter Ln., La Cañada, CA 91011 • phone (800) 375-1312; fax (818) 790-1346

FG Modellsport, distributed by SEI Racing, 145 N. Sierra Madre Blvd. #10, Pasadena. CA 91107 • phone (626) 577-8004





Specifications

Length.....390mm
Width.....246mm
Wheelbase.....285mm
Weight (RTR).....56oz
SKILL LEVEL*.....2
PRICE
Retail: $499.99
Average Hobby Shop: $299.99

* Indicates skill needed to satisfactorily complete kit. Level 1 kits are the easiest to complete, Level 4 are the most difficult and shouldn't be attempted by beginners without experienced assistance.

Running Gear

Hitec 925MG Steering Servo
KO Propo Mars FM Radio
CS Rocket 2000 Speed Control
KO Propo Receiver
Orion V Max+ 2000 Batteries
Orion Chrome Modified Motor 10x2

What you get

- Complete rolling chassis
- Schumacher Mini Block tires (rear) Pin tires (front)
- New redesigned Body and Wing

What you need

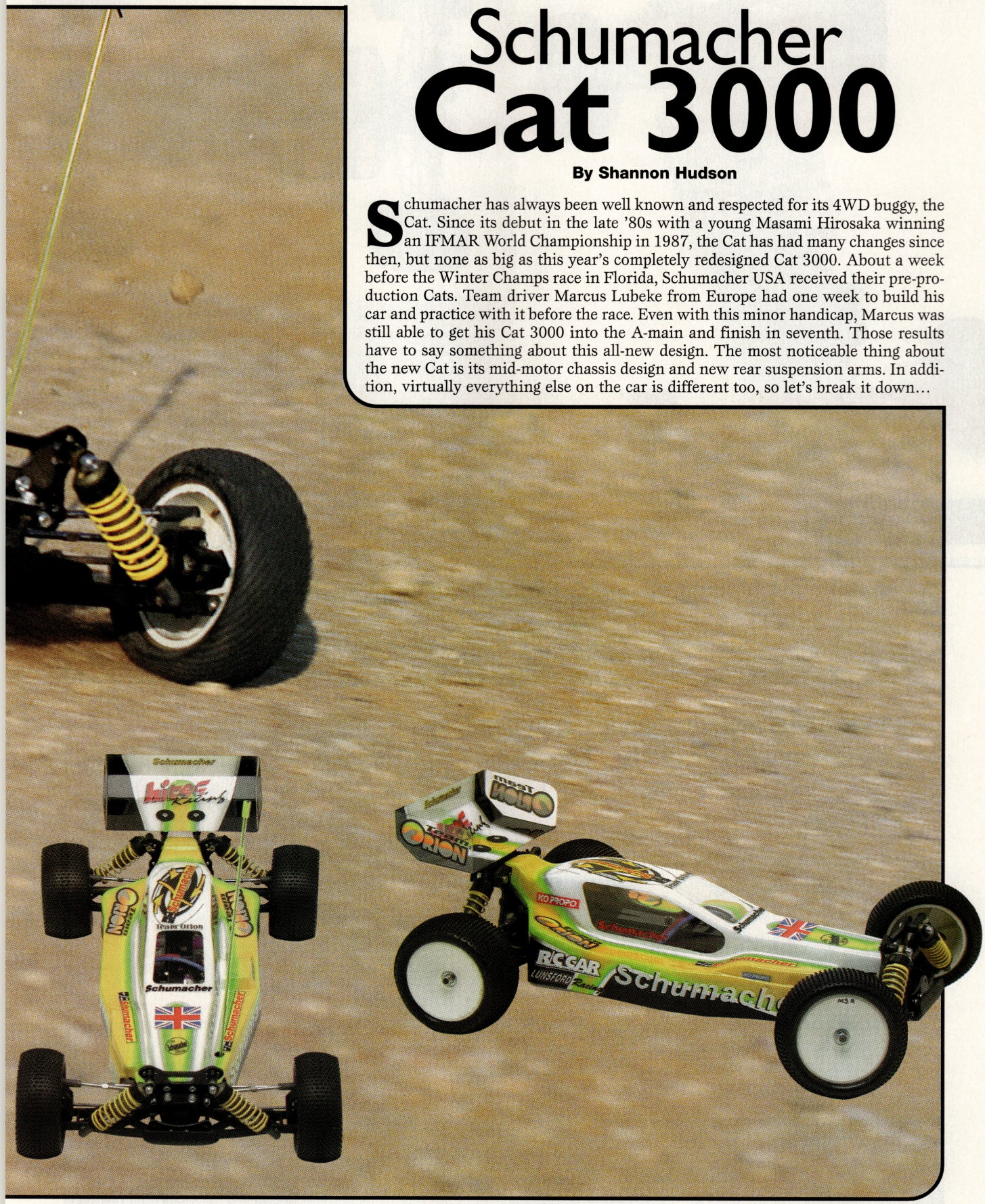
- Polycarbonate paint
- 2-channel radio and receiver
- Steering servo
- Battery pack (saddle type)
- Electric motor
- CA "super glue" for tires

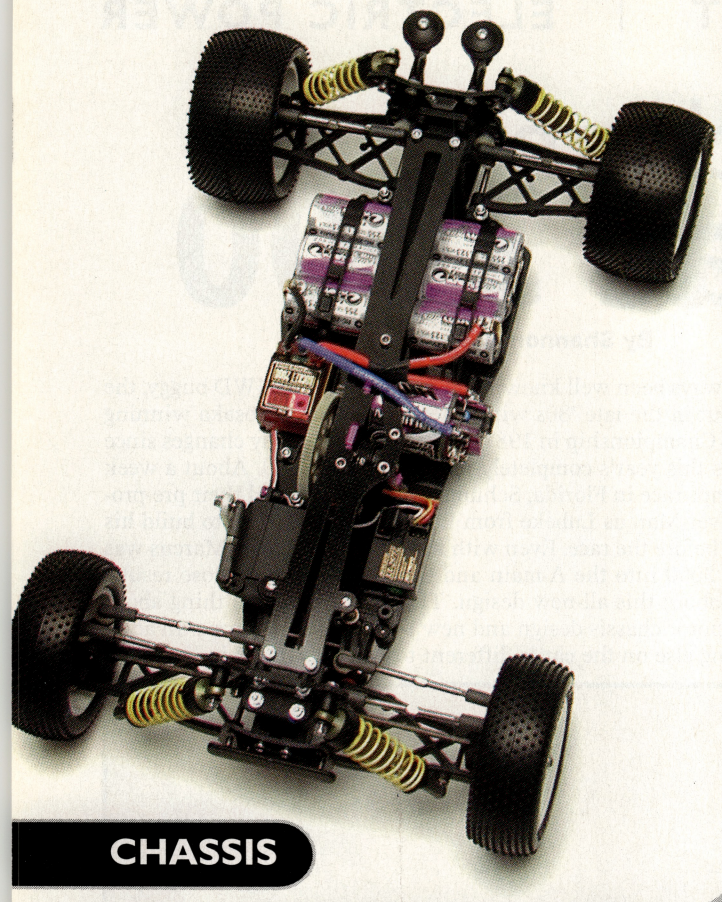


Schumacher Cat 3000

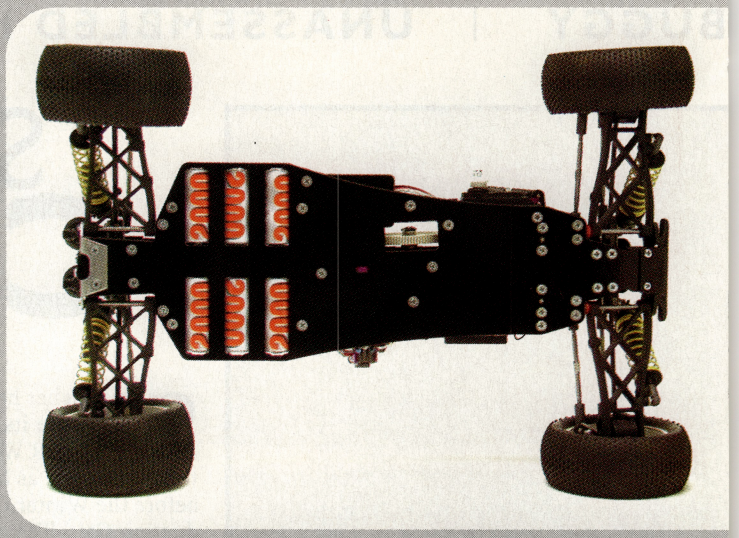
By Shannon Hudson

Schumacher has always been well known and respected for its 4WD buggy, the Cat. Since its debut in the late '80s with a young Masami Hirosaka winning an IFMAR World Championship in 1987, the Cat has had many changes since then, but none as big as this year's completely redesigned Cat 3000. About a week before the Winter Champs race in Florida, Schumacher USA received their pre-production Cats. Team driver Marcus Lubeke from Europe had one week to build his car and practice with it before the race. Even with this minor handicap, Marcus was still able to get his Cat 3000 into the A-main and finish in seventh. Those results have to say something about this all-new design. The most noticeable thing about the new Cat is its mid-motor chassis design and new rear suspension arms. In addition, virtually everything else on the car is different too, so let's break it down...


Schumacher
Schumacher
Schumacher



CHASSIS



The Cat's chassis is a rigid twin-deck design that consists of Schumacher's own S1 carbon composite. The shock towers are also made out of this material; it looks like graphite but does not conduct electricity like graphite, which means no glitch problems. Another plus to the S1 material is that it is not quite as stiff as graphite, so having a small amount of flex makes the car a little easier to drive. The lower deck is set up for saddle pack style battery placement and has a small cutout below the spur gear for the lowest possible CG. The top deck bolts to the front and rear diff housings and center aluminum motor plate, which means virtually no front-to-back flex. Schumacher already has all the graphite chassis parts available in their Speed Secrets line of option parts. Although I think it's no secret that the new Cat 3000 is going to be extremely fast right out of the box.

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DESIGN CUTTER STIKA

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- 12" STX-8 $799

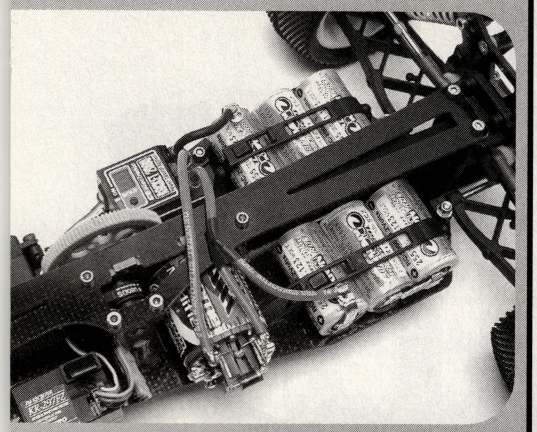


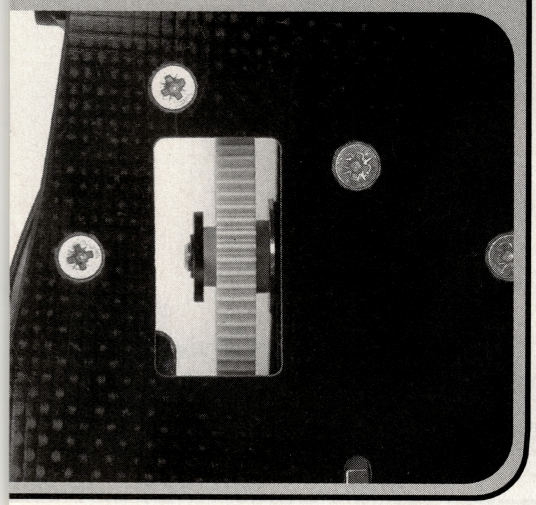


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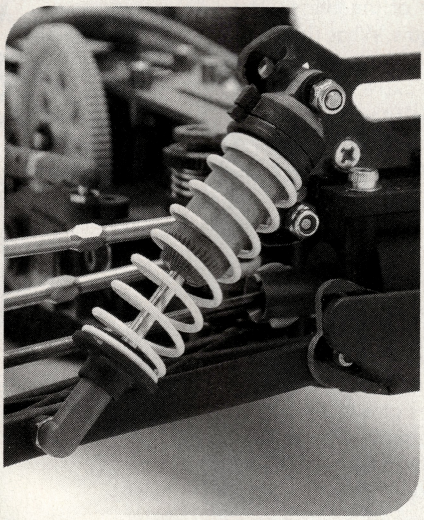
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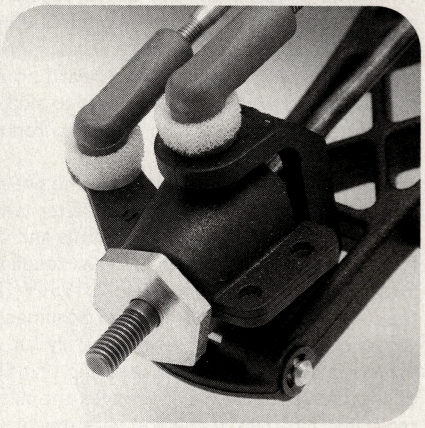




SCHUMACHER **CAT 3000**



FRONT SUSPENSION



The first noticeable difference with the front suspension is that the shocks are in a more upright position. Not quite as upright as a Losi XX-4 or Yokomo buggy, but much more upright than last year's car. The more standup position should aid in the handling on bumpier tracks. There are new front hub carriers that have two holes to achieve a different Ackerman effect. The new front arms have four different mounting holes for the shocks, while the front shock tower has five. There are also four holes for the camber link. The shocks have hardened alloy bodies, yellow springs and plastic seal housings. The pistons are Vari Click so you can choose between one and four holes open which alters the damping. To get the best performance out of the shocks I used Associated green slime lubricant on the O-rings. The steering consists of a dual bellcrank setup with an integrated servo saver, which looks similar to the Axis, Schumacher's touring car.

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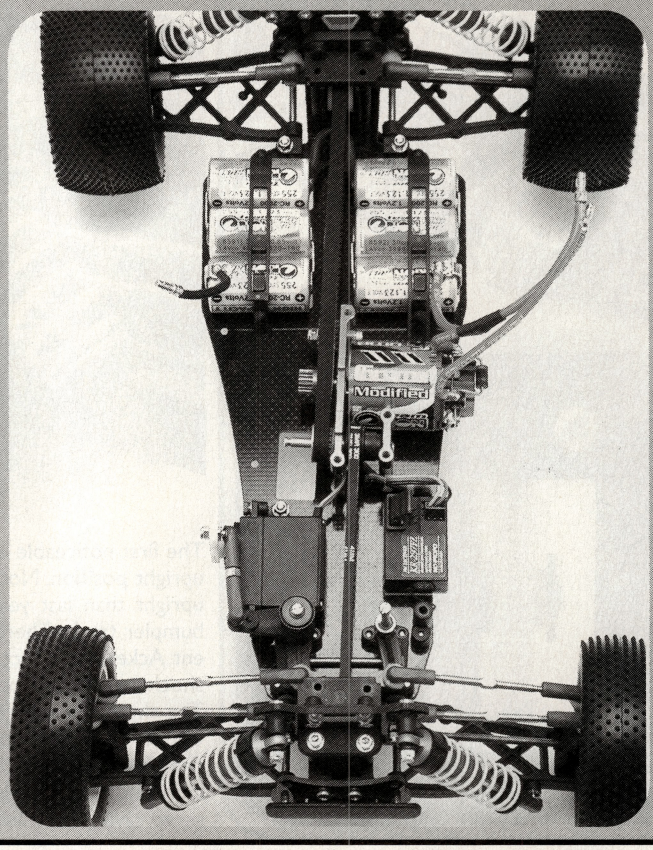
RRCF Racing is the R/C Car racing division of the RRCF Group— Hartford, Wisconsin

LOW-INERTIA, TWIN-BELT TRANSMISSION

Since the motor is mounted near the center of the chassis, the front and rear belts are almost the same lengths. What this does is supply an even amount of torque to the front and rear wheels. This setup should allow the Cat to accelerate extremely fast. The rear belt also has a bearing-supported alloy belt tensioner and is a bit wider than the front belt. The engineers at Schumacher did extensive testing on this setup. I heard no matter what they tried they were not able to get the belts to skip. The Cat comes with a complete 16-piece ball bearing set to reduce drivetrain drag and help it spin more efficiently.

Schumacher's ball differentials come pre-assembled and are very smooth, although I do recommend after two or three rebuilds you opt for the Tungsten carbide diff balls and thrust washers. You can go one to two times longer between rebuilds and they seem to last forever (PT#U1475O Diff Balls, U1954V Thrust Bearing). One of the things I really like about all of Schumacher's cars is their innovative blade driveshafts—this is truly an awesome feature. The Blade is a small plastic C-shaped clip that fits over the pinned end of the driveshaft where it engages the alloy outdrives. No more replacing outdrives, thank you very much!

I almost forgot to mention that included in the kit are MIP CVD driveshafts for the rear and universals for the front, with new steel hex adapters. There is no slipper included in the kit; instead, Schumacher decided to include the two-piece alloy trans housing in its place. They did this in order to keep the cost down. This is a good sacrifice, actually, because most, if not all, the team drivers ran the slipper locked anyway. Another benefit to not having the slipper is that with direct drive you cut the rotating mass down which should make the car even quicker! The purple alloy trans housing allows for a more precise gear mesh and acts as a heat sink to keep motor temperatures down—cool!



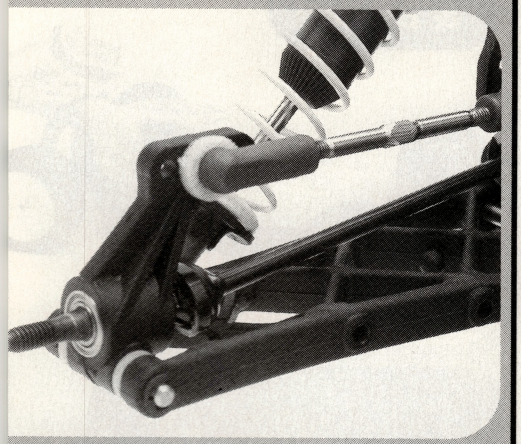


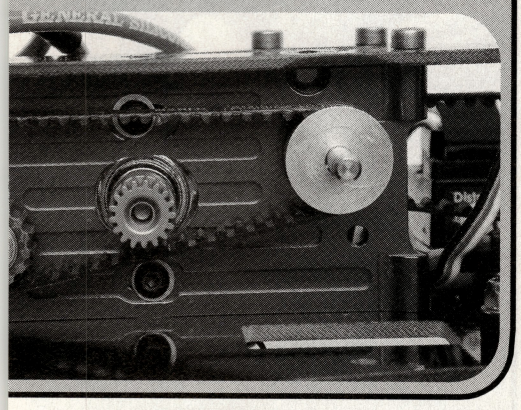
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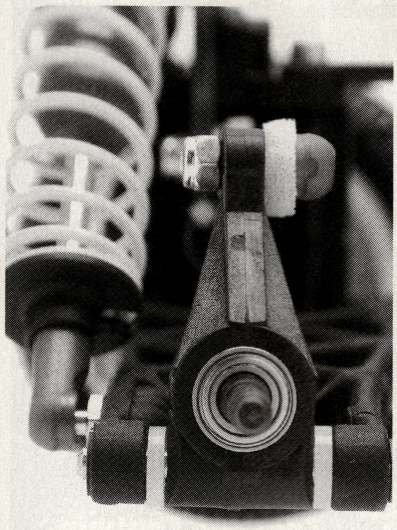
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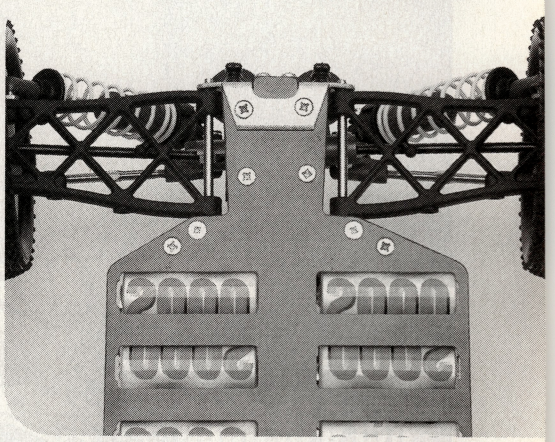
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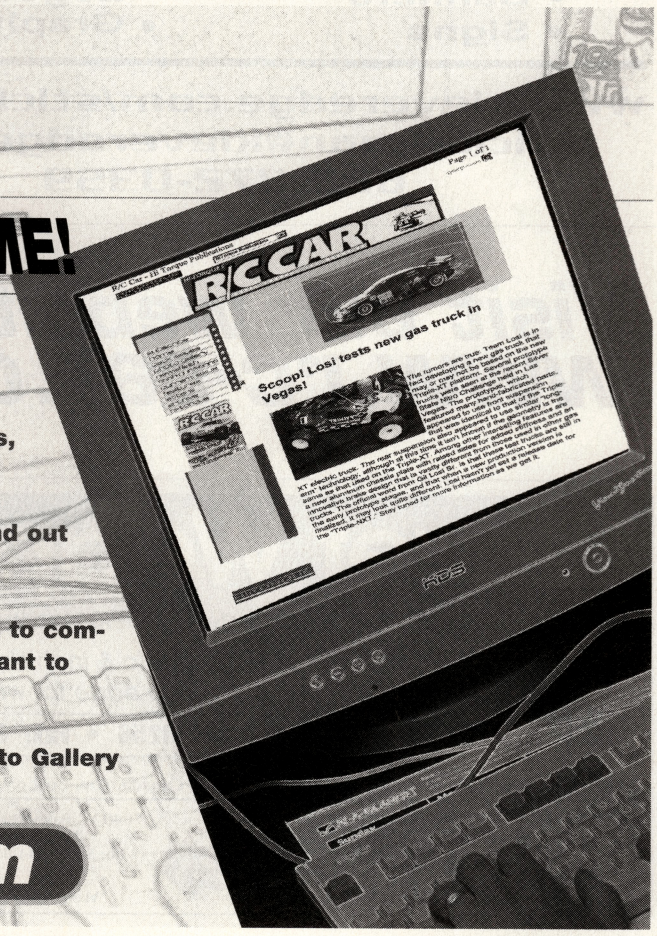
REAR SUSPENSION



The rear A-arms are the same as the new Fireblade EVO. These arms have a molded ball stud in them for the sway bar. The rear suspension has adjustable anti-squat, toe-in, and wheelbase. As with the front suspension, it is multi-adjustable with the same amount of shock and camber rod locations. There is a new hub carrier for the rear, which has larger 5x10 bearings, and three different holes for mounting the camber rod. The rear shocks are medium length and come with yellow springs. The instructions tell you to use 40wt oil all around with three holes open in the pistons, which seems like a good starting point. Schumacher has great silicone shock oils that should have been included in the kit—hint, hint. Overall, the suspension on the new Cat is awesome and is so adjustable you should be able to get it dialed in on any track.

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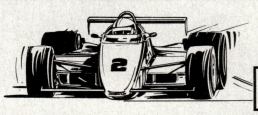
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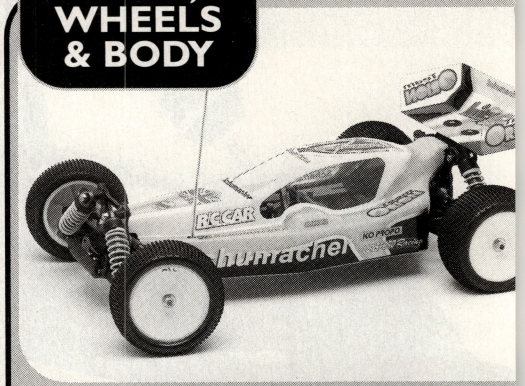
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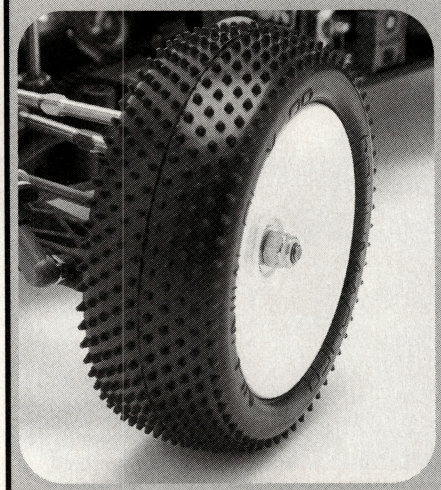
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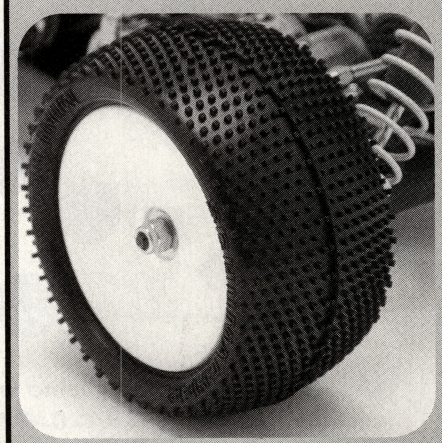
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TIRES, WHEELS & BODY







An all-new body was molded up for the Cat, and it has to be the best-looking body Schumacher has had yet. It isn't as space age-looking as the old one, which I think was just ahead of its time. The awesome Team Ibon paint job would probably make any body look good. Schumacher tires have not always been the best setup for any track, but I feel that's all about to change. They have come out with a new compound which is similar to Losi's Silver compound and a new mini block tread pattern. Mounted up on a set of white disc wheels these tires should be hooked up. The disc wheels are stronger and in my opinion better-looking than the three-spoke wheels the car used to come with.

Performance

I had a chance to run the car at Hot Rod Hobbies on a free practice Thursday. The track was dry and dusty. When I hit the throttle the new Cat took off with authority. The combination of Orion batteries, motor, and CS Rocket 2000 speed control worked great together. Since there is no slipper included, you would think the car would be loose, but it wasn't. The car accelerated extremely fast and tracked straight. The steering was very precise with virtually no push anywhere. The jumping ability of the Cat is awesome as well.

Unfortunately, I did have one minor problem. I cased it off one of the doubles and the spur gear fell off. I put a washer and E-clip on the shaft instead of the plastic clip hoping this would take care of the problem, but no such luck. By this time the spur gear had gotten a little munched. So I packed it up and went home.

I called Schumacher USA the next day and spoke with Robin Schumacher himself. He told me that he had not heard the complaint from anyone else. Robin said my layshaft must have had a flaw in it, so he is going to send me a new shaft and clip ASAP. The whole crew over at Schumacher are very helpful and I appreciate Robin's fast response on this little problem.

The Good

- New mid-mounted motor configuration with equal length belts (minus a slipper assembly) allows car to accelerate very fast.
- Redesigned suspension handles better on bumpy "American" tracks.
- New body looks very stylish!
- Tires included actually work well on most off-road tracks.
- A full set of ball-bearings is included.
- Alloy motor mount standard

The Bad

- Schumacher shocks are not the best in the business—very easy to trap air inside while building if not careful.
- Parts are not as readily available at your local hobby shop as are its competitors.

The Verdict

By far, this is Schumacher's best 4WD car to date! It's fast, efficient, handles well on most every track surface, and is very durable. Schumacher's extensive line of Speed Options parts allow racers to custom-tailor their cars to a variety of different track conditions, and the kit's price is very comparable to its competitors. Overall, we're very impressed with the car, and can't wait to get a few races under our belt to see what this car can do with more tuning time! ◆

SOURCES

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HPI SAN JOSE CHAL

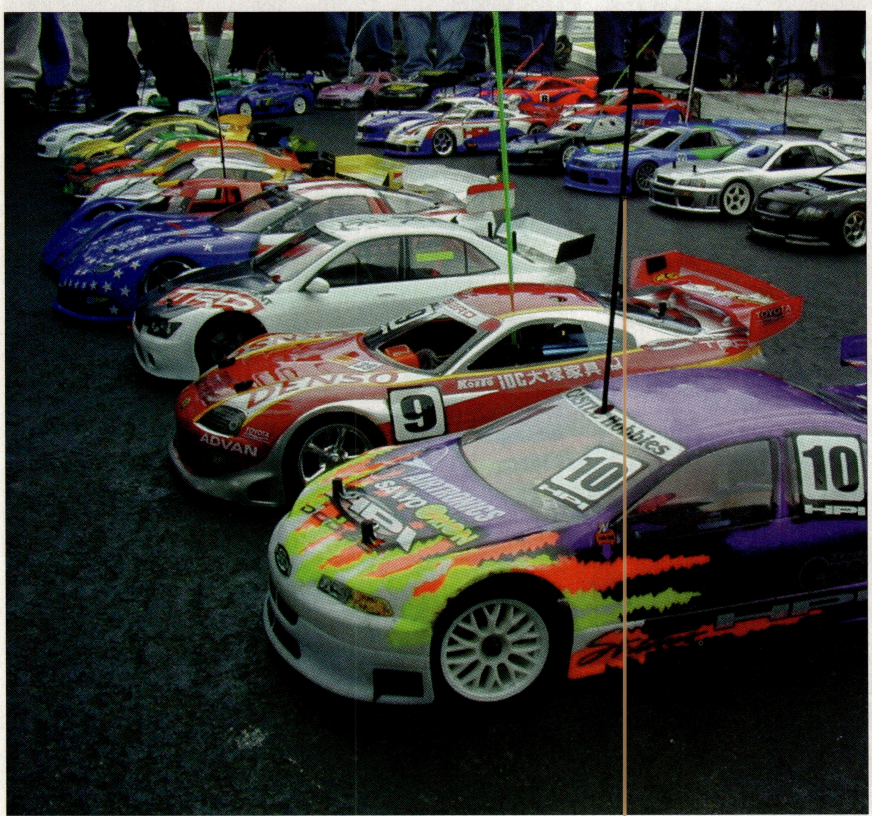


San Jose's first foray into HPI's Challenge race series was a big success—just look at the turnout!

During the weekend of March 11-12, 2000, near the intersection of Camden and Union in San Jose, California, over 100 racers and more than 500 spectators were witness to the first HPI USA Challenge race in Northern California!

Castle Hobbies of San Jose normally holds races the first and third Sundays of each month, but when co-owner Eric Vasutin was given a call out of the blue asking him to host the first HPI Challenge race of the year—he readily agreed! With just a month's worth of planning, HPI crew members showed up in San Jose, greeted by anxious racers and a well-stocked hobby shop.

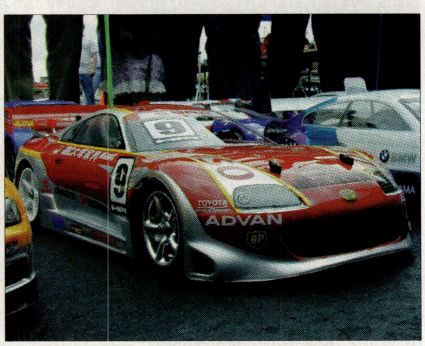
Castle Hobbies employees and racing volunteers set up the portable track system on Friday night, complete with an intricate timing loop bridge and curved corner pieces. The track looked great, freshly painted white and ready for the action!



So who's going to take the top honors in the Concours competition?



This E-Hobbies-styled car got quite a few looks from the judges.



Another crowd favorite was this extra sweet-looking Toyota Supra!

LENGE RACE

By Frank McKinney

First up was the Electric RS4 class, featuring mostly RS4 Pro 2 cars, a few RS4 Sports and even some RS4 Rally cars! While the Box Stock Nitro RS4 class had the most newcomers racing for the first time, the Electric RS4 class racers had their share of R/C first-timers also. This is the point of the HPI Challenge series: getting first-time racers on the track to have fun and watch expert-level drivers compete! We really have to commend Eric Vasutin of Castle Hobbies on his track layout, which was wide enough for the beginners yet still challenging enough for the racers.

Out of 36 racers in the Electric RS4 class, Michael Cometti, a local racer who has driven HPI sedan cars for years, was the TQ at the end of qualifying, holding onto the spot from his first run.

The Nitro RS4 Open class was the largest class by far, with 45 racers participating. Steve Adams, a "die-hard HPI driver" held the TQ by a few seconds over the rest of the field, but he knew he'd be chased hard by Wayne Lee and Simon Kau! Race announcer Cameron Wagner, in a borrowed Nitro RS4 equipped with the original Nitro Star 12E engine, was ready to chase them all down; he was really fast!



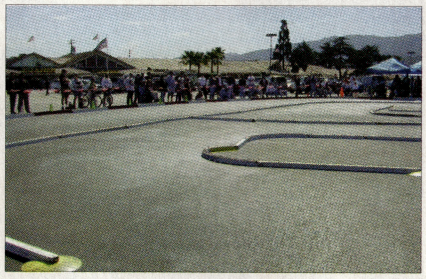
Pitmen get ready to set down the Super Nitro RS4 Open A-main racers' cars.



HPI's Thad Garner checks in the racers.



HPI had a booth on hand to help display all their newest products.



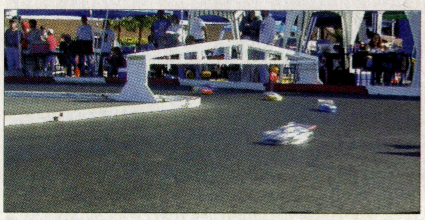
Spectators at the event were two-deep at times during the weekend!



Super Nitro RS4 racers take to the track.



The top three finalists in the Concours competition get ready for the final judges' verdict.



The start of the Electric RS4 A-main.

In Box Stock Nitro, the story of the weekend was Richard McClosky, who ran both Box Stock Nitro and Super Nitro Open, running great with both cars. Richard set TQ early and never looked back. With 19 racers in this class there was a good turnout, and you can expect to see more racers in this class at future events! Many first-time racers made this event a great race for spectators.

The Super Nitro Open class was again TQ'd by Richard McClosky, running the popular Toyota GT-One body. With six drivers signed up, the feeling was that there should have been more racers, so if you have a Super Nitro RS4, check HPI's schedule for an HPI Challenge race near you!

HPI SAN JOSE CHALLENGE RACE

Concours Competition

● An hour before noon on Saturday, about 50 cars were brought forward for the HPI Challenge Concours, and a crowd of racers quickly formed to see what the competition had. The Concours judges spent a long time trying to figure out how to select one car that stood out.

After long deliberation, it was determined that there was just no way the judges could pick just one car from the group, so the judges decided to pull the top ten cars forward. There were a few racers who were disappointed that their car didn't make it into the top-ten picks, but to be honest, the judging was so hard, it was impossible to pick just a few cars! The judges decided to pick the top ten cars, then narrow them down to three cars.

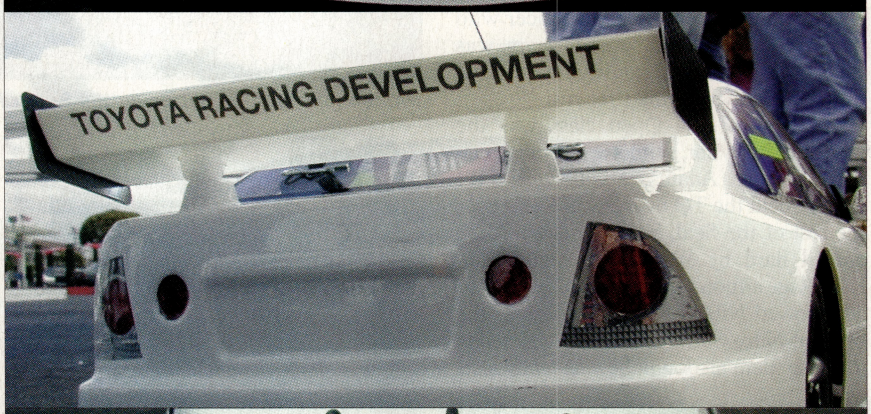
Two out of three judges picked this white Altezza. While you may think it's "plain" on the outside (even though it's based on a real Toyota Racing Development project car), it's the details that really made this car shine!



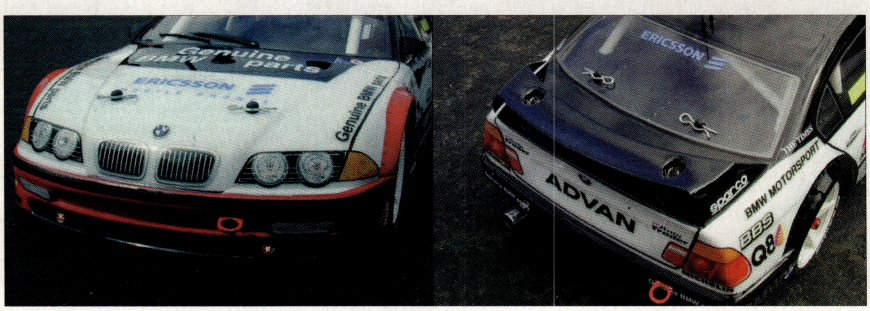
Concours winner Steve Phemister.

Who is the racer who spent all this time working on his car? Steve Phemister—he made all the custom molds on the car, and had flown down from Washington State with good buddy Scott Kovalik. Scott had also placed his car on the podium in the Concours competition; his car was the Yokohama BMW sedan!

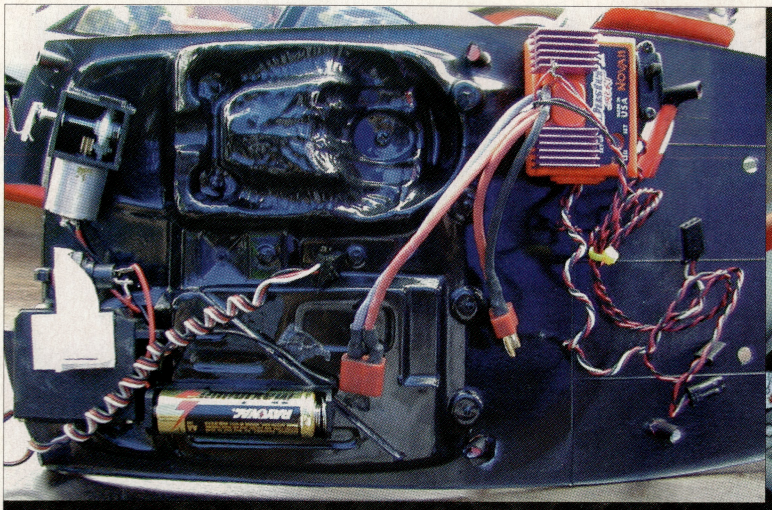


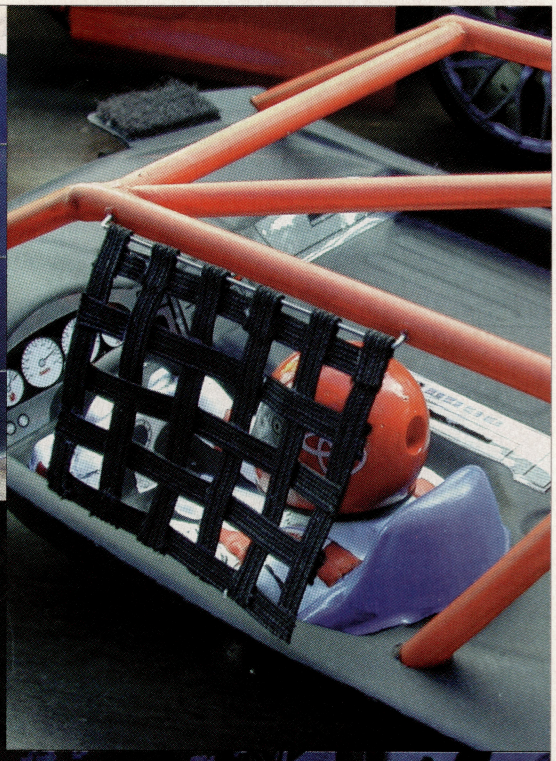


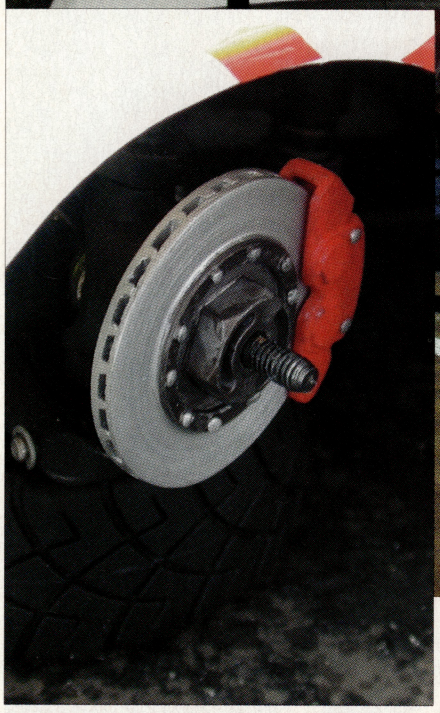




Concours runner-up Scott Kovalik's BMW.









And after the weekend's racing, this is what the body looked like! According to the rules of our HPI Challenge Concours, the winning body had to be run in at least one heat—this body was driven in every practice and race run. Steve won an RS4 Pro 2 kit and a huge HPI Challenge Concours trophy. Good job, Steve!

Steve Phemister's Winning Car Details

It's all about the details! We grabbed Steve's car after the competition so we could give you a closer look at this winner!

• Rollbars, driver figure, did we mention the functional wiper? The wiper actually had a rubber band that snapped it back into place if you lifted it!

• Not only did this car have lights, it had light fixtures that were made to fit the Altezza body and coated with chrome Monokote (an R/C aircraft covering)

• The rear tail lights received the same treatment as the front lights—three-dimensional light enclosures, but with the added detail of red reflectors!

• Jack ball!

• The yellow strip is a full-size touring car detail: when the car comes in during the required pit stop, the yellow strip is removed so the officials can see the car has pitted.

• Netting for the driver, attached to the rollbars on the inner body. The netting was real cloth, too!

• The HPI Z3 inner body was modified to fit the longer interior of the Altezza body, and tubing was cut and bent to fit.

• A spy shot of the mechanicals that made the lights and wiper blade work—we promised that this would be all that we showed!

• Custom-molded disc brakes with (again, custom-molded) calipers! The discs actually rotated with the wheels while the brake calipers stayed in place! There wasn't enough time to install the braided brake lines.

HPI SAN JOSE CHALLENGE RACE

Here are the top ten finishers in each class:

Electric RS4 A-Main

Finish Position	Name
1	Michael Cometti
2	Michael Li
3	Gavin Salmon
4	John Chin
5	Gary Liu
6	Jeffrey Blackburn
7	Manny Laguatan
8	Dave Holstrom
9	Steve Phemister
10	Charlie Barnes

Nitro RS4 Open A-Main

Finish Position	Name
1	Simon Kau
2	Cameron Wagner
3	Andrew Lam
4	Lucas Hopkins
5	Ken Schumake
6	Steve Adams
7	Shayne Barr
8	Jon Miwa
9	Wayne Lee
10	Henry Pun

Super Nitro RS4 Open A-Main

Finish Position	Name
1	Henry Pun
2	Richard McClosky
3	Wayne Lee
4	Simon Kau
5	Chris Smith
6	Neon Rofox

Box-Stock Nitro RS4 A-Main

Finish Position	Name
1	Richard McClosky
2	Simon Kau
3	Joe Ventimiglia
4	Frank Guerra
5	Don Pedrazzi
6	Troy Hogaboom
7	Jared Alvord
8	Gary Haney
9	Greg Calagno
10	James Wetzel



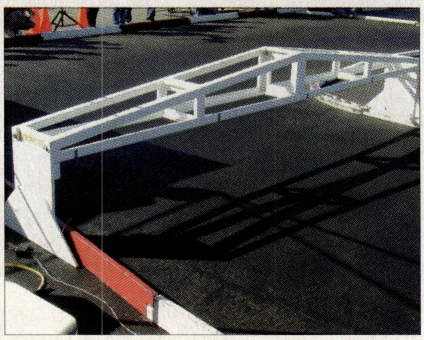
Drivers from the Nitro RS4 Open A-main grab some glory.



Nitro RS4 Open drivers battle back and forth during the A-main.



Box-stock Nitro RS4s take to the track.



Racers had to drive under this timing loop to score their lap.

There are too many people to thank here, but the entire staff and ownership of Castle Hobbies of San Jose, California, (408) 377-3771, deserve lots of thanks for their willingness to help HPI out with this awesome event! The racers, winners, spectators and Concours competitors get a big hand also, plus we can't forget Dennis Racine for helping out with pictures of racers from each main event. ●

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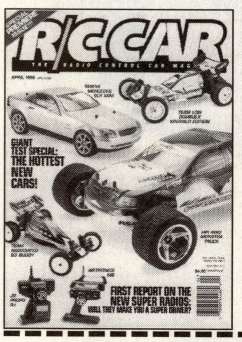
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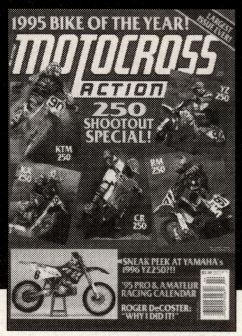
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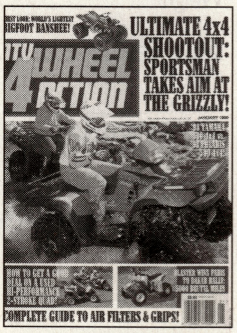
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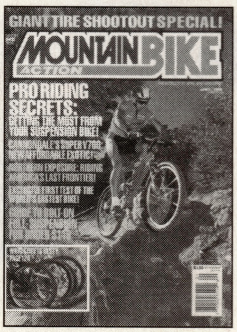
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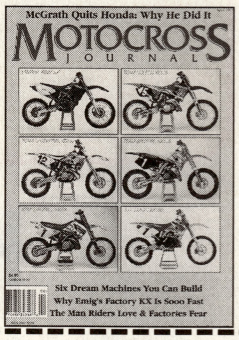
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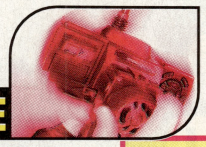
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TEST DRIVE

SPECIFICATIONS

Length	431mm
Width	265mm
Wheelbase	299mm
Front track	218mm
Rear track	212mm
Weight	2500g.
SKILL LEVEL*	3
PRICE	
Retail	$899.99
Average hobby shop	$649.99

* Indicates skill needed to satisfactorily complete kit. Level 1 kits are the easiest to complete, Level 4 are the most difficult and shouldn't be attempted by beginners without experienced assistance.



Kyosho Fantom 2001 1/8-scale

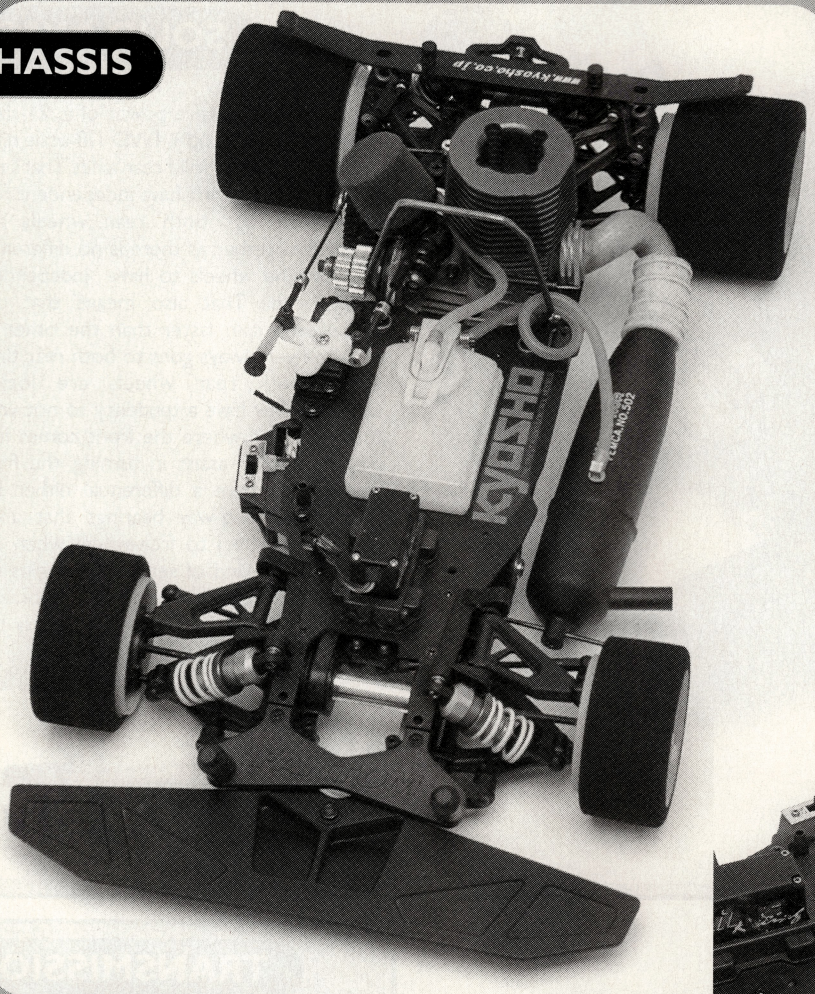
The designers at Kyosho must be very hungry and very tired. Very hungry because it's obvious that, with their new lineup of competition-level vehicles, they are craving some championship titles, and tired because they must have been burning the midnight oil doing their homework to get every detail just right. They've been tasting success for many years with their 1/8-scale nitro buggies. Their Ultima ST trucks are starting to burn up tracks across the country. And their TF line of electric touring cars have always been solid performers.

But when you decide to start playing with the big boys in playgrounds like 1/8-scale on-road with Serpent and Picco, you better have done your homework. The 4WD 1/8-scale nitro on-road class has been called "the Formula One of R/C", and is undoubtedly the most prestigious class in scale road racing, so anyone entering this level of competition better be serious.

Kyosho has revived their Fantom name with their new Fantom 2001 for their long-awaited re-entry into the world of 1/8-scale nitro on-road. Designed to be competitive right out of the box, there are only a very small handful of options, as it comes "fully equipped" to do battle against the competition. The only things it doesn't come with are an engine, exhaust system, tires and body.

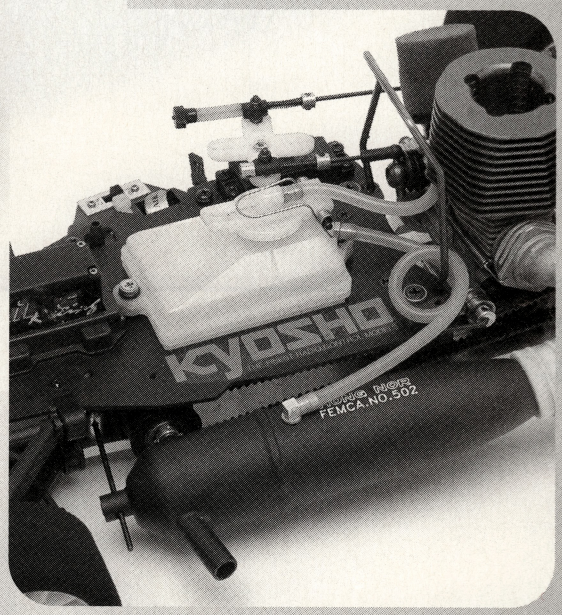
Kyosho is serious about racing!

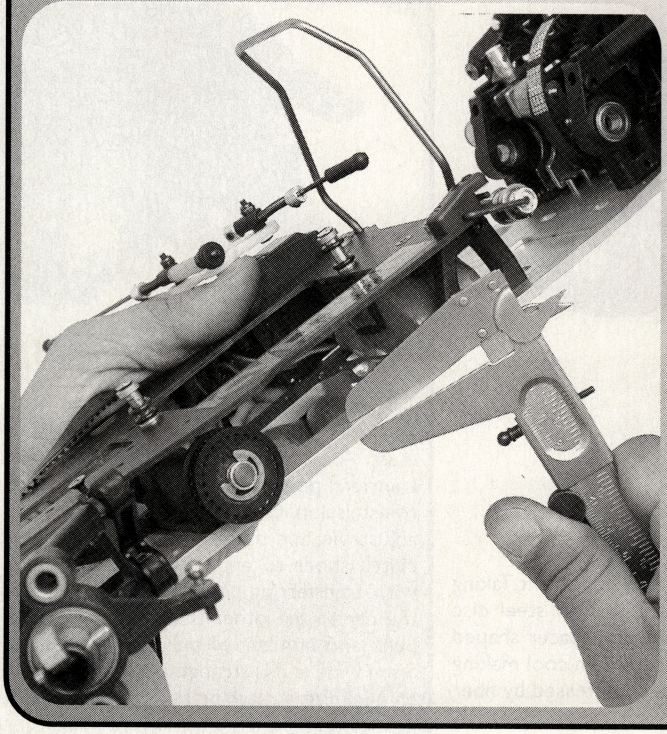
CHASSIS

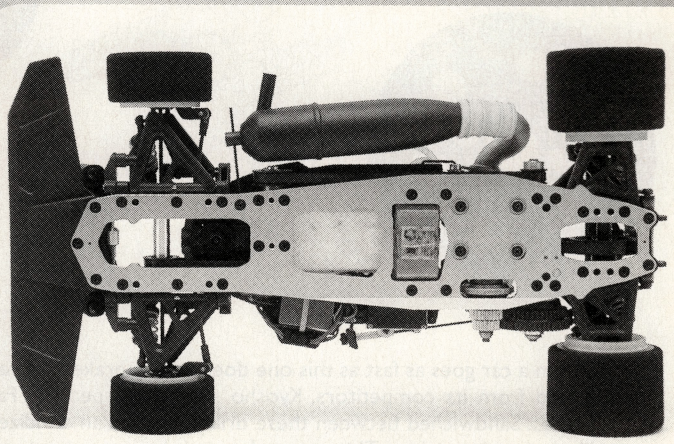


The centerpiece of the Fantom 2001 is the lower chassis plate. We always have felt that the quality of the main chassis is indicative of the quality of a kit as a whole. What we have here is a 5mm anodized plate with a satin finish. This beautiful piece is precisely machine-cut and milled, and lightened. It's made of high-grade aluminum and, of course, is very stiff. The radio plate/upper deck mounts to the lower deck at six points.

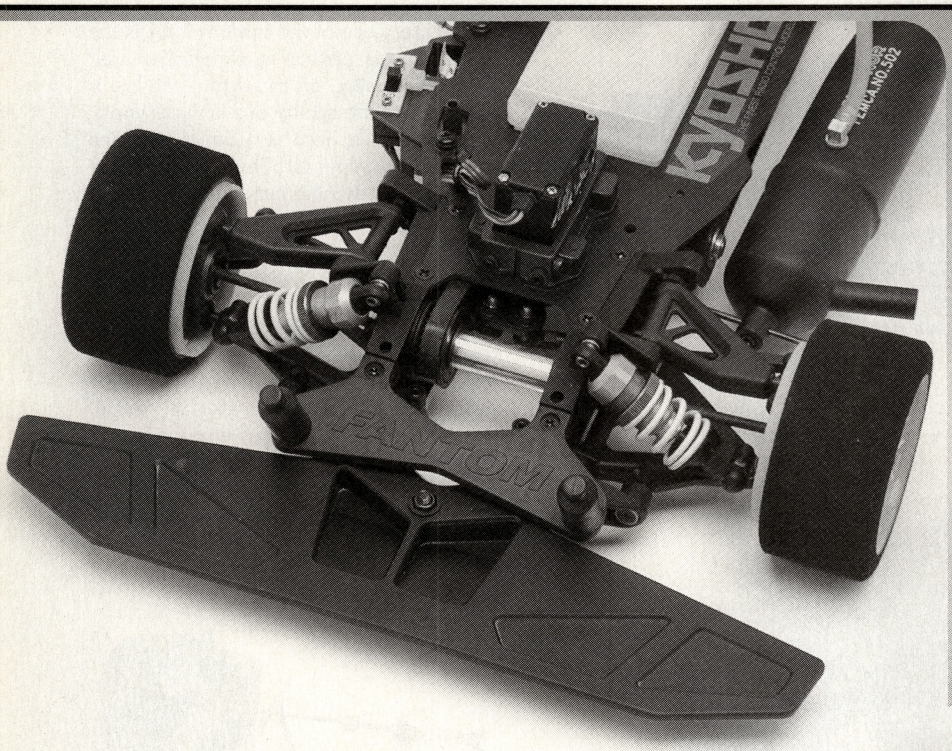
At first glance, while still in the bag, the texture of the upper deck led me to believe that it was made of Kydex or some other molded plastic material—weird! Upon further inspection, we found it was actually made of laminated graphite, but not of the type we're used to seeing here. There is no weave pattern on either side, but a texture, instead. Looking at the edge of the piece, you can see the layers of material sandwiched together.



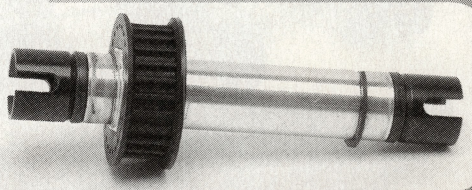




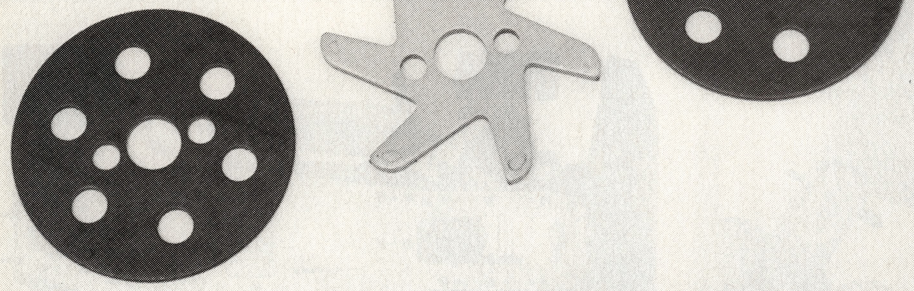
SOLID AXLES



To handle the massive power of a .21-sized engine (up to 2.75 hp!), 4WD 1/8-scale nitro on-road cars have solid rear axles. That's not to say that they don't have independent rear suspension, but both rear wheels are "locked" together, as there is no differential to allow the wheels to have independent turning radii. That also means that one wheel can't spin faster than the other, so equal power always goes to both rear tires. When both rear wheels are locked together, they have a tendency to not want to turn. That's where the front comes into play. To further assist in turning, the front end doesn't have a differential either, but instead has one-way bearings that allow each front wheel to free-wheel when off-throttle. This kind of setup really helps the steering response, but leaves all the braking chores to the rear end, so a properly balanced chassis setup is important.

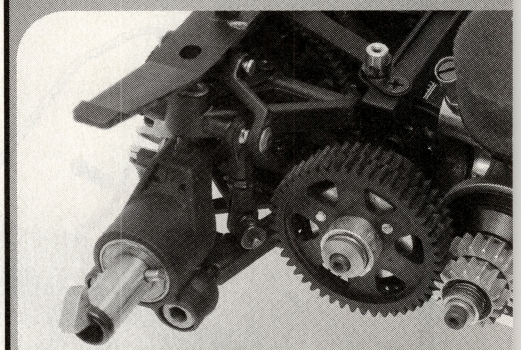


BRAKES



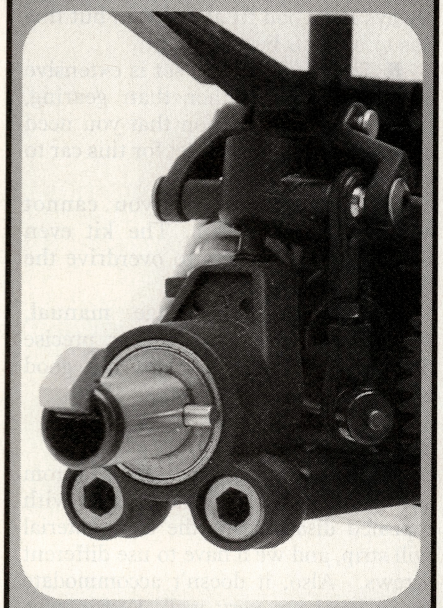
When a car goes as fast as this one does, strong brakes are really, really important. Taking a lead from its competitors, Kyosho saw fit to spec the Fantom with dual steel disc brakes. Sandwiched between these drilled discs is an anodized aluminum spacer shaped like a six-vane turbine. This spacer draws air between the discs to keep them cool making the braking performance more consistent. The discs themselves are compressed by fiber pads glued to stainless steel shoes.

TRANSMISSION



To get the most speed from an R/C engine, a two-speed transmission is a must. An adjustable Centax-style clutch transfers power from the engine to the transmission. Of course, the shift point is adjustable, and there are large, heavy duty clutch shoes to engage the taller gearing with. Transferring power from one end of the car to the other is a system of three belts and number of pulleys. Each belt is 5mm wide and is strengthened with Kevlar to minimize stretching and breaking.

SUSPENSION



Pillow ball suspensions are characterized by being incredibly adjustable, extra strong, and slop-free. But because of the infinite adjustability, setting up these suspensions can be hard without proper measuring devices. The reward, though, is solid, consistent performance that has no free play but without binding. The steering arms on the front end of the Fantom had upper and lower pillow balls to allow pivoting required for steering and vertical motion to soak up the bumps and ruts. The rear uprights have one upper and two lower pillow balls. The triangular pivot points make a solid connection to the upper and lower A-arms, allow adjustable rear toe setting, and still provide plenty of vertical motion to keep the rear end planted to the tarmac.

All of the A-arms' inner hinge-pins are made from 3mm stainless steel. Most of them are secured by set screws, but a few do require the use of E-clips to hold them in place. All of the ones that are held with set screws come with notches in place, so no filing is required. Thick steel dogbones drive each corner's axle.

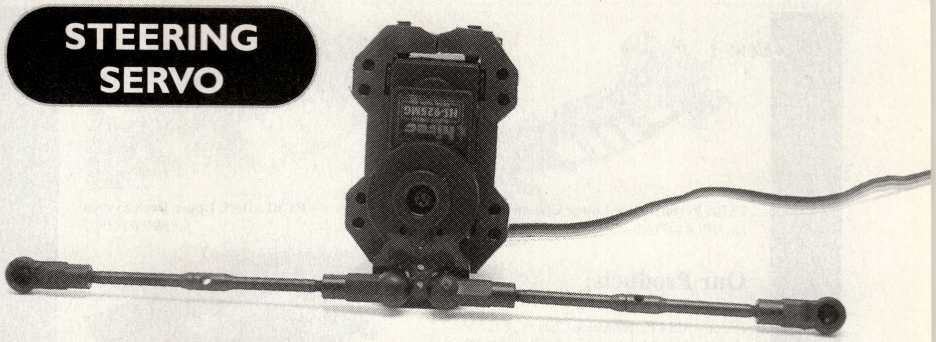
What you get

- Complete rolling chassis

What you need

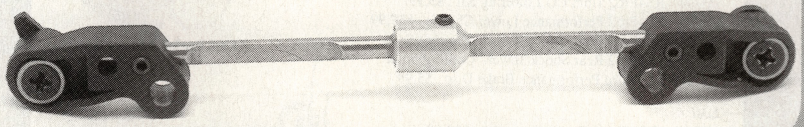
- Foam Tires
- Body
- .21-size engine and exhaust system
- Paint (suitable for polycarbonate)
- 2-channel radio and receiver
- Steering and throttle servos
- Five-cell hump-style receiver pack
- CA (Cyanoacrylate) "super glue" for tires

STEERING SERVO



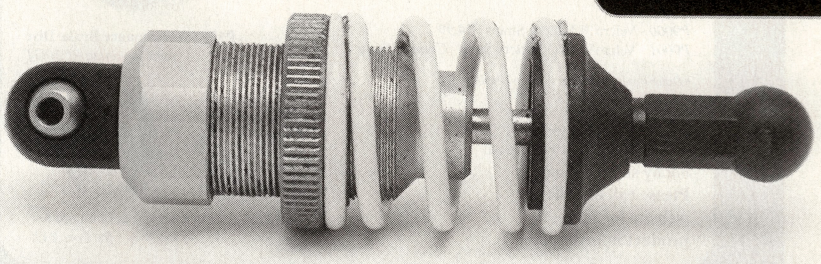
The steering servo is mounted in an unusual manner. First, the ears have to be cut off the servo. (It was pretty painful doing that to a brand-new Hitec 925MG.) Then the servo gets clamped in a holder with set screws and O-rings. That piece is then mounted to the upper deck. The good thing is that you can adjust the height of the servo (to make sure the servo saver clears the belt) without removing the whole assembly from the car.

SWAYBARS

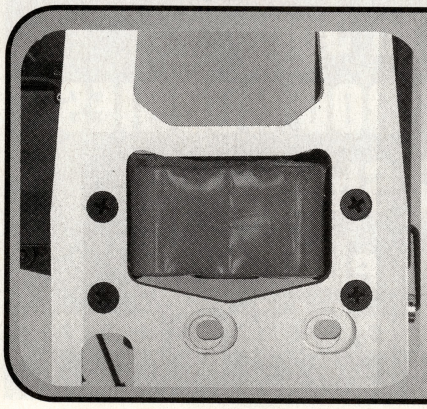


Adjustable swaybars on both ends of the Fantom come standard. The front is a single pivot lever, and the rear is a multi-link cantilever unit. The front swaybar stiffness is set by moving the position of the pivot cup and the orientation of the stabilizer shafts. The rear is set by the position of the link point on the ends of the swaybar.

SHOCKS



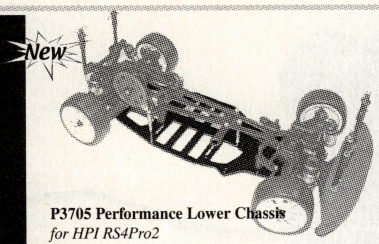
Hard anodized and Teflon-coated shocks come on all four corners. These smooth oil-filled units have threaded bodies for fine adjustments, dual O-ring seals to prevent leaking, and a bladder to compensate for oil displacement during compression.



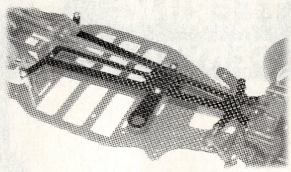
BATTERY PACK

Kyosho decided to spec a five-cell receiver pack in hump configuration rather than the more common flat pack. There are two benefits to this. First, the receiver pack's mounting position is right in the middle of the chassis, so the weight is kept in the center. Second, after removing two screws from the radio plate, the pack easily drops through the chassis cutout for replacement. They couldn't have made it any easier to replace battery packs. ◆

Penguin r/c


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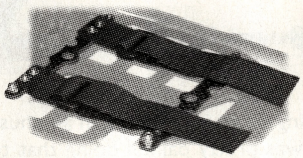
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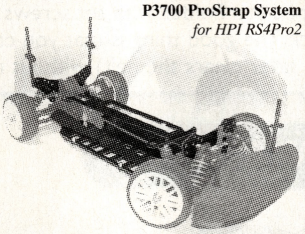
Other:
P9000 - Velcro™ Battery Straps **$4.99**
P9001 - Velcro™ LTO Battery Strap ***Coming Soon***

• Other Products and Parts are available

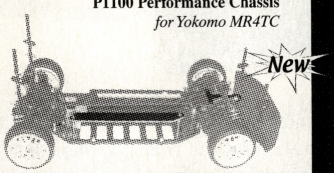
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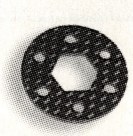
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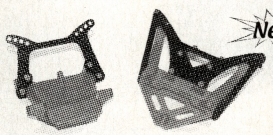
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KYOSHO FANTOM 2001

THE GOOD

■ Parts quality is excellent and the fit is absolutely perfect. Kyosho has always had good fit and finish, but this has to be their best work.

■ The stock feature set is extensive and exhaustive. Other than gearing, there is no other option that you need or, for that matter, can get for this car to be competitive.

■ There is nothing you cannot adjust on the Fantom. The kit even includes extra pulleys to overdrive the front wheels, if so desired.

■ The multi-language manual, though short on text, has clear, precise drawings of each step and has good cross-referenced parts lists.

THE BAD

■ The receiver holder is molded from soft nylon. We're afraid that with repeated disassembly, the soft material will strip, and we'll have to use different screws. Also, it doesn't accommodate many receivers very well. Fortunately, we had the Airtronics receiver that Kyosho appears to have designed the receiver holder around, so it fit perfectly.

■ As much as we may sometimes complain about the quality of tires that come with some kits, at least they are included. We would like to have seen any tire included with the Fantom kit.

■ Even though you shouldn't have to worry about it when you spend as much as this kit costs, you still have to hack up servos by cutting off their ears. Kyosho could come up with a different mounting system.

■ The setup sheet is only in Japanese, making it very hard (okay, impossible) for most of us to use.

THE VERDICT

As we mentioned earlier, Kyosho has really done their homework on the Fantom 2001. It has all the features and specs to be a solid competitor in the world of 1/8-scale on-road. It goes together really well and all the parts fit perfectly , but then we are still guessing at a baseline setup due to the lack of English setup notes. We'll have to reserve our opinion of performance and setup until next month, when we will be giving you a full performance test. ◆

SOURCES

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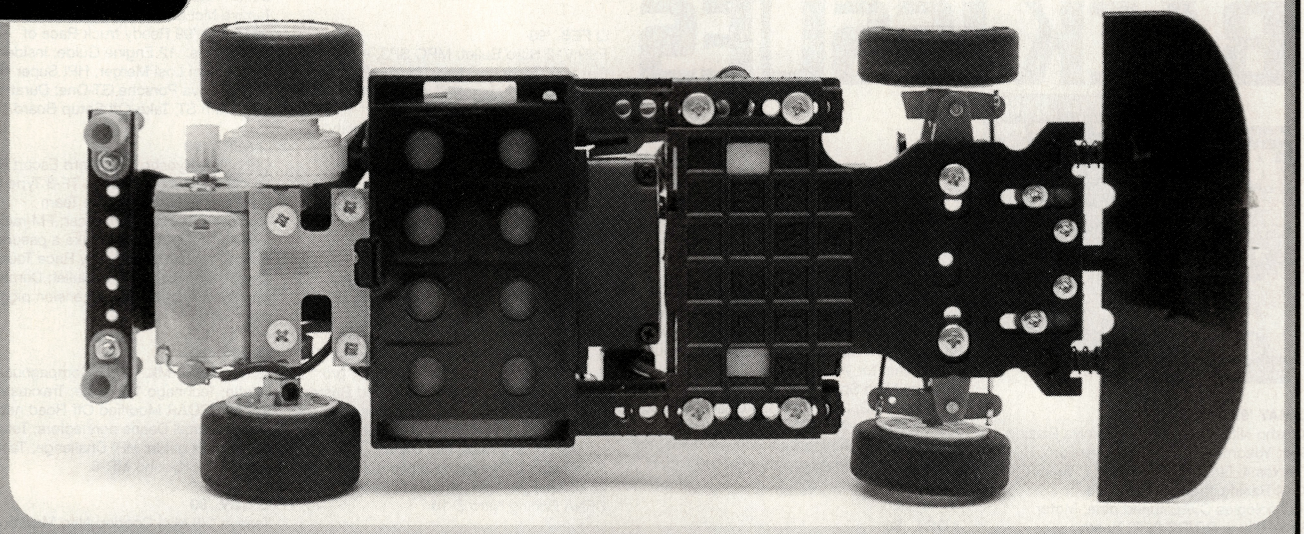
Kawada

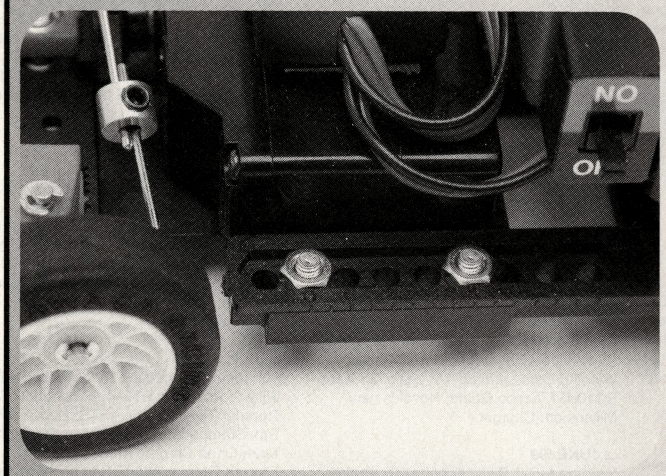
M-24 Pit Gear

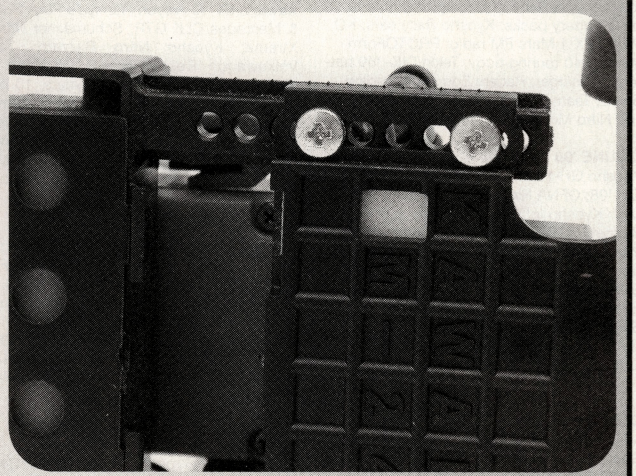
When you think that you've seen it all, someone shows you a new gizmo that forces you to rethink your position. This happened twice this month: with the awesome 1/5-scale FG Modellsport F2000, and with something at the other end of the spectrum—Kawada's diminuitive M-24 Pit Gear! Unlike some micro-kits we've come across, the tiny 1/24-scale Pit Gear is a fully functional R/C model with all of the capabilities and controls of larger kits. And although each Pit Gear comes with a clear polycarbonate body (that you paint the same way you would a 1/10-scale shell), you can also use many of the hard-styrene plastic bodies from your favorite 1/24-scale model kits (thanks to Kawada's easy-to-adjust body-mount set).

A slot car minus the slot!

CHASSIS

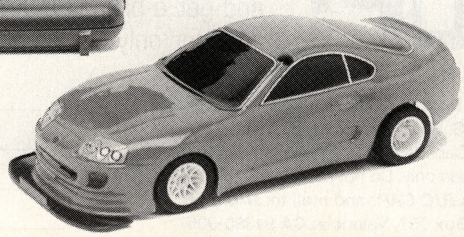






The Pit Gear comes as an unassembled kit, but don't let this discourage you—there aren't that many parts, and building the entire chassis shouldn't take even the most mechanically declined person more than half-an-hour at most. The main portion of the chassis is comprised of two black plastic pieces; the rear piece forms a box for the battery, while the front piece serves as a platform on which the front suspension and steering servo are attached.





SPECIFICATIONS

Length	7.25 in./105mm
Width	3 in./76mm
Wheelbase	103-120mm
Front track	2.5in./64mm
Rear track	2.4 in./61mm
Weight (RTR)	8oz

Price

Retail	$325
Average Hobby Shop	$219(w/radio)

R/C CAR BACK ISSUES



❑ **MAY '98**
Kyosho Nitro Mini-Cooper; Tamiya Blazing Star; Yokomo YR-4 MS USA version; Traxxas 4-Tec; Mugen Prime 12; Team Losi XX-4 Racing Truck; Innoventive Technologies CVEC tuned pipe; Motor Saver filters; PC/RC EFR; Reedy International Race of Champions; how to build battery packs; Kyosho Rally cars; KO Propo EX-1 Mars FM radio; PROTOForm Volvo S-40 touring body; Tekin DIS-350 battery discharger; Racers Edge diff building board; Team Associated RC10T3 (Part 1); HPI Nitro Mini (Part 1); Tamiya M02l.

❑ **JUNE '98**
Kyosho GP-10 MK. II Spider; Schumacher Cat '98; OFNA Racing Nitro Z-10 HPI RS4 Mini; Kyosho Inferno DX II; SRP Spectre; Bennett vs. ESP Clods; '98 Team Losi Winterchamps; Airtronics anti-lock brake booster; Cross Racing JOMO Nissan Skyline GT; GM Racing Super Glue; Tekin G-10 PRO ESC; Hitec Lynx FM Radio; Schumacher '98 Spec S.S.T. 2000 (part 1); Team Associated RC10B3 (part 2); Team Losi Double-X Kinwald Edition (part 2).

❑ **JULY '98**
MRC Nitro Thunder King; Traxxas Nitro Sport; Kyosho ATV Quad rider; OFNA Pirate 10 SE Porsche; Kyosho Formula 10; Team Losi XX-T 'CR' Graphite; Team Losi XX-4 (part 2); Tamiya M02L (part 3); Futaba 3PJ FM/PCM radio system; Roland Digital Group Sitka; Schumacher gauge set; Dirt Bagz Battery Caddy; Robinson Racing bearing cleaner; GM Racing V-12 ESC.

❑ **AUG. '98**
HPI Nitro RS4 Racer; Tenth Technology StreetWise Stadium Truck; Thunder Tiger Twister; Yokomo MX-4; Team Associated Nitro Dual Sport; Team Associated Nitro Dual Sport; inside the Silver State Nitro Challenge Winners; Setting your suspension; 12 ways to go faster!; inside the Pro-Line Cactus Classic; Factory Works Motor Centering Kit for Losi vehicles; MIP Thorpe Wrenches; Futaba Magnum Sport and Magnum Junior Radios; Progressive Suspension EDC Shocks; Schumacher CAT '98; Team Associated RC10T3.

❑ **SEP. '98**
Trinity Switchblade 12sj; Schumacher Fireblade USA; Tamiya Golf VR5; FSR Bullet; Kyosho SuperTen McClaren; GTR F1; Thunder Tiger Mirage V-Spec; which scale is for you?; how to care for your modified motor; project Dirt Oval Nitro Sport; MIP 4-N-1 Clutch; RPM Tire Gluing JIG; Hitec CG-330 Charger; Trinity Touring Car Tire Tamer; OFNA starter box; Dynamite Glow Tuning Screwdriver; Team Losi XX4 (part 1); Team Associated RC10GT (part 1).

❑ **OCT. '98**
Kawada SV-10 Alcyon; Tamiya's PIAA Porsche & Mercedes CLK GTR; Schumacher Nitro .21 Xtreme; Kyosho Nitro Blizzard; Tamiya Volkswagon Beetle; ROAR Off-Road Fuel Nationals; understanding swaybars; 10 beginner problems; OFNA car stand; Performance Hobby Jack Stand with Lite Switch; Novak Atom ESC; JR Racing XR2 AM Computer Radio; Trinity Monster Stock Jr. Stock Motor; HPI RS4 Pro; Team Losi Kindwald Edition

❑ **NOV. '98**
HPI RS4 Rally; MRC Nitro Thunder King; HPI Mini Pro; Team Associated L3; Tamiya Ferrari F310B F1; Tech Racing Voggerd GT; Kibrough/BSR Oval Shootout; Mark Pavidis' new Mugen MBX-4; building a track; turn marshalling rules; Tamiya Championship Series; RPM Ride-Height gauge; Dynamite Ultra-Start starter box; Tekin Pro Motor Dyno; Traxxas Nitro Sport.

❑ **DEC. '98**
Kyosho TF-3 Type-R; Tamiya M0-3 Cooper; Kawada SV-10 Alcyon; Tenth Technology Streetwise Mercedes; Tamiya TGX-Mk. 1 TS; painting Lexan bodies; roll center; Novak Pit Wizard; 12 uses for fuel tubing; '98 ROAR mod Nats; Driving the ROAR off-road winning cars; JR-Propo R1 Radio; Schumacher CCD charger/discharger; Kyosho MP-5; Schumacher Fireblade USA.

❑ **JAN. '99**
Traxxas Nitro 4-tec; Kyosho QRC-SV Mooneyes Street Van; Thunder Tiger TA02 Nitro Conversion; OFNA Nitro Z-10 Pro; Tamiya TA03R Mobil 1 NSX; Team Kinwald Pro Shock bushings; RPM Bearing Blaster; Tamiya tire gluing jig; Racers Edge shock piston drill set; IFMAR OnTrack World Championships; Dynamite's New 12 S and 12 SPD Engines; ROAR On-Road Fuel Nationals; off-road tire tuning; HPI Viper Cup; First Annual Labor Day Shootout

❑ **FEB. '99**
FSR V12 Nitro Bullet; MRC SP3; Kyosho Fiat 500; Team Losi NXT; Tamiya SVT F-150 Ford Lightning; R/C and Safety; Chicago Hobby Show; Dead Short Your Batteries?; Tamiya TCS national; Trinity's Paradox; Inside the TCS winning cars; Tamiya CVA Transparent Shocks; Hitec CG-335 Charger; Integy discharge tray; Roland Sticka STX-7; Team Losi Street Weapon; MRC nitro Thunder King.

❑ **MAR. '99**
MRC Q-Tee Coupe; Schumacher Nitro S.S.T.; HPI Super nitro RS4; Tamiya TG-10 Mk.1; Mercedes CLK-GTR; Savage Motorsports Headhunter HS-350; Team Associated RC12L3; How to break in your engine; Trinity D3.5 Modified motor; pro building tips; new Era models Clod Buster Kit; How to set screw your suspension; Trinity foam touring car stand; Team Kinwald blue drivers; GM Racing Commander Charger; Integy Indi Reactor 20 discharger; MPH Products Packrack; OFNA Racing Nitro Z-10.

❑ **APR. '99**
Duratrax maximum ST RTR; Team Losi I.W.C. Street Weapon; Kyosho Inferno MP-6; HPI RS4 pro 2; HPI Nitro RS4 RTR; Schumacher S.S.T. '99 Pro; Team Losi Double-X Tuning Guide; Super-Size Nitro Sedan Shootout; Deans Speed Jig; Dirt Bags Cargo Hauler; Multiplex programmable servos; HG Inc. Transparent Shocks; HPI RS4 Rally.

❑ **MAY '99**
Tamiya Toyota GT-One; Kyosho Landmax Volvo S-40; Team Assosicated RC10L3 Touring; Tamiya Baja Champ; Golden Horizon Colt 10- Formula 1; Integy parts cleaner; Team Losi NXT; '99 International Reedy Race of Champions; Team Associated Dual Sport Conversion; Motor Saver Filters; Inside the Reedy Race Winning Cars; Jamara 1/2-scale Go-Kart; RC10-GT Tuning Guide; Novak's new Millennium Charger.

❑ **JUNE '99**
Yokomo MR-4 Rally; Kyosho GP Spider Mk. II World Cup Edition; Tamiya M4 Sherman Tank; Tamiya TAO3R TRF; SVM Columbia Mk5 1/5th Scale; Novak Fusion; Robinson Racing RC10GT Spur Gear; Integy 16x2 Chargers; JR Racing XR3 FM Radio; FSR Nitro Bullet; '99 Team Losi Florida Winter Champs; Tamiya Juggernaut; Inside Winter Champs winning Cars.

❑ **JULY '99**
Hobby Tech HT1; BoLink/Racetech G-Force; Mugen Seiki MBX-4; Yokomo YR4-M2 pro; Tamiya Wild Dagger; Traxxas Nitro Wash; Pro-Line/Jaco pre-mounted sedan tires; FMA Direct Typhoon ESC; Golden Horizon Turbo Head; FMA Warlock FM Receiver; Hi-Tec Lynx FM 3D; Silver State Nitro Challenge; How to update your HPI Nitro RS4; '99 Florida Gas Winternats; Tamiya TG-10.

❑ **AUG. '99**
Tamiya Juggernaut; Kyosho Ford F-150 Desert Racer; Kyosho 4-Stroke SuperTen; Tamiya McLaren F1; PC Controller Shootout; '99 Reedy truck Race of Champions; .12 Engine Guide; Inside the Trinity/team Losi Merger; HPI Super Nitro RS4; Tamiya Porsche GT-One; Duratrax maximum ST; Take-Off Setup Board.

❑ **SEPT. '99**
CEN SP1; Kyosho QRC Ford Escort Rally; Yokomo MR-4TC; Kyosho TF-3 Type R '99; Rally Car Shootout; Inside Team Associated's TC3 touring car; FM racing receiver guide; How to make a pseudo sedan; International Reedy Race Touring Car Championship; FSR Bullet; Duratrax Piranha; Progressive Suspension piggy back reservoirs.

❑ **OCT. '00**
Tamiya TG10-Mk. 1 Pro; Compagnucci Beetle; Technago 1/5 Scale; Traxxas nitro 4-tec pro; ROAR Modified Off-Road nats; How to install Deans connectors; Touring car buyer's guide; HPI Challenge; Tamiya's TRF-414X; Kyosho MP-6.

❑ **NOV. '99**
Tamiya 1/8 Mini Cooper; Neo Maximum Nitro pro; Team Losi Triple-X; How a two-speed tranny works; '99 IFMAR Off-Road World Championships; Hitec HS-925MG & HS-945MG Servos; Inside the IFMAR Winning Cars; Tamiya Monster Truck Alloy Shock Set; TamiyaMo3 Mini Cooper; Hobby Tech HT1.

❑ **DEC. '99**
HPI Nitro RS4 2; Kyosho Snake Bite; Serpent Impulse Streetspec; Tamiya M-O4L; HPI RS4MT Baja Bug; Golden Horizon Neo Type-M; Kawada SV-10 GT; '99 ROAR On-Road Nats; Racer of the Century; HPI Nitro RS4 Buyers' Guide; ROAR On-Road National Winning Cars; CEN Two-Speed; MIP tweak Station; Team Losi NXT; Academy SP3,

❑ **JAN. '00**
Schumacher Fireblade EVO; Tamiya Wild Willy 2; Academy STR-4; Kyosho MP-6 DX; Thunder Tiger Real Ten RTR; Horizon Pro-Trax Stampede; Picco/Omega .21 Engine; Team Orion Chrome Modified motor; Traxxas T-Maxx; NORRCA Off-Road nats; How to clean bearings; Tamiya nationals; Pro-line Endless Summer; Budget battery discharger guide; Penguin Yokomo MR4-TC Chassis Set.

❑ **FEB. '00**
Schumacher SST AXIS Pro; Tamiya Tao3R-S TRF; Team Associated TC3; Thunder Tiger EB-4; New for 2000; *R/C CAR* interviews Mike Reedy; Volvo Challenge II; Trinity Real Time 2 battery discharger tray; Sierra Radio Control Racers PC Game.

❑ **MAR. '00**
Kyosho TF-4 type R; Tamiya Toyota Celica; Team Losi XX-4 Worlds Edition; Duratrax Axis; HPI World Challenge; How to make a pass; Hot Rod hobbies & *R/C CAR* Shootout; What's the deal with 4WD?; Inside foam inserts; Team Losi Triple-XT; Hitec Spectra Module.

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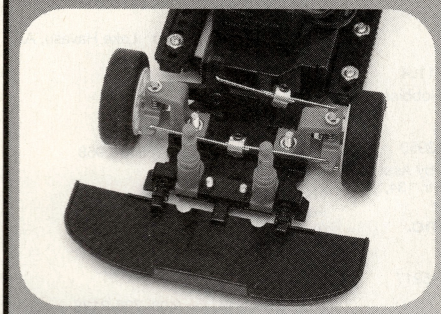
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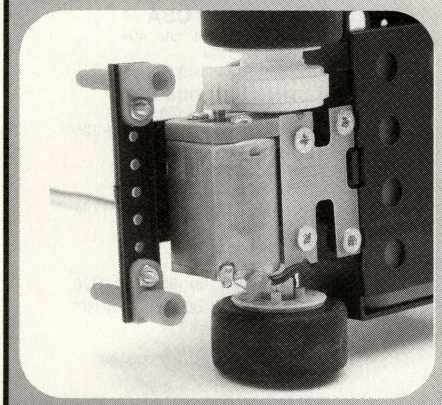
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FRONT SUSPENSION



The front suspension of the Pit Gear is actually very similar to what's found on 1/12- and 1/10-scale pan cars. A pair of red plastic uprights hold a simple sliding-kingpin suspension that uses a pair of tiny springs to provide damping. The steering arms themselves are free to slide up and down in the uprights to help the front tires remain in contact with the ground. In back, Kawada once again borrows pan-car technology by mounting the motor and rear axle assembly to a flexible piece of fiberglass. The fiberglass provide movement from side-to-side as well as from front to rear. Another tiny spring between the fiberglass plate and the rear of the main chassis provides additional damping and helps support the weight of the car.

DIFFERENTIAL



A tiny electric motor spins the Pit Gear's rear wheels through the smallest bevel-gear differential we've ever seen. To gain or lose rear traction, the diff's action can be tightened or loosened by a small nylon nut on the right side of the axle—ingenious. All four corners of the Pit Gear have nylon-spoked wheels shod with hard-rubber slick tires. The tires work very well on nearly every surface including smooth concrete, plus you don't have to glue them, and that's always good!

1/24-SCALE



As we mentioned previously, the Pit Gear's chassis can accomodate not only a variety of available bodies from Kawada, but it can also fit many types of styrene bodies from 1/24-scale static model kits. This versatility is provided by a highly adjustable wheelbase that can range from 103 to 120mm in 2mm increments. The width of the front suspension is also adjustable in five increments to further customize the chassis' dimensions.

MICRO SERVO





What really sets the Pit Gear apart from other micro-models is that you can use any transmitter and receiver that you might already have lying around—no need to buy a complete system. Of course, using high-quality radio gear is a bonus unto itself, in that the range and signal clarity is much better than with "toy" radio systems. A micro servo is needed for steering (most radio manufacturers offer some type of micro servo) and, of course, you'll need an ESC (electronic speed control). For our test, we used a Sanwa (Airtronics) M7 Sport radio system that is specifically made for use in the Pit Gear. This system comes with Sanwa's SX 051Z micro servo and ES-01 Mini Fet Amp ESC that plugs right into the Pit Gear's motor and battery—no need for fuss. At press time, we were not certain if this system could be purchased from Airtronics. Check with your Kawada dealer for availability. Power for the motor and receiver comes from Kawada's M-Pack 7.2-volt 110mAh Nicad pack. This is the only battery that you can use in the Pit Gear, and it comes with a handy plug-in wall charger. We recommend buying at least one additional pack, as it takes about an hour to charge.

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(760) 948-4012, (760) 948-4307

Pro-Line/Jaco
P.O. Box 456
Beaumont, CA 92223
(909) 849-9781 fax (909) 849-2968

Pro Match
2033 S. Palo Verde Blvd Lake Havasu, AZ 86403
520-855-2226

Protoform Inc.
P.O. Box 456
Beau mont, CA 92223
(909) 849-9781 fax (909) 849-2968

RCPS
18312 Gifford St.
Fountain Valley, CA 92708
(606) 727-5180

Ricambi
801 West El Camino Real #339
Mt. View, CA 94040
(408) 738-3514, fax (408) 738-3138

R n D Racing
164 Aero Camino
Goleta, CA 93117
(805) 685-444

Robinson Racing Products
4968 Meadow View Dr.
Mariposa, CA 95338
(209) 966-2465, fax (209) 966-5937

Roland DGA
15271 Barramca Prky.
Irvine, CA 92618
(949) 727-2100, fax (949) 727-2112

RPM
14978 Sierra Bonita Ln.
Chino, CA 91710
(909) 393-0366 fax (909) 393-0465

RRCF Racing
1925 State Rd 83, Hartford, WI 53027
(262) 673-1999, fax (262) 673-3163

Savage Motor Sports
8700 Kugler Mill Rd.
Cincinnati, OH 54243
(513) 271-6858

Savon Hobbies
P.O. Box Box 421220
Miami, FL 33242
(305) 634-8959, fax (305) 634-3950

Serpent USA
2830 NW 79th Ave.
Miami, FL 33122
(305) 639-9665, fax (305) 639-9658

Schumacher USA
6302 Benjamin Rd., Ste. 404
Tampa, FL 33634
(813) 889-9691 (813) 889-9593

Tamiya America Inc.
2 Orion; Aliso Viejo, CA 92656
(800) TAMIYA-A, fax (949) 362-2250

Team Associated
3585 Cadillac Ave.
Coasta Mesa, CA 92626
(949) 850-9342, fax (949) 850-1744

Team Losi
13848 Magnolia Ave.
Chino, CA 91710
(909) 465-9400, fax (909) 590-1496

Team Orion distributed by HPI
15321 Barranca Pky.
Irvine, CA 92618
(949) 753-1099, (949) 753-1098

Tekin
940 Calle Negocio
San Clemente, CA 92673
(949) 498-9518, fax (949) 498-6339

Testor Corp.
620 Buckbee St.
Rockford, IL 61104
(815) 962-6654, fax (815) 962-7401

Thunder Tiger
distributed by ACE Hobbies (above)

Traxxas Corp.
1210 Shiloh Rd.
#120 Dallas, TX 75228
(972) 613-3300 fax (972) 613-3599

Trinity Products Inc.
36 Meridian Rd.
Edison, NJ 08820
(732) 635-1600, fax (732) 635-1640

Yokomo
17951 Skypark Cir., Ste K
Irvine, CA 92614
(949) 252-8663, fax (949) 252-8657

KAWADA M-24 1/24-SCALE PIT GEAR



In the past, we've tested several micro-model R/C cars, and quite frankly, we found them all fun, but they were always too squirrelly, or they lacked radio range (how does five feet sound?). The Pit Gear was a pleasant surprise. It's pretty fast; its speed/size ratio feels similar to a 1/10-scale sedan with a stock motor. It also has excellent radio range thanks to its ability to use "real" R/C control equipment. Run times of over 10 minutes are the norm, so you can get plenty of wheel time. The best thing about the Pit Gear is that it is very easy to drive. We can clearly see being able to race several Pit Gears at once, door-to-door, where the best driver will win—not the most aggressive driver. And because of its size, you can build a challenging Pit Gear track virtually anywhere. A moderate-sized basement can be turned into a Micro Monte Carlo! All you need is a few soda cans and a few Pit-Gear-owning friends to have your day at the races, regardless of what Mother Nature is doing outside! ◆

SOURCES

Kawada, distributed by Mach 5 RC, 16290 Redmond, WA 98052 • (425) 376-0880; fax (425) 885-3639





gas truck buyer's

The Glow Show!

The popularity of gas trucks shows no sign of slowing down. As more and more models are introduced, it's going to get harder for you to make your choice. We've gathered every available gas-powered off-road truck for this guide—from budget-priced sport trucks to ready-to-runs to all-out racers—to help steer you in the direction of the truck that will best fit your needs.

DURATRAX



Nitro Quake

Like the Kyosho Nitro USA-1, the DuraTrax Nitro Quake is a 1/10-scale nitro truck that's based on a 1/8-scale buggy platform—in this case the donor is the DuraTrax Axis. And because of its kinship with the Axis, the Nitro Quake is one tough customer. The truck comes ready to run straight from the box—the radio gear (a high-quality Hitec Lynx system) has already been installed for you. All that's needed to run the Nitro Quake is for you to install the 12 AA batteries (included) and purchase a glow-plug igniter, fuel and a fuel bottle. The Nitro Quake's rugged Stress-Tech suspension and high-performance shaft-driven 4WD with hardened-steel gears provide ample speed and durability over virtually any terrain, and its .21 c.i. Torq 21 engine has nearly twice the displacement of those in most 1/10-scale trucks, so you know that the Nitro Quake can really shake!

Price: $829.99 w/radio, $629.99 w/o radio



Maximum MT

The Maximum MT is essentially a monster-truck version of DuraTrax's popular Maximum ST. To "monster-fy" the ST, DuraTrax gives it larger tires, a bigger, more powerful Torq 16 pull-start engine and a very cool retro-looking truck body. As with the ST, the Maximum MT comes fully assembled and includes a Hitec Lynx two-channel radio system, transmitter/receiver batteries and a helpful "get started" videotape.

Price: $469.99 w/radio, $369.99 w/o radio



Maximum ST

The Maximum ST (Stadium Truck) was the first of DuraTrax's lineup of RTR nitro vehicles, and it has set a new standard for completeness. With the exception of fuel and a glow-plug igniter, everything needed to run the Maximum ST is included in one box. A Hitec Lynx AM radio system comes pre-installed, as does the powerful Torq 12 pull-start engine. But DuraTrax went even further by including batteries for both the transmitter and receiver, pre-painting and trimming the body, and even gluing the tires! The ST features long-travel suspension with aluminum oil-filled shocks, a ball-bearing equipped transmission and a racing-type three-needle carb for improved tuning.

Price: $419.99 w/radio, $299.99 w/o radio

DuraTrax, *distributed by Great Planes Model Distributors, 2904 Research Rd., Champaign, IL 61826-9021 • phone (217) 398-6300; fax (217) 398-0008*

guide

HPI RACING



Nitro MT

Although its long-travel, oil-filled shock suspension is similar to that found on the electric RS4 MT, the Nitro MT has many new features specifically designed to work with its nitro poweplant. First, HPI engineers designed a rugged shaft-drive system with beefy steel bevel-gear differentials to replace the electric MT's belt system. Shaft drive is less susceptible to damage from rocks and debris. Next, the Nitro MT received a thick, purple-anodized aluminum chassis to provide a strong backbone and to help keep the included HPI Nitro Star 15FE pull-start engine running cool during even the most strenuous running. To get the most power from the 15FE engine, HPI designed a new plastic tuned muffler for the Nitro MT. Other features include Pro-Line Dirt Hawg all-terrain tires, a removeable molded radio tray for easy chassis cleaning (held in by just two body-clips) and one-piece molded suspension links for hassle-free building and setup.

Price: $499

HPI, *15321 Barranca Pkwy., Irvine, CA 92618 • phone (949) 753-1099; fax (949) 753-1098*

KYOSHO

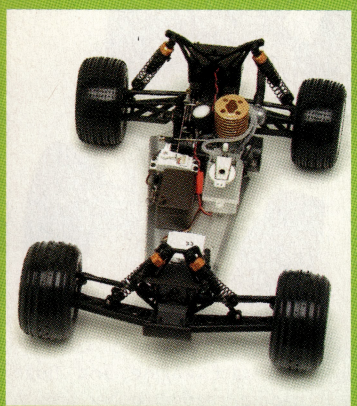




Ultima ST GP Type R

After nearly a decade of producing a crop of "also-ran" 1/10-scale off-road racers, Kyosho is back in the business of making serious racing vehicles. The Ultima ST GP Type R is one of the first vehicles to be produced under Kyosho's new philosophy, and it is without question the finest racing truck Kyosho has ever built. With racing features such as long-travel composite suspension arms with Kyosho's unique Twin Cap shocks (which can be filled from the top Associated-style or from the bottom in Losi-style), a beefy 3:1 three-gear tranny with a racing ball-diff, vented stainless-steel brake disc, full ball bearings and a set of universal-joint driveshafts, the Ultima has everything it needs to compete with the best. It even comes with Pro-Line tires and a great-looking Pro-Line Chevy truck body.

Price: $349



Ultima ST Racing Sports

Hot on the heels of the highly competitive Ultima ST Type R comes the Ultima ST Racing Sports—an RTR (ready-to-run) version of Kyosho's latest, and best, gas-racing truck to date. The Racing Sports comes fully assembled from the factory, including the installation of a brand-new Kyosho pistol-grip radio system and Kyosho GS-12R pull-start nitro engine. Kyosho has even painted the body for you! All you have to do is apply the stickers, glue the tires, and install 12 double-A batteries. The only major differences between the Racing Sports and the all-out Type R trucks are the full ball-bearings (the RS uses metal bushings) and shocks (the RS has plastic ones).

Price: $379.99

RACING OR SPORT TRUCK: WHICH IS BEST FOR YOU?

Whether you are brand-new to nitro or a seasoned veteran looking for a new ride, you should spend a little time thinking about which of these trucks will best meet your needs—before you spend any dough! The first question you should ask yourself is what do I plan to do with my new truck? Do you intend to race or just run for fun? Do you need the extra grip that 4WD provides? Do you want to build the truck yourself or do you want an RTR? If you plan to race, then your choices are really limited to three trucks: the Losi NXT, either of the Associated race trucks (Team or Factory Team versions) or the new Kyosho Ultima ST Type R. For anything other than serious racing, any of the trucks in this guide will be fine. If you want to get into gas trucks with the least possible fuss, then an RTR is for you. If you want a truck that's very easy to drive, then you might consider a 4WD truck such as the HPI Nitro MT, Kyosho Snakebite, Tamiya Mad Bison or the incredible Traxxas T-MAXX. If you want something a little bigger than 1/10-scale, then the DuraTrax Nitro Quake, Kyosho Nitro USA-1 or MRC Nitro Thunder King could be what you're looking for.

gas truck buyer's guide

KYOSHO (CONT.)



Nitro USA 1

This is the original "bad boy" of nitro trucks. Kyosho's Nitro USA-1 has been with us for a decade now, and remains as impressive today as it was when introduced. This 1/10-scale monster truck is actually derived from Kyosho's original Burns 1/8-scale off-road buggy! As such, it can take quite a bit of abuse. The Nitro USA-1 features a shaft-driven full-time 4WD system with three differentials (one at each end and one in the center), a pull-start .21 c.i. glow engine and muffler, and beefy nylon suspension components that have been designed to take the abuse of high-speed nitro racing. Dual shocks at each corner add to the monster-truck flair, while the reproduction of the classic USA-1 Chevy truck body tops off this already impressive package.

Price: $499.99



Snakebite

Based around Kyosho's innovative QRC (Quick Reverse Clutch) transmission, the Snakebite is the only truck (besides the new Traxxas T-MAXX) to offer reverse with nitro power. The secret is the QRC gearbox itself, which can alternate between one of two gearsets to move the truck forward (when you pull the throttle) or backward (when brakes are applied). The Snakebite comes with long-travel suspension with plastic oil-filled shocks, a rugged shaft-driven full-time 4WD system, a Kyosho GS-11X pull-start engine and huge paddle-treaded rubber tires. A highly detailed polycarbonate body accurately reproduces the look of the real Snake Bite monster truck—right down to the glaring red eyes and huge white fangs that protrude from the grill. Not for the faint of heart!

Price: $399.99



Nitro Tracker

The Nitro Tracker is Kyosho's most economically priced gas truck, but that doesn't mean it isn't packed with features. The Nitro Tracker has a combination molded-tub and aluminum-plate chassis (the plate helps draw heat from the included Kyosho GS-11R glow engine), long-travel suspension arms with plastic oil-filled shocks, and a stout rear-wheel-drive transmission with an easy-to-build and maintain bevel-gear differential.

Price: $339.99

Kyosho, *distributed by Great Planes Model Distributors, 2904 Research Rd., Champaign, IL 61826-9021 • phone (217) 398-6300; fax (217) 398-0008*

MRC



Nitro Thunder King

The largest nitro truck you can buy (nearly 1/7-scale), the Nitro Thunder King is based on MRC's electric-powered World Scale vehicles, with which it shares many of its chassis and suspension components. To keep weight low, MRC uses special aircraft-grade aluminum alloy for the Nitro King's chassis and sub-chassis, and a powerful .21 glow engine with a tuned muffler provides the go. Helping to harness this power and put it to the ground are a rugged ball-bearing equipped transmission and adjustable ball diff and a super long-travel suspension with glass-filled nylon arms, and massive aluminum oil shocks. Also included with the Nitro Thunder King is MRC's on-board electric start system that uses an electric motor to crank the engine rather than relying on a pull-starter or electric starter box. Available with or without radio.

Price: $400 approx.

MRC, *80 Newfield Ave., Edison, NJ 08818 • (732) 225-2100; fax (732) 225-0091*

SCHUMACHER



Desert Storm

Your search for the fastest production 1/10-scale nitro truck just ended. What possessed Schumacher to stuff a big-block .21 c.i. engine into a 1/10-scale stadium truck chassis? Maybe it was the warm beer they drink across the pond. Nevertheless, the Desert Storm has a power-to-weight ratio akin to that of a top-fuel dragster! Along with the included Thunder Tiger pull-start engine and tuned muffler, the Desert Storm comes nearly fully assembled from the factory. A yellow-anodized aluminum tub-chassis provides good rigidity with reduced weight (as if weight were a problem for the Desert Storm!), and there's a belt-driven transmission with adjustable ball differential, a sealed box for the receiver's battery, and plastic oil-filled shocks at each corner of the truck's independent suspension.

Price: $539

Schumacher USA, Inc., *6302 Benjamin Rd., Suite 404, Tampa, FL 33634 • phone (813) 889-9691; fax (813) 889-9593*

TAMIYA

Mad Bison



If its rather odd name doesn't get your attention, then perhaps the long list of features found in Tamiya's newest nitro off-roader will. For starters, the Bison's TGM-01 chassis is actually based on Tamiya's TG-10 shaft-driven 4WD on-road sedan chassis! Features include a revised gear ratio for off-road pulling power, a powerful and reliable Tamiya FS-15 pull-start glow engine with a special thin-profile exhaust, long-travel suspension arms with Tamiya's clever two-piece design to prevent dirt from sticking, and a polycarbonate undertray. The whole package is topped with a great-looking Toyota Tundra body shell with plenty of wild graphics. You won't be bored—trust us!

Price: $585

Tamiya America, Inc., *2 Orion, Aliso Viejo, CA 92656-4200 • phone (949) 362-2240; fax (949) 362-2250*

RATING THE READY-TO-RUNS

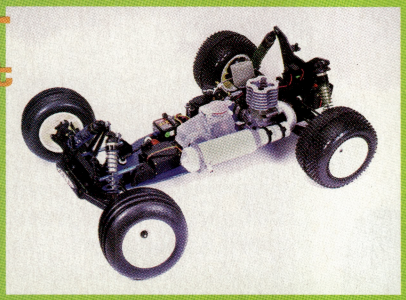
An RTR (ready-to-run) is an RTR, right? Wrong. By definition, a RTR can be anything from a truck whose chassis has been mostly pre-assembled to a truck that only needs batteries to be installed in its radio system. Of the RTR nitro trucks in this guide, here's the rundown on each manufacturers definition of RTR. For safety and shipping purposes, none of the RTR trucks come with fuel. You will also need a squeeze-type fuel bottle for each truck.

- **DuraTrax:** All three DuraTrax trucks come with pre-assembled chassis with Hitec Lynx radio gear already installed. The tires have already been glued to the wheels, and the body comes pre-painted and trimmed. Inside the box, you'll even find 12 AA batteries—four for the on-board battery and eight for the transmitter. To run any of the DuraTrax trucks, all you'll need to do is install the batteries and apply some stickers to the body (this last part is optional). The engines all have pull-starters, so no external starting device is required. **Not included** is a glow-plug igniter.
- **Kyosho:** Kyosho's only RTR is the new Ultima ST Racing Sports. The chassis is pre-assembled, with a Kyosho pull-start engine and radio already installed. The body comes pre-painted. To run the Ultima RS, you'll need to glue the tires using CA (cyanoacrylate) and trim and decal the body. **Not included** are a glow-plug igniter, CA glue and 12 AA-size batteries.
- **Team Associated:** The new RTR GT, the only RTR Associated makes, comes with a pre-assembled chassis with an Associated .15 pull-start engine and Hitec Lynx radio gear already installed. The body comes pre-painted and trimmed to fit. Associated has already applied a pair of blue-stripe decals for you, but you can also apply any other stickers from the included sheet for added detail. To run the RTR GT, you'll need to glue the tires and install batteries into the transmitter and receiver pack. **Not included** are a glow-plug igniter, CA glue and 12 AA-size batteries.
- **Traxxas:** Each of the Traxxas gas trucks, except the T-MAXX, is available in two versions; one with a Traxxas TQ radio and one without. The T-MAXX is only available with the new three-channel TQ-3 radio installed. All of the trucks come with pre-assembled chassis. The versions with the TQ radios come with all of the servos and receiver/battery holder/switch already installed. All of the trucks come with Traxxas' innovated EZ-Start system, so you won't need a separate glow-plug igniter or any type of external starter device. To run the Traxxas trucks, you'll need to paint, trim and detail the body, glue the tires, and install batteries into the transmitter and on-board receiver pack. **Not included** are CA glue, paint, 12 AA-size batteries and the six-cell NiCad pack that powers the EZ-Start.

gas truck buyer's guide

TEAM ASSOCIATED

RC10GT Team Kit



Since its introduction in '93, Associated's RC10GT has become an enormous success both in sales and on the racetrack. Throughout its long career, the GT has received almost continual updating as a result of Associated's extensive race program. For 2000, the GT receives its most comprehensive revamp to date. New to the Team Kit is a lighter and longer one-piece chassis plate to replace the venerable tub-chassis of all previous GTs. A new "slim-line" front bumper, composite front chassis-brace tube-mounts go with the new chassis. Also new to the Team Kit is a stronger, easier-to-adjust engine-mount/transmission brace that virtually eliminates chassis flex and makes setting gear mesh much easier. Other new items include stronger composite rear arm-mounts with three degrees of toe-in and two degrees of anti-squat per side, and composite rear hubs that add 1.5 degrees of toe-in for a total of 4.5 degrees per rear wheel. A full set of stainless-steel, rubber-sealed bearings and a hot-looking Pro-Line Ford F-150 racing body are also included.

Part No.: 7067 (for pull-start engines); 7068 (for non pull-start engines)

Price: $419.95

Factory Team GT



This brand-new model represents the very best from Team Associated. The Factory Team GT kit begins as a Team Kit with all of the various upgrades found in that model, but Associated adds to this a full complement of its Factory Team aftermarket accessories, making this the most "decked out" kit you can buy! Here's what you get: Factory Team blue-anodized aluminum servo-saver hub and adjustment collar, blue-aluminum screw kit, blue exhaust manifold and tuned pipe, blue inline front axles, blue aluminum brake adapter, blue titanium turnbuckles, Unobtainium shock shafts, front and rear graphite shock towers, and a special 28-page RC10GT tuning guide. This is the ultimate Associated gas truck!

Part No.: 7061 (for pull-start engines); 7060 (for non pull-start engines)

Price: $482.95





RC10GT RTR

Finally, Associated has introduced a competitive gas truck for those of you who don't feel like putting one together from a kit! The RTR comes fully assembled straight from the box and includes a powerful Associated .15 engine with pull-starter, Pro-Line tires and a Hitec Lynx radio system already installed. The RTR GT is pre-assembled to Associated's demanding specifications to ensure that you get a truck that will be as well put together as if you had done it yourself. Even the body has been pre-painted for you—just add stickers and go racing!

Price: $479.95

Associated Electrics, Inc., *3585 Cadillac Ave., Costa Mesa, CA 92626 • (714) 850-9342; (714) 850-1744 fax*

TEAM LOSI





NXT

The NXT is Losi's gas racing truck, and, like the Associated GT, it has been designed for serious competition. The NXT features an ultra-rigid chassis comprised of a lower aluminum plate and molded-composite upper bridgework. To add further stiffness, even the engine and transmission are used as structural chassis elements. The NXT features an updated suspension geometry that provides greater traction and stability, both of which contribute to making the truck easier to drive quickly. Other features include a full set of steel turnbuckle tie-rods, Losi's innovated dual-disc slipper clutch, pre-set gear mesh, a sleek new body and high-grip Directional front tires and Reptile rears. Losi also offers a full line of hop-ups for the NXT, including titanium-nitride shock shafts and graphite-composite chassis and suspension pieces. Does not include an engine or radio system.

Price: $314.95 (Sports), $439.95 (Racer), $499.95 (Graphite Plus)

Team Losi, Inc., *13848 Magnolia Ave., Chino, CA 91710 • (909) 465-9400; fax (909) 590-1496*

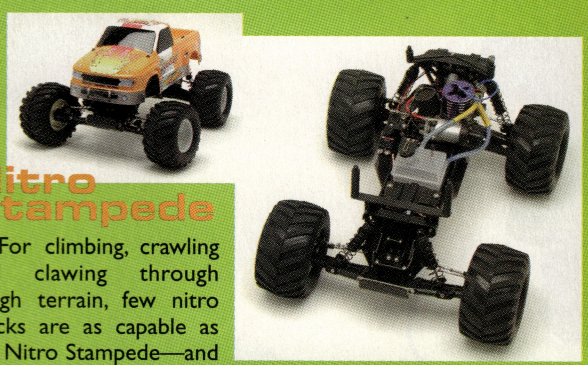
TRAXXAS



Nitro Sport

When designing the Nitro Sport, it appears that Traxxas had one goal in mind—to make an RTR (ready-to-run) nitro truck that was supremely beginner-friendly. They succeeded. The Nitro Sport comes fully built straight from the box, and a version with Traxxas TQ radio system is available. The Nitro Sport's powerful TRX Pro 15 engine is equipped with Traxxas' EZ-Start system: simply plug the EZ-Start in to the back of the truck and press its button—that's all there is to it! No pull-starters, no starter boxes and no separate glow-igniters to charge. Getting into nitro off-road couldn't be any easier! And the Nitro Sport isn't without performance features. Check this out: the truck comes with a tuned exhaust system, a powerful disc brake, a rigid dual-deck T6 aluminum and composite chassis, a long-travel suspension with oil-filled shocks, and a rugged Magnum 281 transmisison with ball bearings and a steel-gear planetary differential.

Part No: 4510 (with TQ radio); 4504 (without radio)
Price: $520, $420



Nitro Stampede

For climbing, crawling and clawing through rough terrain, few nitro trucks are as capable as the Nitro Stampede—and fewer still are as quick to go from box to dirt. Featuring incredibly high ground clearance and extra-long suspension travel damped by large-diameter Ultra oil-filled shocks, the Nitro Stampede has become even more user-friendly: Traxxas has now fitted the Nitro Stampede with its innovative EZ-Start one-touch system. Other features of the fully assembled Nitro Stampede include a powerful TRX Pro 15 engine with dual exhaust, a rugged dual-deck T6 aluminum and composite chassis, Traxxas' durable Magnum 375 transmission with steel diff gears, a very effective disc-brake system and efficient telescoping U-joint driveshafts. Available with or without Traxxas' TQ radio system installed.

Part No.: 4110 (with radio); 4104 (without radio)
Price: $595, $495



Nitro Rustler

If you're looking for all-out speed in a RTR (ready-to-run) 1/10-scale stadium truck, then the Nitro Rustler should be tops on your list of potential purchases. Designed around Traxxas' race-proven SRT suspension, the Nitro Rustler is made for blistering speeds thanks to its TRX Pro 15 engine with specially tuned exhaust and ball-bearing-equipped Magnum 281 transmission (with steel-geared planetary differential). Features include a rigid dual-deck T6 aluminum and composite chassis, extra-long fiber-composite suspension arms with Traxxas' long-travel Ultra shocks, a powerful disc brake, and telescoping U-joint driveshafts for smooth power delivery. And if this weren't enough, Traxxas has now fitted the Nitro Rustler with its EZ-Start one-touch system, which eliminates the need for pull-starters, starter boxes and glow igniters.

Part No.: 4410 (with radio); 4404 (without radio)
Price: $575, $475



T-MAXX

How does this sound to you: three-and-a-half inches of suspension travel with two huge shocks per wheel, a two-speed transmission that can be shifted into reverse via an included three-channel radio system and a top speed in the neighborhood of 35mph! Sound to good to be true? Then you haven't yet met the T-MAXX! The crown jewel in Traxxas' RTR (ready-to-run) line of nitro trucks, the T-MAXX breaks new ground in features and performance. Its powerful TRX Pro 15 engine has a racing-style three-needle carb for improved tuning, an EZ-Start on-board ignition system for painless operation, huge (nearly six-inches tall) paddle tires, a huge disc brake, and a sleek bodyshell that gives the truck a racy appearance. All of this, plus a thick T6 aluminum alloy chassis and "over-engineered" double-wishbone suspension make the T-MAXX an awesome piece of rolling stock.

Price: $695.00

***Traxxas,** 12150 Shiloh Rd., Dallas, TX 75228 • phone (972) 613-3300; fax (972) 613-3599*

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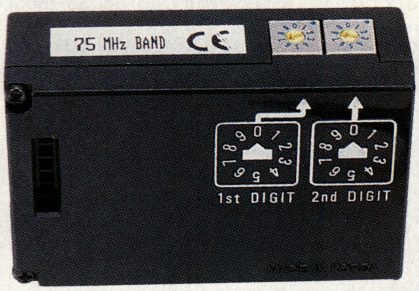
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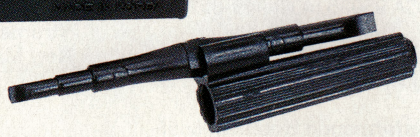
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Lagoon Park R/C Raceway, 2730 Lagoon Park Dr., Montgomery, AL 36109 (334) 272-6438

R/C Hi-Tech Raceway, 3303 Meridian St., Huntsville, AL 35811 (205) 539-1347

R/C Thunder, 1530 Schillinger Rd., Mobile, AL 36675, (334) 645-2787

ALASKA

Fairbanks R/C Club, 510 Juneau Ave., Fairbanks, AK 99701 (907) 456-5494

ARIZONA

Hobbytown Mountain Raceway, 1500 E. Cedar Ave., Cedar Hills Shopping Center, Flagstaff, AZ 86004, (520) 214-9887

Hobbytown Raceway, 13802 N. Scottsdale Rd., Scottsdale, AZ 85250 (602) 948-3946

Hobbytown Raceway, 1915 East Baseline Rd., Gilbert, AZ 95234, (602) 892-0405

Hobbytown Raceway, 1102 E. 22nd St., Tucson, AZ 85704, (520) 882-8888

Hobbytown USA, 5030 E Ray Rd., Phoenix, AZ 85044, Linda McFarland, (602) 598-5282

Kiwanis Park R/C Track, 855 S. Magnolia Ave., Yuma AZ 85364, (520) 539-7148

Scottsdale R/C Raceway, 3023 N. Scottsdale, Scottsdale, AZ 85251 (602) 945-2186

Speedway Hobbies, 2710 N. Steve's Blvd., Ste. 8 Flagstaff, AZ 86004 (520) 714-1566

ARKANSAS

Alison Offroad RC Raceway, 6320 Thibault Rd., Little Rock AR 72206 (501) 490-1227

Arkansas R/C Car Association, 101 W. 52nd St., N. Litle Rock AR 72218 (501) 753-1286

Airport Speedway, 1521 Airport Loop, Rogers, AR 72756, (501) 636-7123

Grand Slam Superspeedway, 5300 S. Zero St., Ft. Smith, AR 72703 (501) 648-1994

Hobbytown USA, 356 E. Joyce Fayetteville, AR 72703, (501) 571-3730

Sparks R/C Raceway, 7194 Greene 721 Rd., Paragould, AR 72450, (501) 239-3606

Grand Slam Hobby, 5300 South Zero, Ft. Smith, AR 72901, (501) 648-1994

CALIFORNIA

Castle Hobbies, 14918 Camden Ave., San Jose, CA 95124, (408) 377-3771

Hobby Central Raceway, 34255 PCH, Unit #107, Dana Point, CA 92629, (619) 513-0373

Hobby Central II, 13461 Community Rd., Poway, CA 92064 (619) 513-0373

Hobbytown, Parktwon Plaza Shopping Center, 1350 S. Park Victoria Dr. #21, Milpitas, CA 95035 (408) 945-6524

Hot Rod Hobbies, 25845 San Fernando Rd., Saugus, CA 91350, (661) 255-2404

Jake's Performance Hobbies, 6650 Commerce Blvd., #21 Rohnert Park, CA 94928, (707) 586-3375

Lucerme Valley Raceway, 32800 Old Woman Springs Rd., #4, Lucerne Valley, CA 92356 (760) 248-7305

MnM Hobbies, 4225 Prado Rd., Ste. 103 Corona, CA 91720, (909) 272-3545

Nor-Cal Speedway, 519 Bush St., Woodland, CA 95695 (530) 668-5678

ProCar West, Sante Fe Springs, CA m2rcracing

Race Corner of Marin, 300 Entrada Dr., Novato, CA 94949, (415) 883-0388

Race Prep Raceway, 20115 Nordhoff Chatsworth, CA 91311, (818) 709-6800

Racer's Haven, 7401 White Ln. #12 Bakersfield, CA 93309, (805) 835-0441

Ripon R/C Speedway, 701 N. Acacia Ave., Ripon, CA 95366 (209) 599-5160

Sacramento R/C Racing, 6201 27th St., Sacramento, CA 95824, (916) 454-4044

Showtime Speedway, 3709 Abbot DR., Bakersfield, CA 93312, (805) 5890493

Simi Valley Ground Pounders, 392-C - East Easy St., Simi Valley, CA 93065, (805) 584-8211

So. Cal Raceway, 19118 Brookhurst St., Huntington Beach, CA 92646, (714) 963-7484

Speedworld Raceway & Hobby, Billy Bowerdman 90 Corporation Yard Rd., Roseville, CA 95678, (916) 783-8864

Ultimate Hobbies, 2378 North Orange, CA 92865, (714) 921-0424

COLORADO

S&T Raceway, 323 Auburn Dr., Colorado Springs, CO 80909, (719) 574-2910

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Central CT Auto Racers
Davis Hobbies II, 45A Welles St., Glastonbury, CT 06033, (860) 633-3056

JP's Hobby Center & Raceway, 78 Pershing Dr., Derby, CT 06418, (203) 735-5512

K&N Speedway, West St., Stafford Springs, CT 06076 (860) 684-9896

R/C Madness, 640 Enfield St., P.O. Box 64, Enfield, CT 06082, (860) 741-6501

Xtreme Radio Control, 469 Danbury Rd., New Miford, CT 06469, (860) 354-4703

DELAWARE

Hobbystop Speedway, Rd. #4, Box 100, Rte. 13, Seaford, DE 19973, (302) 629-3944

FLORIDA

Broward County R/C Race Club, Mills Pond Park, Ft. Lauderdale, FL (954) 525-3304

Burton's R/C Raceway, 4215 Mustand Rd., Lakeland, FL 33803, (941) 665-1322

Coral Springs Roadrunners, PO Box 9632 Coral Springs, FL 33075, (954) 925-8284

Farmer's Hobby & Raceway, 5006-3 E. Broadway, Tampa, FL 33619, (813) 248-3314

First Coast Speedway, 6410 Waltho Dr., Jacksonville, FL 32211, (904) 743-2161

Ft. Myers R/C Club, Lee Civic Center, Ft. Myers, FL (941) 936-1528

Frontier Race Track, 15260 N.E. 244th Ave., Salt Springs, FL 32134, (352) 685-2881

Hobbyworld Raceway, 7273 103rd St., Jacksonville, FL 32210, (904) 722-9022

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Means R/C Raceway, 1550 Pondell Rd., Nortrh Ft. Myers, FL 33903, (941) 772-2251

Monster Hobbies, 616 Southeast 10th St., Deerfield Beach, FL 23441, (954) 428-9118

NORRA, 3300 Santa Barbara Blvd., Naples, FL 34104, (941) 324-9021

Ocala R/C Car Club, 2610 SE 8th St., Ocala, FL 34470, (800) 324-8882

PBG Motor Park, 6351 Barbara St., Palm Beach Gardens, FL 33418, (561) 627-2608

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Port St. Lucia Racing, 3626 SW RIvera St., Port St., Lucie, FL 34953 (561) 336-8711

Randy's RC Raceway, 7744 Glenwood St., Clermont, FL 34711, (352) 242-0557

River City R/C Club, 9711 Sharing Cros Dr., Jacksonville, FL 32257, (904) 268-1948

Sarasota RC Speedway, 8475 Cooper Creek Blvd., University Park, FL 34201, (941) 358-7047

Speedworld-RC, 600 S. Yonge St., Ste. 107, Ormond Beach, FL 32174, (904) 271-6240

Tampa Bay RC Club, PO Box 10224, St. Petersburg, FL 33733, (813) 526-0744

Tropical Racers, Tropical Park, Palmeto Expressway & SW 40 St., (Bird Road), Miami, FL

GEORGIA

Anthony's Victory Lane, 129 East Hwy. 80, Pooler, GA 31322, (912) 748-0847

Dalton Raceway, 3036 Parquet Rd., Dalton, GA 30720, (706) 226-6699

Emerald City R/C Speed, Hwy. 80 East, Dublin, GA 31027, (912) 272-3856

Hobbytown Raceway, 2301 Airport Thruway, Columbus, GA 31904, (706) 660-1793

Racer's Edge, 1530 Hwy. 19 N., Thomaston, GA 30286

Sandy Cross Speedway, Rt. 1 Box 1071, Hwy. 51, Royston, GA 30662, (706) 245-9573

Stinger Speedway, 3769 Maysville Rd., Commerce, GA 30529, (706) 335-9044

Sugar Bowl Speedway, 5272 Nelson Brogdon Blvd., Sugar Hill, GA 30518, (770) 945-6709

HAWAII

Maui Racing Association, 230 Hana Hwy., #11, Kahului, HI 96731, (808) 873-0376

Team PRC Racing Club, 176 Mamo St., Hilo, HI 96720, (808) 935-3561

IDAHO

Dirt Stuff Plus, 5344 N. Yellowstone Hwy., Idaho Falls, ID 83401, (208) 522-7576

ILLINOIS

Adams R/C Raceway, 7201 S. Adams, Bartonville, IL 61607, (309) 633-9300

AJ's, 10211 Keslinger Rd., DeKalb, IL 60115, (815) 756-2772

Depot Hobby Raceway, 180 S. Seminary St., Galesburg, IL 61401, (309) 342-9323

H&H Raceway, 9346 Virginia Rd., Lake in the Hills, IL 60102, (847) 458-1777

Hobbytown Raceway, 2103 N. Veterans Pkwy., Bloomington, IL 61701, (309) 664-4451

Leisure Hours R/C Raceway, 24121 W. Theodore, Bldg. 1, Plainfield, IL 60544 (815) 439-1477

Monee R/C Raceway, 26049 Ridgeland Ave., Monee, IL 60449 (708) 799-5597

Outlaw R/C Speedway, 1614 Broadway, Mattoon, IL 61938, (217) 234-6229

Quad Cities Raceway, 541 1st Ave., North Silvis, IL 61282, (309) 751-9663

Rector's R/C Raceway, RR3, Box 104, Albion, IL 62806, (618) 842-9379, (618) 446-3282

RMR Raceway, 19091 W. Casey Rd., Libertyville, IL 60048, Ray Rawald, (847) 549-6963

Shiloh Eagles Speedway, 308 N. Virginia AVe., Belleville, IL 62220, (618) 277-6030

SIRCAR Raceway, 1200 N. Marion, Carbondale, IL 62901, (618) 549-5885

Sport 'N' Hobby, 905 Bibbs, Jacksonville, IL 62650, (217) 254-1375

Stanton Hobby Shop, 4718 N. Milwaukee, Chicago, IL 60630, (773) 283-6446

Wep Raceway, RR #2, Box 44, Lawrenceville, IL 62439

INDIANA

Bremen Racing, 308 N. Bowen, Bremen, IN 46506, (219) 546-3807

GM Raceway, 1651 W. Franklin St., Elkhart, IN 46516, (219) 293-1827

Hardesty Raceway, 11 East Plymouth St., Hamlet, IN 46530, (219) 867-8600

Hobby Barn Raceway, 1950 Springhill, Terre Haute, IN 47802 (812) 299-5773

Hobbytown USA, 5385 E. 82nd St., Indianapolis, IN 46250, (317) 845-4106

P&T Hobbies & Raceway, RR2 (Hwy. 60), Mitchell, IN 47446, (812) 849 6666

R/C World of Indiana, 2246 West U.S. Hwy. 36, Lynn, IN 47355, (765) 874-2464

Summit Area Radio Cars, 7000 Red Haw Dr., Ft. Wayne, IN 46805, (219) 492-2271

IOWA

Hobby Haven, 7672 Hickman Rd., Des Moines, IA 50322, (515) 276-8785

HobbyTown USA, 2737 16th Ave. SW, Cedar Rapids, IA 52404, (319) 364-3289

Manly R/C Club, Box 23, Manly, IA 50456 (515) 454-2025

Outback Speedway, 403 State St., Gutherie Center, IA 50115, (515) 747-3064

Radio Control Raceway Park, 2100 First Ave. N., Ft. Dodge, IA 50501, (515) 576-3780

Wild Bill's Raceway, 901 W. Jones, Knoxville, IA 50138, (515) 842-5973

KANSAS

Hobbytown USA, 2016 W. 23rd, Lawrence, KS 66046; Kevin Decembes, (785) 865-0883

R/C Superdome and T.Q. PRO Shop, 14 E. Avenue A., Hutchinson, KS 67501 (316) 665-6633

RC Hobbies, Franum Creek, Milford Lake, KS (785) 238-1877

RCRC Raceway, 507 N. 4th Atwood, KS 67730, (795) 626-3261

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Trio Hobbies & RC, 216 Redmar Plaza, Radcliff, KY 40160, (502) 351-7547

LOUISIANA

Baton Rouge Velodrome, 7122 Perkins Rd., Baton Rouge, LA 70815, (504) 665-5616

Indy Speedway & Hobby, 3753 General DeGaulle Dr., New Orleans, LA 70131 (504) 367-1891

Pontchartrain Hobby Shop, 3755 Pontchartrain Dr., Slidell, LA 70458, (504) 649-1199

MAINE

Clay Bowl R/C Hobbies, P.O. Box 61, Greene, ME 04236, (207) 946-5003

R/C Speedway & Hobbies, 87 Main St., Fairfield, ME 04963, (207) 453-4588

MARYLAND

Countryside Raceway, 406 Pamela Rd., APt. C, Glen Burnie, MD 21061, (410) 761-6196

Doug's Raceway, 2935 C ain Hwy., Waldorf, MD 20601, (301) 843-6220

Hobby Town USA, 8223-11 Elliot Rd., Easton, MD 21601, (410) 820-9308

JR's Race Place, 2935 Crain Hwy., Waldorf, MD 20601, (410) 947-2766

The Track, 16806 Oakmont Ave., Gaithersburg, MD 20877, (301) 417-9630

MASSACHUSETTS

C&C Hobby & Raceway, 562 Russells Mills Rd., South Dartmouth, MA 02748, (508) 997-4131

Hi-Tech Hobbies, 1681 Broadway (Rt. 138) Raynham, MA 02767, (508) 880-5373

Megadrome Raceway, Rt. 8 Curran Hwy. North Adams, MA 01247, (413) 743-7223

MICHIGAN

Hobbytown USA, 2252 S. Main St., Ann Arbor, MI 48103, (734) 996-2444

House of Hobbies, 2863 West Shore Dr., Holland, MI 49424, (616) 786-3686

JT Superspeedway, Golden Ave., Battle Creek, MI 49015, (616) 965-0116

Larry's Performance R/C's, 43665 Utica Rd., Sterling Heights, MI 49221, (810) 997-4840

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Ovaitt's R/C Speedshop, Cherryland Mall, 1732 S. Garfield Ave., Traverse City, MI 49686, (616) 947-6670

R&L Hobbies & Racing, 9782 Portage Rd., Portage, MI 49002, (616) 323-3686

Rodgers R/C Raceway, 7463 Ridge Rd., Britton, MI 49223, (517) 451-8301

Village R/C Raceway, Praire Ronde St., Decateur, MI 49045, (616) 423-7878

MINNESOTA

Car Town USA, 2822 Peidmont Ave., Duluth, MN 55811, (218) 727-6248

Duey's Hobbies & R/C Raceway, 6600 Cahil Ave., Inver Grove Heights, MN 55076, (651) 450-1721

Fun City, 9100 Park Ave., Elk River, MN 55330, (612) 441-8365

Northwoods Hobby Raceway, 2638 Hwy. 25 North Brainerd, MN 56401, (218) 829-9257

Ray's Raceway Park, 105 3rd Ave. NE., Glenwood, MN 56334, (320) 634-5246

R/C Racing World, 235 Main AVe., North, Harmony MN 55939, (507) 886-5931

Southside Speedway, 2241 Marion RD., SE Rochester, MN 55904, (507) 281-3233

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Joe McFaden Hobbies, 5531 Fox Meadow Dr., Meridian, MS 39307 (601) 483-7000

Small Cars Unlimited, 820 Cooper Rd., Jackson, MS 398212, (601) 372-FAST

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B&L Hobbies & Raceway, 2800 Anchor Dr., Park Hills, MO 63061, (573) 431-9444

Greentree R/C Racepark, Marshal Road, Kirkwood, MO (314) 831-2194

Ozark's R/C Raceway, PO Box 460, Willard, MO 65781, (417) 742-4376, (417) 742-7223

Real Blue Vue Speedway, 12019 E. 47th St., Kansas City, MO 64133, (816) 358-0238

Real R/C Raceway, 24204 State Rte. 58, Pleasant Hill, MO 64080

NEBRASKA

Goodyear Speedway, 4021 North 56th, Lincoln, NE 68510, (402) 464- 5172

OTWG Carpet Raceway, 55129 849th Rd., Norfolk NE 68701, (402) 644-7922

RC Motorsport Off-Road Raceway, 5600 Mass Rd., Omaha, NE 68164, (402) 593-6133

NEVADA

Danwsey's Indoor R/C Hobbies, 741 N. Nellis Las Vegas, NV 89110, (702) 453-RACE

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Charlie's Hobby Shop, 225 E. Idaho, Ste. # 11Las Cruces, NM 88005, (505) 541-1097

NEW YORK

Rampage R/C, 782 Rt. 9G, Hyde Park, NY 11204

RHODE ISLAND

Tri-State R/C Raceway, 205 Hallene Rd., Warwick, RI 02886, Lenny Sosa (401) 738-4908

SOUTH CAROLINA

Carolina R/C Speedway, 4148 Calhoun Memorial Hwy., Easley, SX 29640; Craig Prahl, (864) 295-1209; *ww.carolinarc.com*

Myrtle Beach R/C Park, 5976 Grace Lane, Myrtle Beach, SC 29577 Brad Smith, (843) 234-0096

The Grove Racing Center, 939 S. Anderson Rd., Rockhill, SC 29730, Mike Durham or Don Faris, (803) 327-4121

Hobbies and More, 1570 S. Main str., Darlington, SC 29532; Jerry Pollard (803) 393-0355

J&M R/C Hobbies, 5341 Dorchester Rd., Evanston Plaza, N. Charleston, SC 29418; Mike Smith (843) 552-9449

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Midway Hobby and Raceway, 707 Sulphur Springs Rd., Greenville, SC 29611; Allen A. Dodson, (864) 246-6335

ORA Atomic Racing, 373 Boyd Pond Rd., Aiken, SC 29803; Bill Felak, (706) 855-0846 or (803) 642-0314

SOUTH DAKOTA

Boomerans Raceway, 105 N. Main, Hartford, SD 57033; Ed Smithback (605) 528-7345

TENNESSEE

Hobby Town USA, 2000 Mallory Ln., Franklin, TN 37067; Bobby Mills, (615) 771-7441

MSA R/C Racing, Rt. 12 Box 489 F, Crossville, TN 38555; D.R. Findley (931) 456-0027

W.O.W. Raceway, 59 Luray Rd., Beech Bluff, TN 38313; Kelly Bean, (901) 427-7874; *windix60@pipeline.com*

XS Speed, 5237 Hwy. 126, Blountville, TN 37617, (423) 323-1513

TEXAS

215 Speedway, 1814 County Rd. 215, Abilene, TX 79602; Clyde Gardner (915) 673-2351

Big Mike's R/C Raceway, 1405 W. Cotton St. Longview, TX 75604; (903) 297-7814

Comanche Trail RC Park, City Park, Big Spring, TX 79720; Allen Nichols (915) 263-4241

Discount Hobbies, 1722A West Anderson Loop, Austin, TX 78757; Tony Bermudex, (512) 458-2324

Drycreek Raceway, 5903 Co. Rd. 2297, Quinlan, TX 75474; Micky Alphin (903) 883-4060

Hal's Hobby Raceway, 1440 Bessember, El Paso, TX 79936; Carlos (915) 591-2213

Hobbycraft Speedway, 819 N. Main St., Corsicana, TX 75110; Keith Hoffman (903) 872-6761

HobbyTown USA, 999 E. Basse Rd., Suite 177, San Antonio, TX 78209; Joe Sena, or Clark Baisdon, (210) 829-8697

Indy R/C World, 2020 Saturn Rd., Garland, TX 75041, (972) 271-4844

Issac's Race Track, 18177 Gulf Frwy., Webster, TX 77598; Issac Ben-Ezra, (281) 488-8697

MBRC Off-Road Raceway, 204 D & E Valley Ln., Kennedale, TX 76133 (817) 292-5055

Performance Raceway, 1106C Witte Rd., Houston, TX 77055; Jorge Tabush or Terry Schmid, (713) 464-4458

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Shamroc Raceway, 106 Cheviot Pl., Stephens City, VA 22655; Scott Janow, (540) 869-3551

Star/Car Raceway, Debbie's R/C World, 200 Commerce Parkway, Virginia Beach, VA 23454, (757) 340-6681

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Alfie's, 108 South K St., Aberdeen, WA 98520; (360) 533-6638

A-Main Raceway, 14011 NE 3rd Ct., Vancouver, WA 98685; Monty Coleman, (360) 571-8404

Burien Toyota R/C, 15025 1st Ave. South, Seattle, WA 98148 Ray Meek, (800) 654-6456

Cedardale Raceway, 16733 Cedardale Rd., Mount Vernon, WA 98273; Joe Madonia, (360) 659-0072; *getchell@halcyon.com*

Four Season R/C Racing, 2941 Sleater Kinney Rd. NE Olympia, WA 98506; Gary Brown (360) 491-2430

Rain City Raceway, 3616 South Rd., Suite A3, Mukelteo, WA 98275, Debbie Cartwright (425) 438-2454 *raincityraceway.com*

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Tacoma R/C Raceway, 6305 6th Ave., Tacoma, WA 98406; Scott Brown (253) 565-1935

Ultimate R/C Raceway, 907 Cole St. #3, Enumclaw, WA 98022; Dan Dougherty, (509) 375-4995

West Coast Hobby & Raceway, 2239 Stevens Dr., Richland, WA 99352; Rick, (509) 375-4995

WEST VIRGINIA

Burr-Fab Raceway, 90 Davis St., West Union, WV 26456; Mark Travis, (304) 873-2487

Fulton's R/C Raceway, 2646 Chapline St., Wheeling, WV 26003; James Fulton (304) 233-5355

Left Turn Hobbies, 100 Saco Ln. Glen White, WV 25849; Stretch (304) 255-3930
Race Zone, Hopewell Rd., Rt. 8 Box 343A, Fairmont, WV 26554; Joe Clutter , (304) 368-1000

WVRCA R/C Club, 142 West Main, Bridgeport, WV 26330; D.W. Weed

WISCONSIN

ABC R/C Inc & Raceway, 244 W. Main St., Waukesha, WI 53186; Dick Mathiesen, (414) 542-1245

Gary's Hobby Center, 3701 Durand Ave., Racine, WI 53403; Bill Phalen, (414) 542-1245

Heart of the Valley R/C Club, 1330 Midway Rd., Menasha, WI 54952; Bill Morgan, (920) 954-1695

Hobbytown USA, 2061 South Koeller, Oshkosh, WI 54901 (920) 426-1840

Hobbytown USA-Revolution, Memorial Mall, 3347 Kohler Memorial Dr., #D2, Sheboygan, WI 53081; Kenny, (920) 452-0801

JJ's Dirt Heaven Hobby and Raceway, 6028 County Rd K, New Frankview, WI 54229; *dirtheaven@msn.com* Aaron Dufey (920) 866-9096

Mid-West Tri-Clone, 3745 Shuster, West Bend, WI 53095; Tom Holz, (414) 334-0429

Pro-Star Racing, 726 Pine St., Green Bay, WI 54301; Chuck, (920) 469-5566

RJ's/R.C., 4920 Hwy. 70W, Eagle River, WI 54521; Randy Stys, (715) 479-2541

S&N's Trackside Hobbies and Raceway, 6405 N. Green Bay Ave., Milwaukee, WI 53209; Scott Ernst, (414) 351-1910

WYOMING

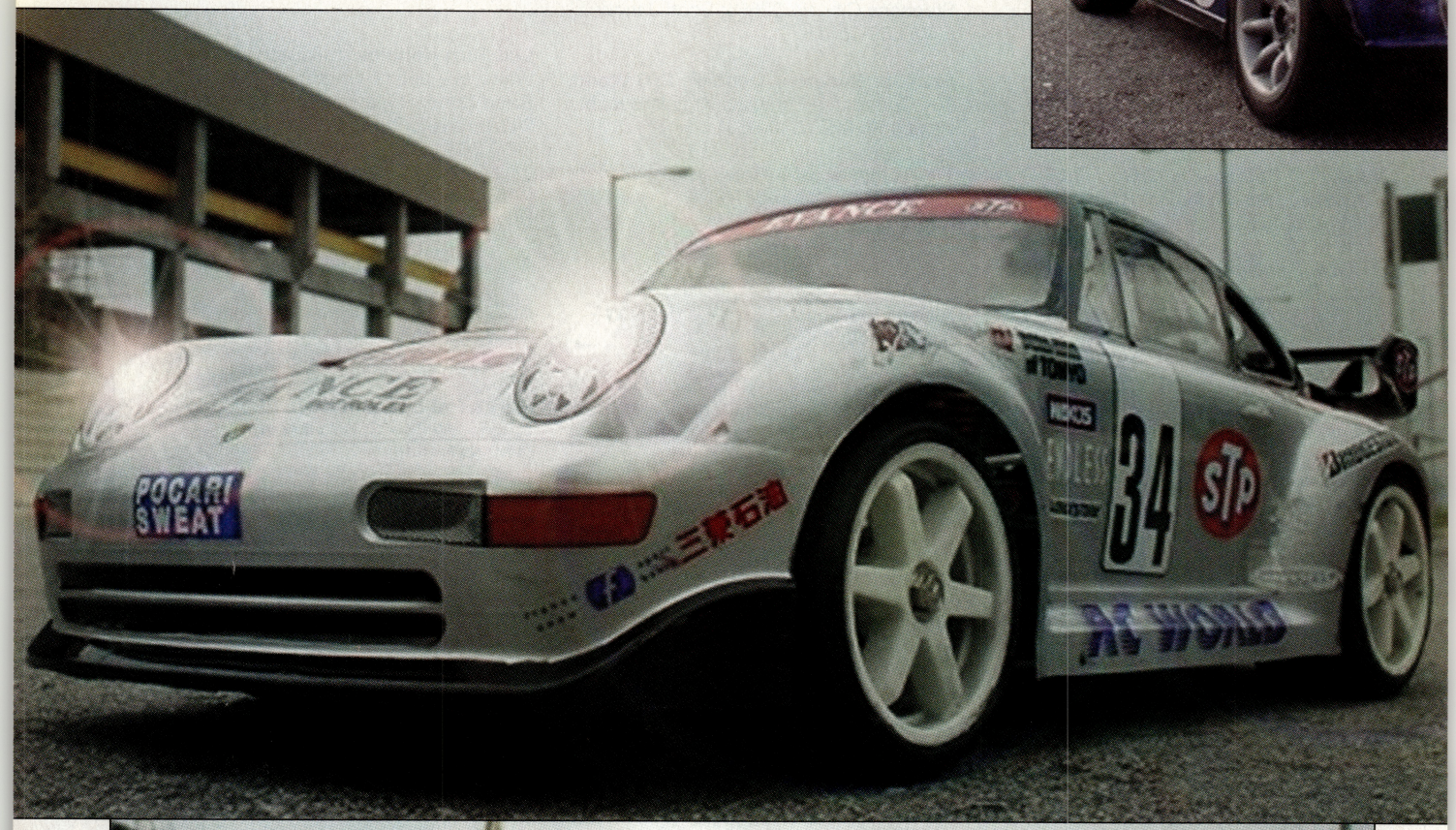
Wind River R/C Racing Association, 309 N. 4th West, Riverton, WY 8250; Shannon Watts, (307) 857-0418

Xtreme Hobbies Raceway, 2724 Powder Basin, Gillette, WY 82718; Frieg Balls, (307) 682-6077

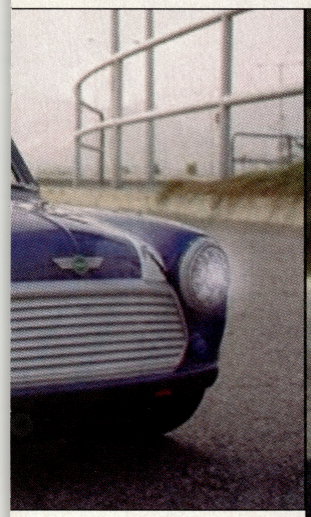
THUNDER TIGER RACE PLACES

parting shot















Stop on by www.rc-car.com

Recently we received these images from our buddy Joe from Hong Kong. Joe dropped a quick note to us while visiting our new web site (*www. rc-car.com*) to tell us that he's been into the hobby for almost three years now, and he spends almost every weeked at his local R/C track. The cars in the photos are his Kyosho Super 10, a Kyosho Mark II and a Tamiya TG-10. Staff photographer John Howell was mightily impressed with Joe's keen eye for R/C photography—"These photos are awesome...I love how he shot them with the buildings like that in the background. They look real!"

If you have electronic photos you'd like to submit to our website, e-mail us at *tomh@hi-torque.com*. In addition, we'd also like to see the good old-fashioned photos as well! You can send them to us at *R/C Car*, 25233 Anza Dr., Valencia, CA 91355, attention *R/C Car* Photo Dept.. If we like what we see, we'll scan them in here and put them up on the web! So don't just stand there, get out with your cars and trucks and get shootin'! ◆

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- *1999 ROAR National Champion (Triple-X), (XX-T), (XX-4)*



Jukka Steenari
- *1999-2000 IFMAR World Champion (XX-4)*
- *1999 European Champion (XX-4), (Triple-X)*

Team Losi XX-4
- *1999-2000 4WD IFMAR World Champion*
- *1999 4WD ROAR National Champion*
- *1999 4WD European Champion*



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Truck, Adam Drake
4wd, Brian Kinwald

US Indoor Championships
1/12th, David Spashett
Touring, Josh Cyrul

Reedy Race Of Champions
Brian Kinwald

Florida Winter Champs
Truck, Matt Francis

Trinity On-Road Challenge
Touring, Josh Cyrul

Cactus Classic
2wd, Matt Francis
Truck, Brian Kinwald
4wd, Brian Kinwald

ROAR Carpet Nationals
1/12th, Josh Cyrul
1/10th, Josh Cyrul
Touring, Josh Cyrul

1/12th Euro Champs
David Spashett





Josh Cyrul and Barry Baker celebrate their 1-2 finish in Modified Touring at the ROAR On-Road Nationals

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