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R/C CAR

MARCH 2004

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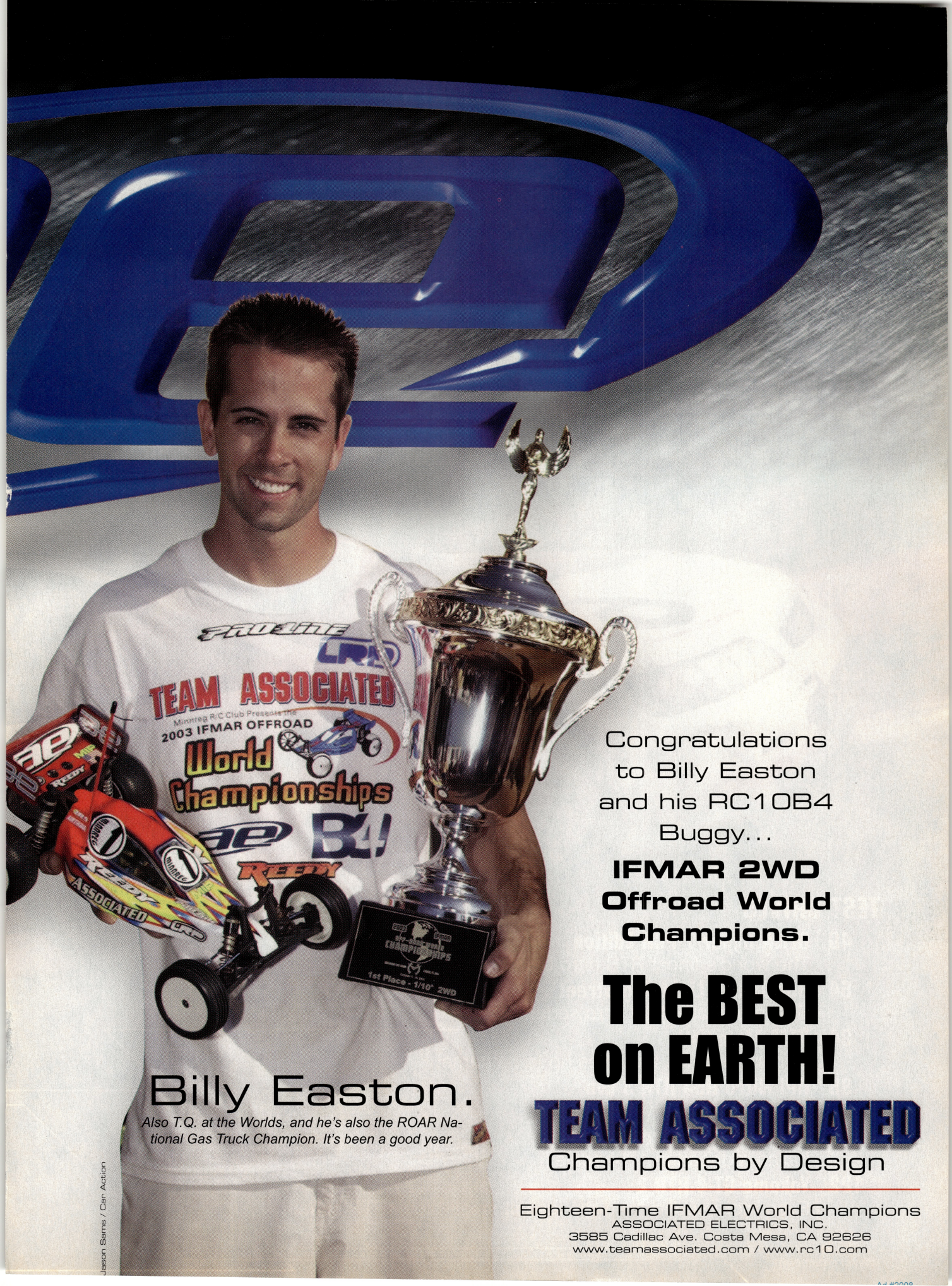


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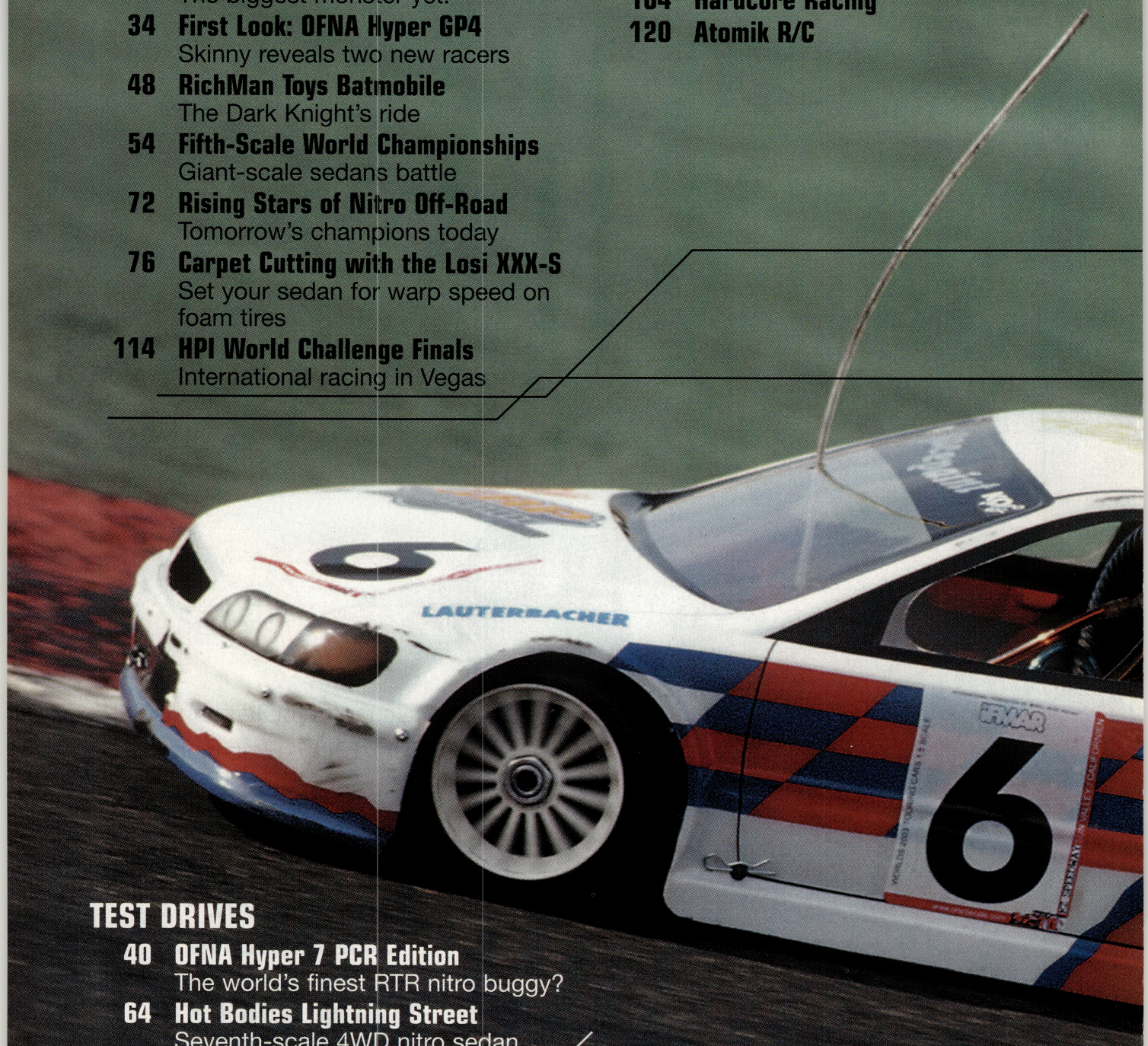
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On the cover: OFNA's Hyper 7 PCR Edition strikes a pose. Photo by Mike Basher

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THE RADIO CONTROL CAR MAGAZINE

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[Drivers' Stand]



ADDING TO THE DICTIONARY

BY FRANK MASI

What's a truggy? It's a word Skinny coined to describe a new breed of monster truck. It's also a word that we use to help define the difference between true monster trucks and a wolf in sheep's clothing. A word's meaning sometimes changes with time. Ten years ago, the Kyosho USA-1 and the Tamiya Clod Buster were monster trucks. Today, the Traxxas T-Maxx and Associated Monster GT are monster trucks. By our definition, a modern monster truck has a Maxx-like design. It should have a raised chassis with a central transmission, its diffs should be lower than the main chassis, it should have lots of ground clearance and it should have tons of suspension travel. A 1/8-scale buggy with big tires and a pickup body is not a monster truck. It is a truggy.

WEB POLL RESULTS

In a recently conducted poll on www.rc-car.com, we asked if people thought that hybrid truggies should be allowed in the same classes as more traditional monster trucks. Here are the results.

No 90%

Yes10%

*Sources: www.norrca.com, www.roarracing.com



Unfair? The way things are now, you'd have to compete against trucks such as this new SUT from GS Racing with your Savage or Monster GT.

Who cares, right? If you went to one of the bigger nitro races with your Savage, and got lapped by one of these buggy-based trucks, you'd understand why I care.

Do I feel that monster truck racing is going to explode? No. However, it's becoming more popular as a "for fun" alternative to the usual classes. As such, we need to create such definitions as I've already outlined—especially if our goal is to keep racing enjoyable for everyone.

Over the past year, we have been pontificating on this very subject. Most of the response we've received in regards to monster-truck classification has been positive. The sanctioning bodies haven't as of yet published formal rules for the monster truck classes*, although NORRCA recently held its Off Road Gas Nationals, at which was included the first-ever monster truck national championship classes. What did NORRCA do? It broke the monster trucks into categories strictly based on engine displacement.

The problem with this thinking is that it fails to take into consideration the fact that almost all new monster trucks have big-block engines. Lumping together a HPI Savage and a converted 1/8-scale Kyosho MP-7.5 hardly seems fair, but if you showed up with the Savage (or an Associated Monster GT), you'd have to race against the truggies. Oh, and by the way: all top ten finishers in the big-block monster truck class were, give the man a Kewpie doll, converted buggies. Skinny won the B-main with our Savage SS. In my mind, he's the real monster truck national champ!

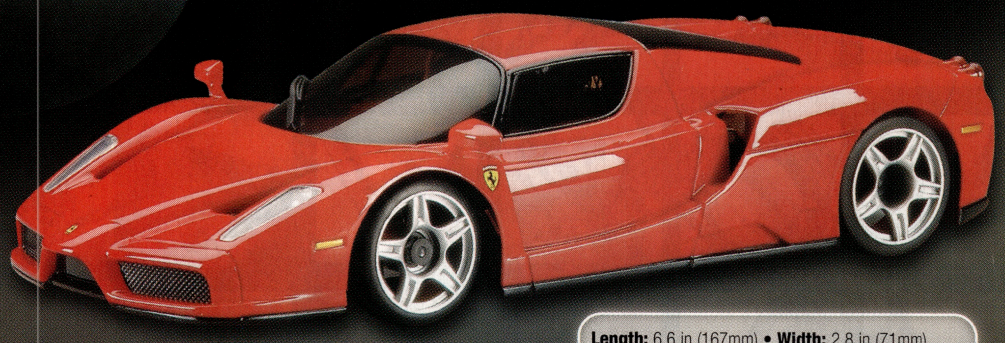
Now is the time for a clear separation of true monster trucks and burgeoning truggy class. Such a clarification is made even more urgent now that several manufacturers are poised to release production truggies. GS Racing's SUT (Storm Ultimate Truck) should by now be on the hobby stores' shelves, and OFNA will soon follow suit with its own out-of-the-box truggy (see our sneak peek at this truck on page 36). Let's think less about engine size and more about overall design. Keep all "real" monster trucks together in stock and modified classes, and put all the truggies in the class that's best suited for them—the unlimited class.

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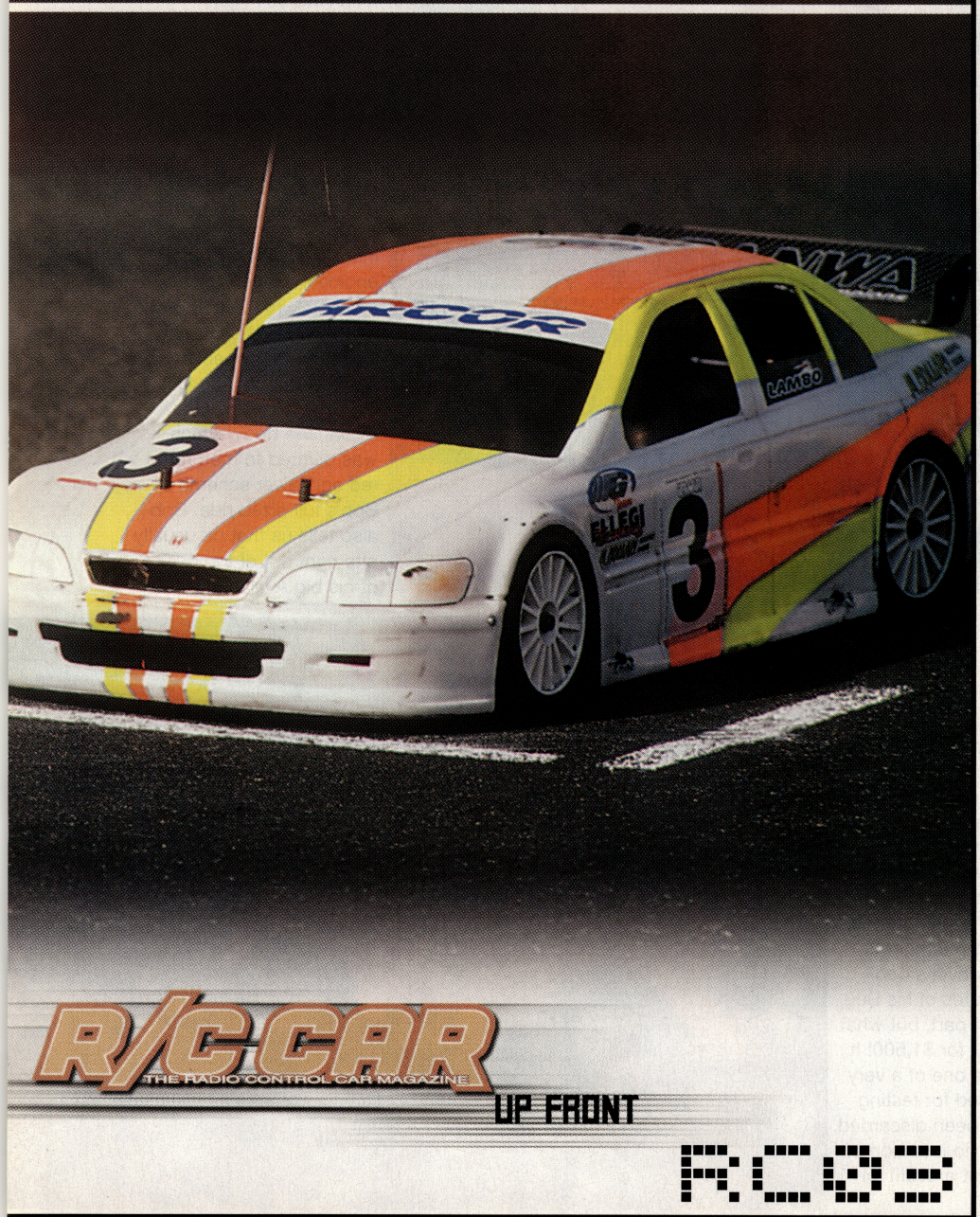
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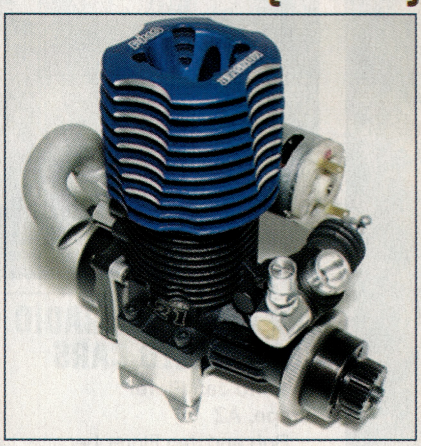
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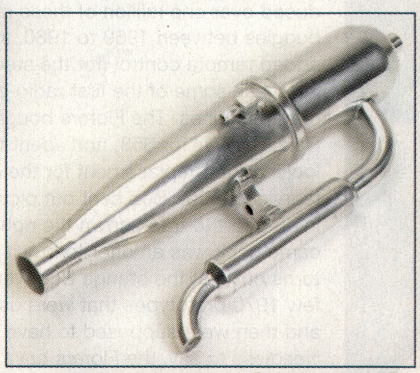




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R/C CAR
THE RADIO CONTROL CAR MAGAZINE
UP FRONT
RC03

[Readers' Projects]

Welcome to *R/C Car's* Readers' Projects. We receive many impressive "home-built" reader projects each month, so we decided to showcase some of them in each issue. How about you? Got a lot of pride in your ride? Snap some pics and send 'em to us here at *R/C Car* Readers' Projects, 25233 Anza Drive, Valencia, CA 91355. Hi-res digital images can also be emailed to brians@hi-torque.com. Who knows, maybe you'll see your car or truck in an upcoming issue! And if we use yours, you'll receive a free one-year subscription!





LOOK OUT FOR THE AVALANCHE

Bob Radice
Union, NJ

Bob loves his full-sized Chevy Avalanche. Know how we can tell? He modeled his HPI Savage to be a near-perfect replica. Bob's Savage is mostly stock, but he has bumped-up the horsepower by installing a Team Orion .26 engine in place of the stock .21. He also added a set of Hot Bodies jumbo-sized chrome wheels and tires. Of course, the finishing touch is a Pro-Line Avalanche body, which was painted to match the red and silver scheme of Bob's full-sized ride. Bob also tells us that he usually pits right out of the back of his big Avalanche.

THE FATHER OF RADIO CONTROLLED CARS

Bob and Jan Florer
Tempe, AZ

Bob and Jan Florer became interested in vintage Cox dune buggies because they resembled their full-sized Meyers Manx buggy. Cox produced over one million of these nitro-powered buggies between 1969 to 1980. In 1978, Cox added remote control (for the steering only), making these some of the first radio-controlled off-road machines. The Florers bought their orange Baja Bug VW for $58, and spent three months looking for a replacement for the driver's door rearview mirror. Bob sent out pictures of his Bug in an effort to track down the right part, but what came back was an offer to buy it - for $1,500! It turns out that the orange Bug was one of a very few 1970 prototypes that were used for testing and then were supposed to have been discarded. Needless to say, the Florers have no intention of parting with this rare find (and what a deal!) following its complete restoration.







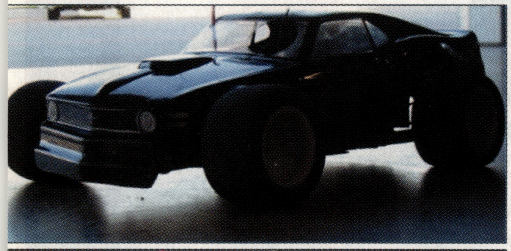
BAJA BUGGIN'

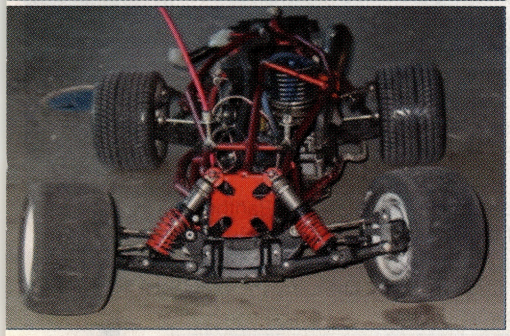
Todd Daly
Clackamas, OR

We receive many interesting submissions but this one from Todd Daly really shows some inspiration. Beneath the Baja Bug shell rests what used to be a HPI RS4 Pro on-road sedan. Todd converted the roadgoing missile by using Associated RC10 shocks and the wheels and tires from one of Tamiya's old Ford F-150 desert trucks. The body is from an HPI RS4 MT, and Todd fashioned his own custom belly pan to keep the crud away from the car's belt-driven 4WD system. Todd controls his Bug with a Futaba radio, Novak receiver and a LRP V7 speedo.









LONG LIVE THE NIGHT-RIDER!

Moe Rose
The Wasteland

The Ford Falcons used for the movies "Mad Max" and "Road Warrior" were Australian models never sold here in the US. Of course, there were never any 1/10-scale R/C bodies of the Falcon, but this didn't stop Moe Rose from creating his own Interceptor using a Parma Mustang Fastback body (painted matte black, of course). Moe's warrior is underpinned by a Traxxas Nitro Rustler chassis, which has been fitted with a custom roll cage and chassis, a 22-tooth clutch bell, 64-tooth spur gear and a MIP 360 rear stinger exhaust system. Moe also lowered the Rustler's suspension for better performance, and the shock towers are built into the roll cage.

DEADLY X-FACTOR AND SICK SAVAGE

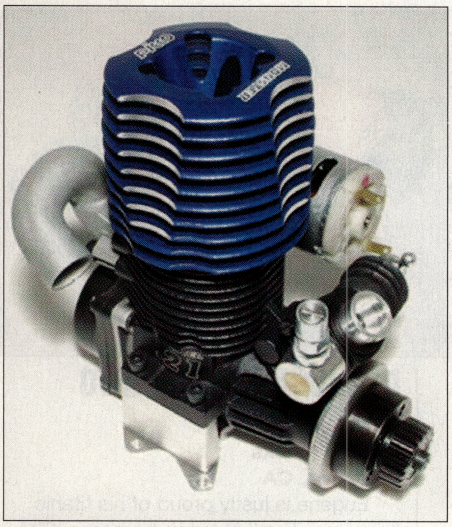
Eugene Meaks
Petaluma, CA

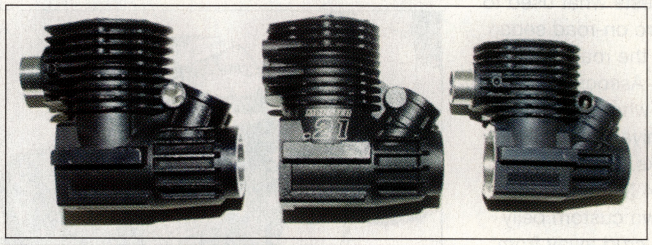
Eugene is justly proud of his titanic twosome. The first is his awesome XTM X-Factor, which has been fitted with a Grave Digger body from Parma. Although mostly left stock, Eugene's X-Factor is fitted with Pro-Line Jumbo Maxx tires for better grip on pavement and when crawling over those big boulders. For even more climbing power, he also installed XTM's posi-traction diffs. Eugene's HPI Savage is even more impressive. The first thing he added was an OFNA/Picco .26 engine. Next, he installed a set of titanium driveshafts from GPM Racing. He also added posi-traction for the rear diff, threaded shocks a full roll cage, high-torque Futaba servos, a wheelie bar, Pro-Line wheels and tires and a 2001 Dodge Ram body.

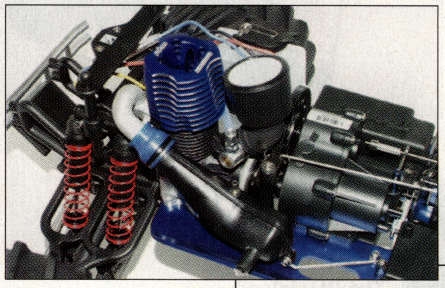
I'LL HAVE A ZOMBIE, PLEASE

We saw Gil "Pops" Losi a few weeks ago at the Off-Road World Championships, and asked him, at the awards dinner, why Team Losi hadn't yet plunged into the every-expanding monster-truck tire market. After all, Pro-Line has been very successful in adapting several of its existing tread patterns to fit the monster-scale format, so why not Losi, which has quite a few unique tire designs at its disposal? "We just don't have the time," replied Pops. Once again, the amiable Italian had steered us off course with frightening ease ("We'll never make a RTR," echoed in our collective heads). No sooner had we returned from the Worlds than we received a press release announcing Losi's new Zombie-Max monster truck tire! The Zombie-Max is an all-purpose MT tire that will work on asphalt, grass, dirt or any combination of the three. As they're molded from Losi's exclusive soft Red rubber blend, the traction, even on harder-packed dirt, will be tremendous, especially given the tire's contoured carcass design. The Zombie-Max tire will fit most popular monster truck wheels, and comes with a special pre-cut self-dampening foam insert. Retail price for the Zombie-Max has been set at $29.99 per pair. Contact Team Losi at (909) 390-9595 for more information.









THE WORLD'S FIRST "MEDIUM BLOCK" .21 FOR T-MAXX

With the release of the all-new P2 3.5cc, Italian engine powerhouse Picco seems poised to revolutionize the idea of the big-block monster truck. The P2 3.5cc is the first .21 engine designed as a direct bolt-in replacement for the stock T-Maxx engine. That's right; the P2 3.5cc will bolt right up to your T-Maxx's chassis, and it uses the stock flywheel/clutch setup as well as—and this is the best part—the Traxxas EZ-Start on-board electric starting system. How did they manage to do this? Picco designed the P2 3.5cc around an all-new "medium sized" block, so although it's slightly larger than the small-block .15 that comes in the T-Maxx, it's also smaller than the standard .21 engine, which uses a big-block design. There's no word on price as of yet however, you can stay on top of the latest developments from Picco by contacting Paris Racing (Picco's U.S. distributor) at (909) 465-1189 and by logging onto *www.teampicco.com*.

CAN'T YOU SEE THE REAL ME?

Panther Tires has a new "high performance" tire that is so new we can't show them to you just yet, but we caught Panther's factory racer—Bobby Moore testing them at the Texas Open Nitro race. What we can tell you, though, is that they are for competition use, and the tire is not your run of the mill design. The over-all look of the tire is different from your typical MT tire and from the looks of Bobby's truck during practice these tires may be the next thing you need for your monster truck.

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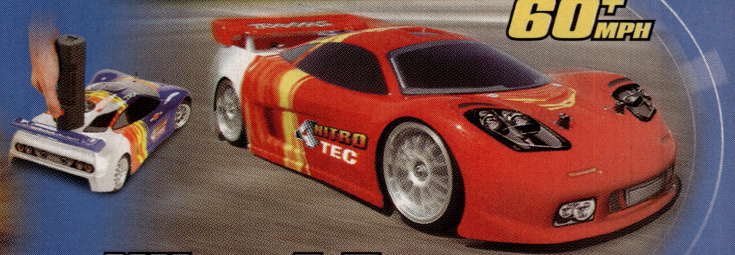
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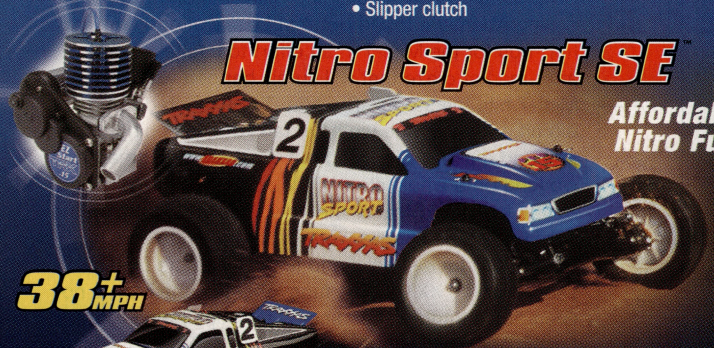
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- 3 belt, 4-wheel drive system
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Nitro Sport SE™

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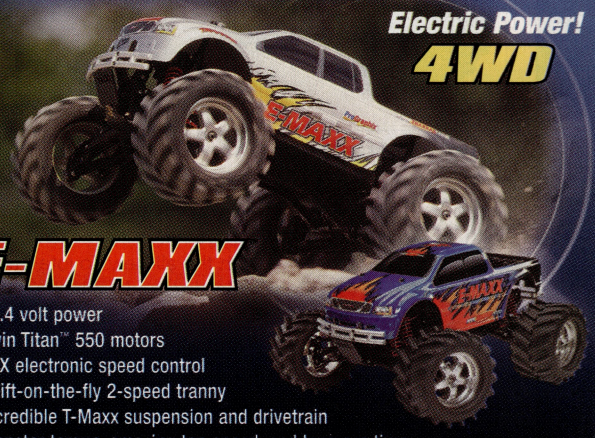


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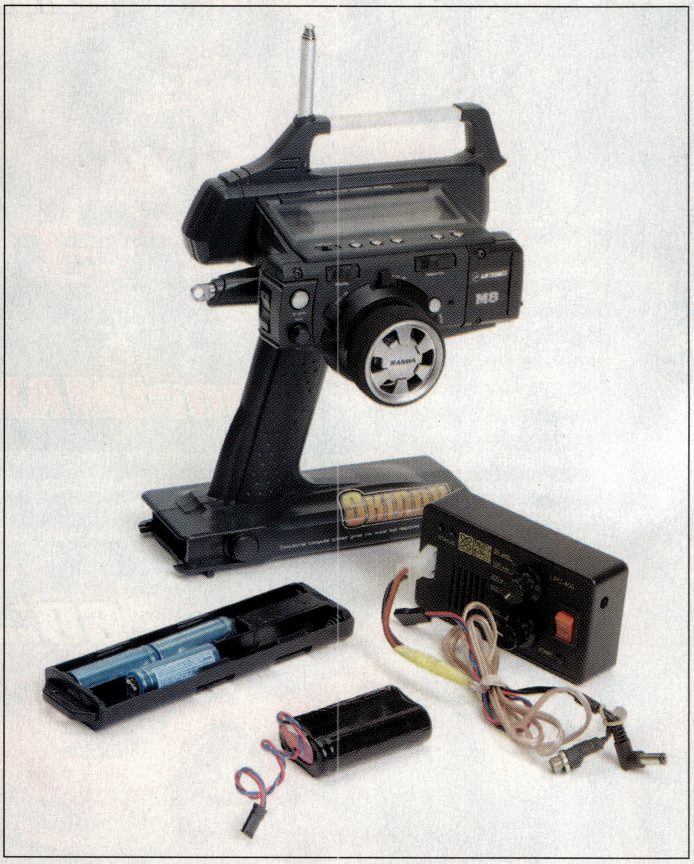


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- Incredible T-Maxx suspension and drivetrain
- Monster torque, amazing top speed, and long run time

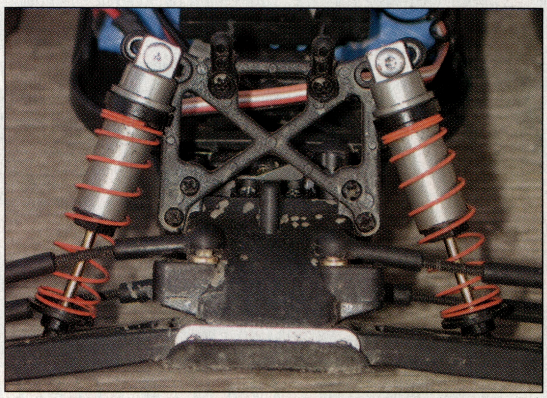
www.Traxxas.com

Traxxas 1100 Klein Road, Plano, TX 75074. Phone: 972-265-8000, 1-888-TRAXXAS. © Copyright Traxxas 2003. Specifications subject to change. Ready-To-Race® is a registered trademark of Traxxas. († RC Nitro Magazine test, June 2003)



HAVE YOU TAKEN YOUR LITHIUM LATELY?

Last year we did an article on Lithium batteries from a company called E-batteries. They have been supplying the top pro racers in the country with lightweight and long lasting Lithium Batteries and have brought them to the retail level for all us regular Joes to help make us faster. Well, we got a call from them the other day, and due to some quirk of fate they needed to re-file their name. Their new name is HT Batteries and their new website is *www.htbtteries.com*. The phone number is the same, (818) 266-8360, so if you want less weight and more power you can reach them with this new information. The owner of HT Batteries, Eric Beier, is a heck of a guy and will get you hooked up to the power you need. Call him today! Please make a note of it.



BEATING THEM TO THE PUNCH

In what seems to be a bold move to capitalize on their Mini-T, Team Losi is already making after-market hop-ups for the little wonder. Recently at a practice session at Hot Rod Hobbies, we spotted Adam Drake playing with his Mini-T and lo-and-behold, his little Mini had these sweet aluminum shocks on it! After grilling Adam we found out that Losi is already making hop-ups for the Mini-T in an effort to capitalize on the after-market craze that will surely happen when the Mini-T hits the stores. The Mini-T is expected to be a big hit and everyone we have talked to is itching to get one and make it all tricked out. Losi is being smart and working on a whole slew of trick parts for the Mini and by the looks and feel of the new shock, they are on the right track. The shocks were head and shoulders above the stock shocks and felt just like the Losi shocks of the XXX-T. The funny thing is, the Mini is not even out yet and we are seeing hop-ups being made for the Mini...you got to love that!



LAND CRUISING

The retro craze is in full swing when it comes to replacement bodies for today's hottest monster trucks. Pro-Line started the phenomenon with its Dodge Power Wagon body for the T-Maxx, but now they have really topped themselves with the all-new Toyota Land Cruiser body. Designed to fit the T-Maxx, Savage and, with a bit of effort, any monster truck (such as the Associated Monster GT), the Land Cruiser is a faithful reproduction of the original Toyota "Jeep" vehicle that was designed in the '50s as transportation for U.S. troops stationed in Japan. For added durability, Pro-Line's version is made from super-thick .060-inch lexan, and comes with such molded-in details as diamond-plate rear corner panels and running boards, handles, latches and grille work. You'll also get a set of pre-cut window masks, paint overspray film, decals, spoiler and extended rear body posts. All this for $32. Check your dealer or phone (909) 849-9781 for more information.

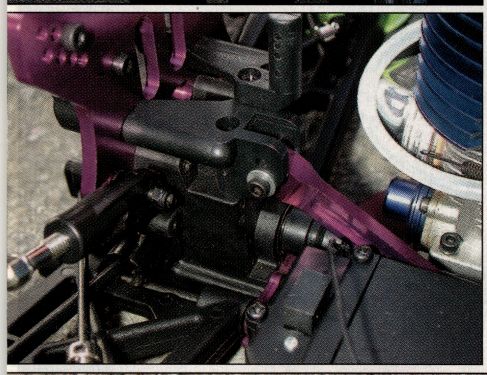


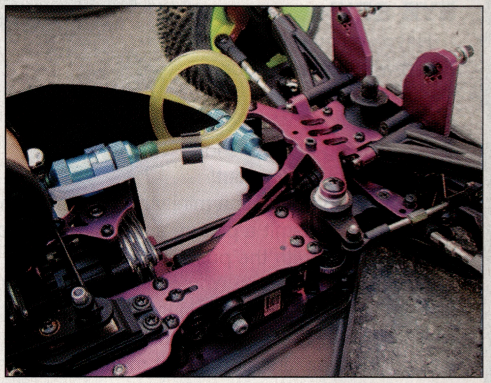
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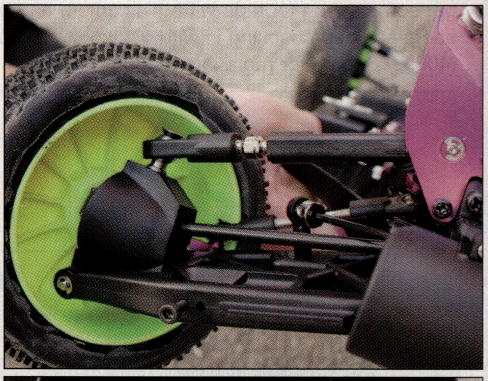
Last month we did a test on the six-wheel drive Fanatic Maxx by "Gallimods," well we goofed on the spelling of the name, and thus the email address. The correct spelling is Gallimods and the website is *www.gallimods.com*. Sorry about that, and please make a note of it.

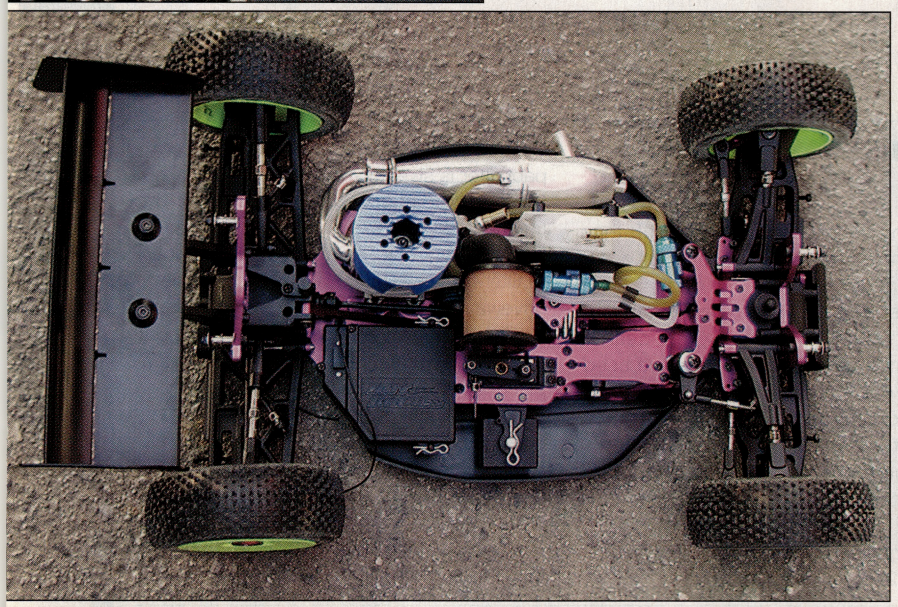
HOT BODIES GOES NUTS

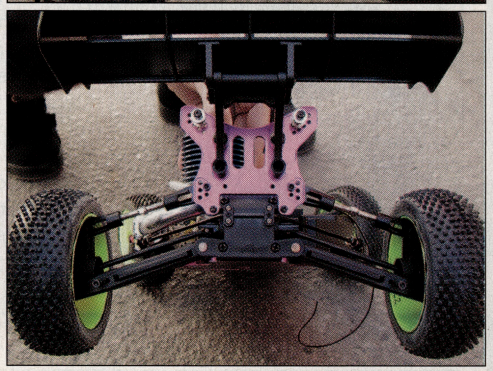
Apparently Hot Bodies is getting into the racing game in a big way. While we were at Hot Rods practicing for the up-coming NORRCA Nats, we ran into Travis Amezcua carrying a very purple-looking 1/8 scale. Curious, we asked "Peanut" what he had under his arm and he went into a story about how just a short 48 hours earlier Hot Bodies had contacted him about running their new Pro race kit—the "Lightning II Pro." He went on to tell us that the buggy we were looking at is the only working sample in the U.S. and he was at Hot Rods getting it set up for the NORRCA Nats—he was also doing a little R&D for Hot Bodies to suggest any last-minute changes to the buggy before it goes into production in January. Peanut is a major R/C honcho with heavy experience in electric cars and nitro GT racing; he is also one of the few fully sponsored Associated racers for electric and 1/10 scale racing. In 2003 Travis raced 1/8 scale a few times and has done pretty well. This caught the eye of Hot Bodies and now the two are working together for the 2004 race season to put the Lightning II Pro on the map. Hot Bodies is Planning on Peanut to race the '04 year with the Lightning II Pro, and they will be attending most of the major 1/8 scale events including the IFMAR 1/8 scale World Championships. Travis feels good about the buggy and plans to be putting it into the A-main at an event near you! Travis was also nice enough to let us get some shots of this one-off buggy so we could share it with you, so with out further ado, here is the Hot Bodies Lightning II Pro.











NEWS FROM MEDIAL PRO

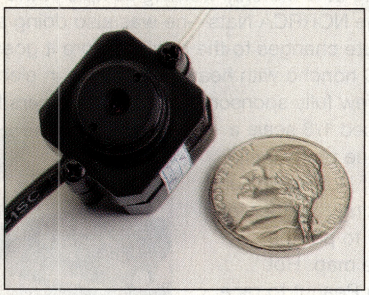
Eighth-scalers, rejoice! Medial Pro has just come out with a new 1/8 scale tire called the Vega. They are named after Daniel Vega, one of Europe's fastest 1/8 scale drivers and the person who help to develop the tire. He also TQ'ed the European 1/8 scale Championships with the tire he helped develop, and we recently got to try them out at the 2003 NORRCA Nationals.

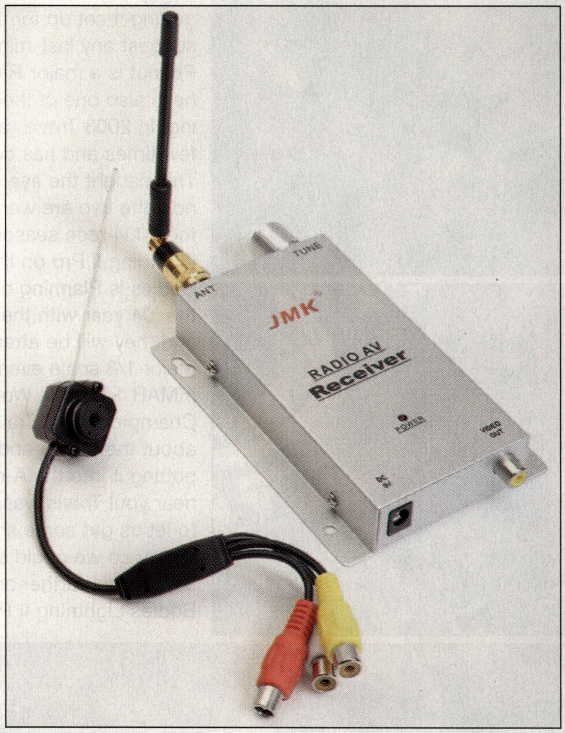
We can say that these new tires will be the hot ticket for your 1/8 scale, and our testing shows incredible traction on a wide variety of surface conditions. One of the best things about the Vega tire is that it has extremely low wear, and can cut down on your tire changing. We were able to race to major races with one set of tires and still have great tire performance for both events. The Vega tire is a directional tread with a closed pattern lug design that is extremely versatile and is available in two rubber compounds—Soft and Firm. You can buy them pre-mounted or just the tires with foam.

Pre-mounted tires will run you around $26.99 a pair and the tires with the foam is $18.99. We found these tires to be a great bargain and highly recommend them for your buggy needs.

Call General Silicones at (626) 445-5036, or visit them on the web, *www.generalsilliconcs.com.*

EYE SPY!





Have you ever wondered what it would look like if you were inside your R/C car driving? Well, Power Racing has just the device for you to find out! Power Racing now has a mini video camera that will fit into your car and will transmit a picture and sound all in one! Actually, the mind wonders with the possibilities of uses you could put this to, but that's another story. You can use this for R/C cars, trains, planes, and boats, so you have plenty to do with this cool camera as it is. The best thing about this camera is the price; it retails for around $100 dollars, and also it mounts up in minutes. We hope to get some action footage with this camera and put it on our website soon, so keep checking in with us! *www.happytimehobbies.com* or (408) 988-1188 for more information.



GOT FILTERS?

Power Racing cares about you and your R/C car, and wants your car to last. That's why they have come out with theses two new filter systems for your car at a great price!

The first one is this inexpensive two-stage air filter. This guy is a great deal for the price of five bucks; we have used these on our 1/8 scale and on our monster trucks and they work excellent. One thing that is cool with the filter is that it has a mount post on the outer part of the filter that really helps to hold the filter in place. This air filter is made for big block engines, so it will not fit anything under a .21.

The second filter is a fuel filter. This compact filter is sweetly made and comes in two colors as of now-gunmetal and red. The unique thing with this filter is that it is one of the few filters that has a brass stone inside to filter the fuel—much like your car in the driveway uses. It also is a mid sized filter so it will work on any size car or engine without affecting performance and it's easy to find a place to mount the filter on smaller cars.

As with most of Power Racing's products, its price is user-friendly too; you can pick one up at your local hobby shop for around ten dollars and it is a great deal for twice the price!

www.happytimehobbies.com or (408) 988-1188 for more information.

THE .12 TR TURBO.

NOT JUST MORE POWER - MORE POWER YOU CAN USE.

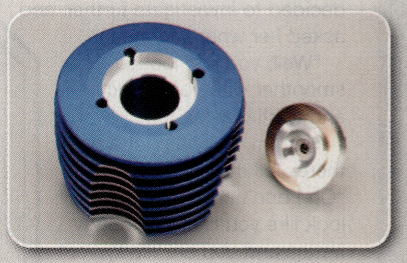


SPECIFICATIONS
Peak torque: 52.7 oz-in @ 21,000 rpm
Practical rpm range: 3,000-39,000
RPM @ peak horsepower: 31,800
Maximum power output: 1.3 bhp

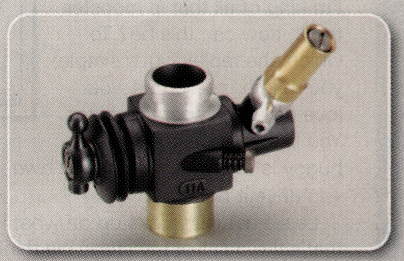
Nobody in Metropolis suspects a mild-mannered reporter can fly faster than a speeding bullet. No one at the next open-class race will think your O.S. .12 TR Turbo is anything more than a typical .12.
Little do *they* know!

The word from *Radio Control Nitro* magazine is this: The .12 TR Turbo puts down power with more driveable smoothness than most other outlaw engines — "and there's a lot of power to go around."

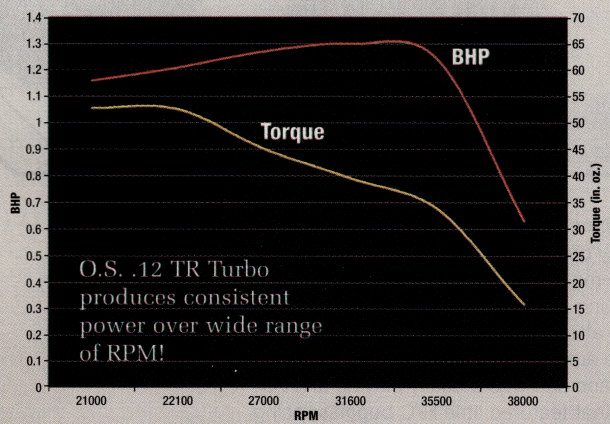
Two heads really are better than one. The Turbo head consists of an outer heat sink head plus an inner button head designed for turbo-style glow plugs, like the included O.S. T-7. The combination eliminates "hot spots" during combustion to increase horsepower.



A 5-port, chrome-plated brass sleeve further sharpens the .12 TR Turbo's performance edge. In fact, this is the first small block engine equipped with more than three transfer ports. And the breakthroughs don't stop there. The included, IFMAR-legal 11A slide-valve carburetor features three needles for extra-precise mixture and fuel flow control. It's O.S. Engines' first three-needle .12 carb.



.12 TR TURBO DYNO TEST RESULTS



= .12 TR Turbo BHP
Peak bhp reaches 1.30 @ 31,800 rpm

= .12 TR Turbo Torque
Peak torque reaches 52.7 oz-in @ 21,000 rpm

Radio Control Nitro magazine's dyno test revealed a flatter horsepower curve for the .12 TRT than any other engine they've tested. That means it produces consistently strong power over a wide rpm range — for more predictable driving, and faster lap times!

The engine block is that of the standard O.S. TR engine, and except for the black finish there's nothing to distinguish it as a "Turbo." So the appearance might be, well, a little deceiving to your competition.

They'll notice a difference when you blow them away.

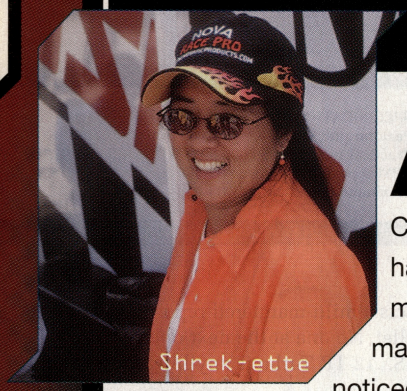
The O.S. .12 TR Turbo. Even with the mild-mannered exterior, this one looks like a winner. For more information, visit O.S. on the web at **www.osengines.com**.

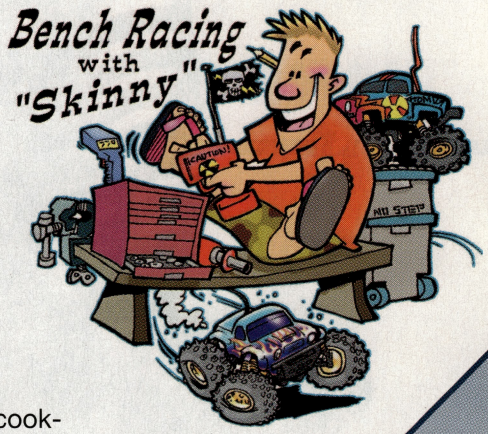
For a free brochure and the location of the dealer nearest you, please call 1-800-682-8948 and mention code number 2956G.

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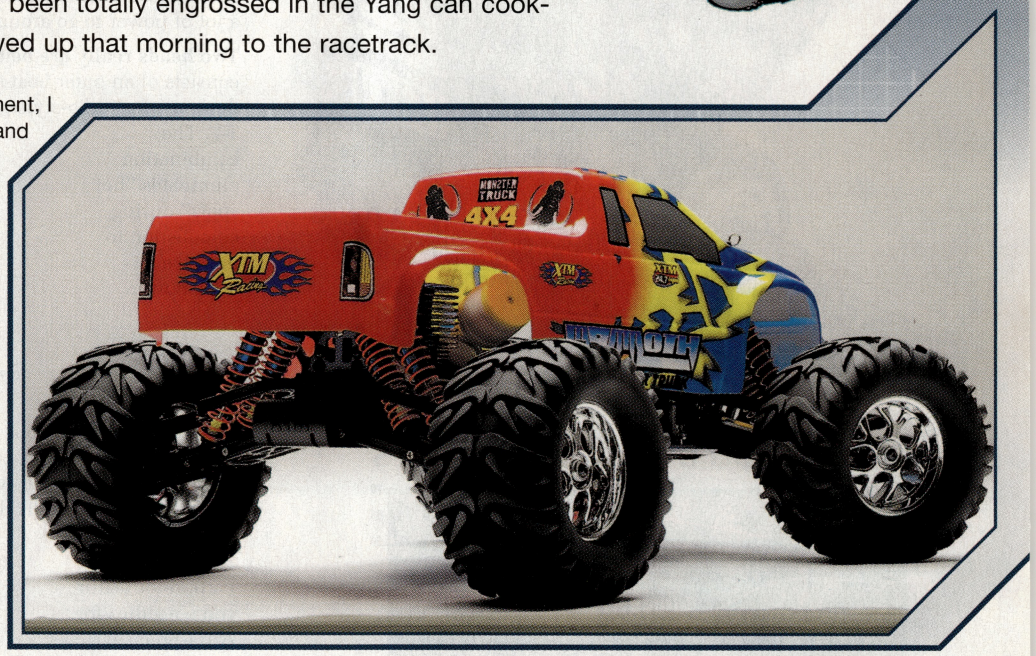
www.osengines.com

[Bench Racing]





As I walked to my pit table following my last laps of practice, Leslie looked up from her "Yan Can Cook" book and said plainly that I had looked much better with my buggy than my monster truck. "What?" was my reply, mainly because I was shocked that she had noticed a difference in my driving, and two, that she even had seen me driving. You see, Leslie has this new cookbook and she loves to cook (as you probably can tell by my sculpted body!). She had been totally engrossed in the Yang can cookbook ever since we showed up that morning to the racetrack.



Curious about Leslie's comment, I decided to investigate further, and asked her what she meant.

"Well, you just looked smoother with your buggy, and a little faster, too."

Hmmm, she has got a point there. Tell me more, Leslie. "Oh I don't know, you just look like you like your buggy better, and you are always out in the garage working on your 1/8 scale; I think you like your 1/8-scale more, that's all."

I like my buggy more? Are you crazy? Honey, you know I'm king of all that is monster truck, how can this be? To which she replied, "It's simple; you're into motocross, you love downhill mountain bikes. You like to go fast. Your buggy is the fastest thing you own, so that's why you drive it better."

Leslie actually picks up on what I like to do, and that's the point of my story. We think that our spouses and "significant others" couldn't be bothered with our hobby, when in fact, they're watching us (sometimes, anyway). I think they just don't want us to know. Perhaps they think that they might in some way encourage us to spend more (like we needed permission).

What really made me think about this was that on the same day one of the guys was out racing and his wife was sitting next to me. She seemed not to really care about the whole race thing and spent the day doing other stuff, but as she sat there next to me during the race I was watching, she was playing around with her cell phone, not really paying attention to the race. Finally, after seeing her fiddle around with the phone for so long, I looked over and she was actually playing an R/C video game that featured little R/C buggies racing around a track! So you see, they do care; they just don't want us to know. It's just one of those things in life that make you go hmmm?

By the way, Leslie is wrong. I don't know which I like better—MT or 1/8 scale.



BY BRIAN SKINNER
email:brians@hi-torque.com

BIG NEWS FOR BIG TRUCKS

History was made on November 24, 2003. In a bold move, NORRCA, the second largest R/C sanctioning body, included monster trucks as a national title event. This was the first ever "official" title for monster trucks, and there was a good turnout for the title dash. We will do a full story on the event next month, but here is a teaser for you.

NORRCA only included two classes for the MT title—stock monster truck (.18 engine and under) and unlimited monster truck (the "anything goes" class). They excluded a category for big-block monster trucks, or what we would call "modified class." Why? We do not know, but they have effectively created a class for the 1/8-scale "truggy" style trucks, and we wonder if this will kill off the big-block monster trucks for racing. We hope not, because if you look at the sales numbers, big-block, ladder style MTs, e.g., the Savage and the Monster GT, are some of the most popular trucks. We think they really should have included three classes.

• Unlimited monster truck—What really matters is that Factory GS pilot (and our monthly columnist) Marty Korn rocketed the all-new Storm SUT monster truck to an amazing three-lap lead over the rest of the field and placed the "truggy" in the first-ever national number-one spot. To top it off, Marty's truck was completely stock, and we're sure Marty will be getting a nice bonus for doing such an amazing feat and giving GS a great start for the new year..

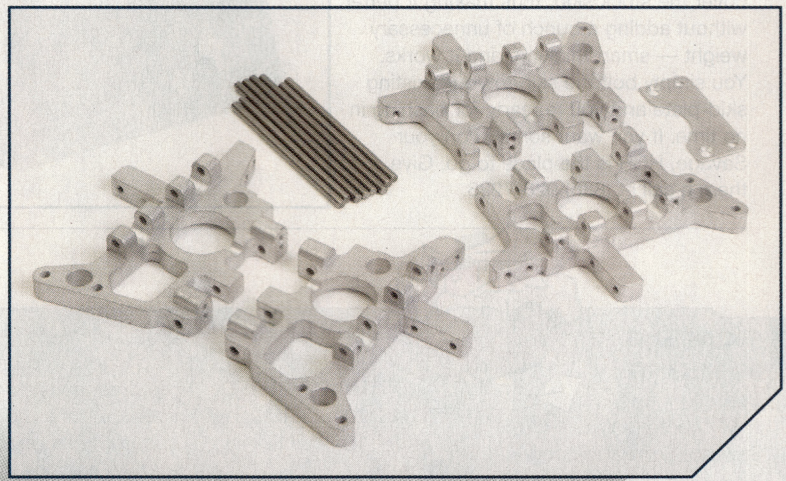
• Stock monster truck—In another surprise, Factory CEN Racing driver Andy Smolnik took a basically stock CEN Fun Factor to an impressive win to capture the stock class title. Andy was handy with the Fun Factor, and had several laps on the field by the end of the A-main. Congratulations to Andy and CEN for their great accomplishment.

I found it interesting that for this first ever MT National title that two completely "outer fringe" trucks would win the titles. It just goes to show you how diverse monster trucks have become, and that the racing aspect of MTs need to be cultivated more.

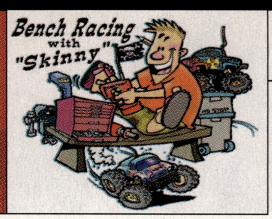
As for your pal Skinny, I had a pretty good weekend. I finished seventh overall in the MT stock class, racing a ProHobby T-Maxx, and finished first place B-main in the unlimited class racing the Savage SS we tested a few issues back. I like to look at it this way: I finished eleventh overall in Unlimited, but I was first place overall in a fictitious Modified monster truck class. I say this because all the A-main trucks were 1/8-scale buggies with big tires—not traditional monster trucks.

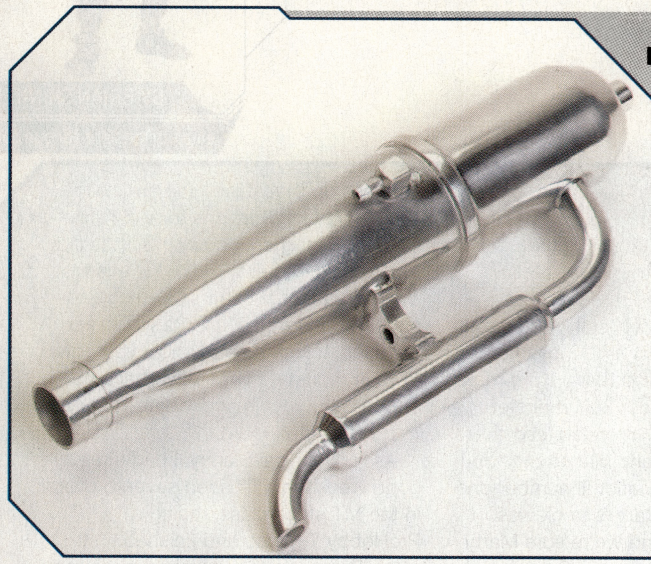
BENCH TEST: RC SOLUTIONS BULKHEADS

RC Solutions has come out with a new bulkhead to go along with their roll cage and chassis. The new bulkhead is designed to fit with their products as well as with the stock T-Maxx parts. It is a machined aluminum piece and it has two unique features that make it worth looking at. First and foremost, it has a hingepin plate that holds the two bulkheads and hingepins together. It is similar in design to the toe blocks on a 1/8-scale buggy. This makes it a little sturdier, and speeds up assembly. The other nice thing about the bulkheads is that the hingepins are secured with setscrews rather than C-clips. C-clips can fall off under a hard impact, but the setscrew is there to stay. This is a good idea and we have seen this on two other designs and we can say that it works well and stays together well. Call (480) 609-7233 for more information.



[Bench Racing]



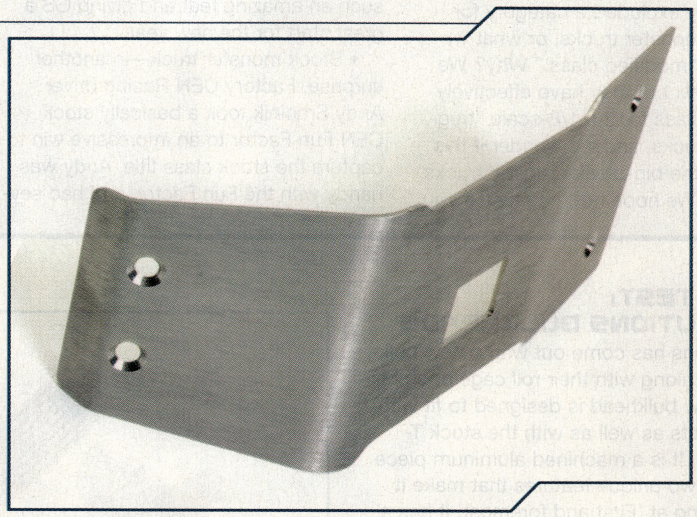


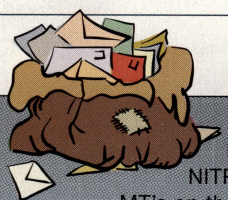
BENCH TEST: COSMETIC SAVAGE SURGERY

Power Racing decided we bashers need some loving, too. If you own a Savage and just have to have the most bling-bling parts for showing off, then you might want to consider the Cherry Bomb pipe. This baby fits on your Savage as normal, but after you put the body on, the stinger sticks out past the body and makes the truck look like it has glass-packs coming out the side. It really is for show, but it works well and does not seem to rob performance. The pipe is a polished aluminum. If you're a die-hard basher, you might need this pipe, and for $49.99, you can't go wrong. Call Nora at Power Racing [(408) 988-1188] and tell her Skinny sent you!

BENCH TEST: SKINS FOR YOUR SKID

Now here is a clever idea from Hardcore Racing. This is a titanium "skin" that bolts onto your Savage's plastic skid-plate. The stock Savage skid is big, and it is pretty strong as it is. To make a Ti skid would be great, but it would be very heavy. HCR decided to make a lightweight Ti skin to cover the stock skid, thus making it better without adding a bunch of unnecessary weight — smart thinking, and it works. You simply bolt the skin to your existing skid-plate and you're ready for bashing in no time. If you want some Ti on your Savage, HCR is the place to go. Give them a call at (888) 928-7223.





SKINNY'S MAILBAG

Dear "Skinny,"

My name is Wil Szwarc (Schwartz), and I have been a faithful subscriber to your excellent mag for about three years. I think that it would be really awesome if you guys could do a shootout with all of the RTR, 4WD, NITRO POWERED MT's on the market today, 1/8 and 1/10 scale!

Thanks.

Wil Szwarc

via *e-mail*

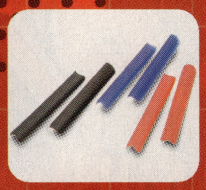
P.S.I love your column and your great big orange van!

Wil, thank you for the kind words and I love my big orange van too! I think your idea of a monster shootout is a good one and we are looking into getting all the trucks together to do a shoot-out like you asked. Question: do you think we should do it together or separate them into 1/8 and 1/10 scale? Personally the gap between the two has narrowed and putting them all together would be a fair shootout, but I want us to do these things for you guys. What do you all think...let me know on this.

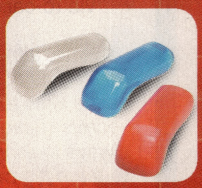
Skinny

GET AGGRESSIVE

Introducing Hitec's NEW Aggressor 2 Channel AM & 3 Channel FM Pistol Grip Radios



You want performance, need reliability and gotta have style, so check out Hitec's all new, affordable Aggressor Radios. Be the first to customize your new Aggressor with thin or thick Grip Pads in three different colors for big or little hands. Then choose Tuning Covers from 5 different styles and colors to customize your new radio and make it "your own."

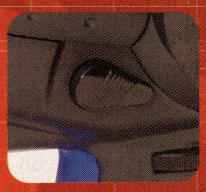




As always, Hitec loaded both radios with valuable features: dual rate steering, servo reversing, a built-in charging jack for optional rechargeable Nicads, and a rock solid signal for reliable control.

Need to be more aggressive?

The Aggressor 3 Channel FM features a push button third channel that can be used for shifting! For easy set up and maximum performance, we've also added throttle and steering end point adjustments (EPA's).



 # 125271 Aggressor 2 AM 27MHz w/two HS-311 servos and HAS-02MB receiver
 # 125751 Aggressor 2 AM 75MHz w/two HS-311 servos and HAS-02MB receiver
 # 125752 Aggressor 2 AM 75MHz w/one HS-311 servo, HAS-02MB receiver and Hitec's EZX-R Reversible Electronic Speed Control
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[FEEDBACK]

E-mail your letters direct to the editors! You can get ahold of Frank Masi at *frankm@hi-torque.com.* If you're going the old-fashioned route, send along your letters to *R/C Car* at 25233 Anza Dr., Valencia, CA 91355. Check us out on the Web at www.rc-car.com

BUDDING ARTIST

I just read Marty Korn's "Paint Shop" article in the January '04 issue, and thought his airbrush tips where great. I am a beginning airbrush artist and was wondering if Marty offers any airbrush classes. I live just down the hill from Valencia, and would like to set up a class if possible. I have always wanted to learn how to airbrush R/C car bodies, and I might actually be good at it, but I just can't seem to get the mixtures and the air pressures right to where the paint comes out evenly and smoothly. Plus, tips on designs—especially flame designs—would also be great. Thank you.

Nate Yeigh
Via rc-car.com

Nate, although Marty doesn't as of yet teach classes (he likes to keep some secrets to himself), he is always looking for someone to fetch his coffee and clean his airbrushes—an apprentice, as it were; like Anakin and Obi-Wan. We'll pass your email on to Mr. Korn, and who knows: maybe he'll get in touch.

IN SEARCH OF ESC INSTRUCTIONS

I have a new speed controller, and I don't know how to put it together. I think it is a Novak.

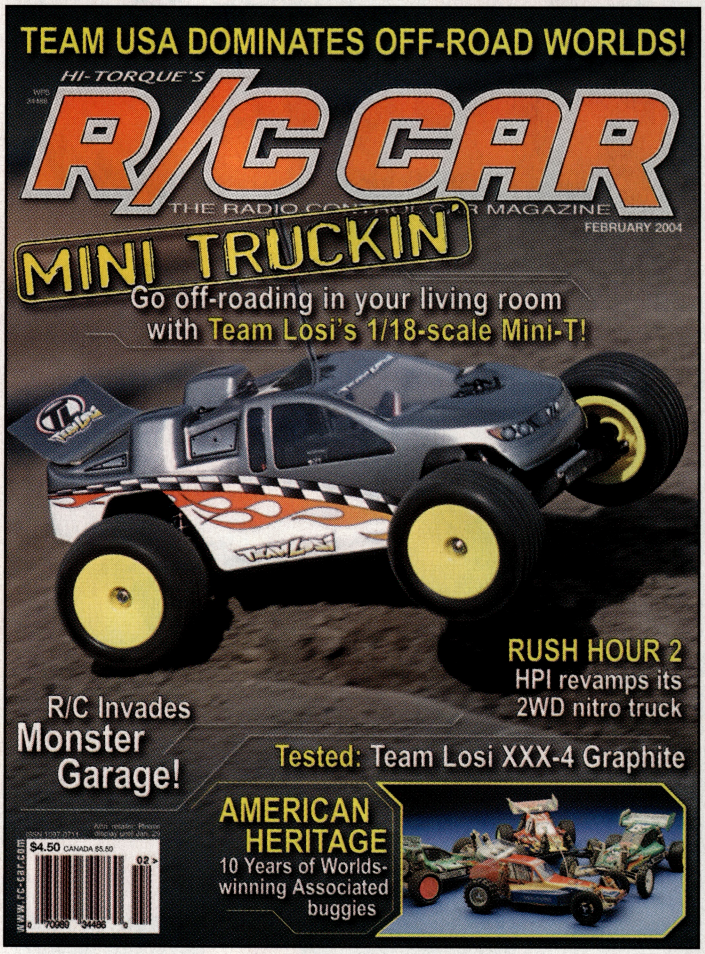
William Robar
Via rc-car.com

William, if it's orange, it's a Novak, and Novak always includes excellent setup instructions for their ESCs. If your ESC didn't come in its factory packaging, with instructions, you can contact Novak by emailing tech@teamnovak.com. You can also visit Novak's website at www.teamnovak.com, which has on it downloadable instruction manuals for virtually every one of their products (even some older models). You'll need Adobe Acrobat Reader to view the files once you downloaded them.

ANGRY DAVE

My name is Dave and I usually enjoy your magazine, however, for the past several months now there has been an inordinate amount of attention given to off-road and monster truck type vehicles. I am an on-road racer who likes F1 cars and touring cars, and I'm getting sick of all this attention given to the "play in the dirt" group, who never seem to have grown out of the Tonka-trucks-in-the-sandbox phase of their lives. I know I seem insulting, but for months now there has been either a monster truck or some sort of buggy on every cover, and very few articles on on-road cars. I hope this trend doesn't continue. The new Corally Assassin has been out for a few months now, so how about an article about it? Or a project Tamiya F201 with all the 3racing/Eagle hop-up parts installed—and a detailed article on how to set this car up for pavement or carpet racing. These are just a couple of examples of articles I would like to see sooner rather than later. I believe the off-road set has been given more than their fair share of attention lately; now how about us on-road "real" racers? Asphalt's for racing, dirt is for potatoes.

Dave
Via rc-car.com



Dave, we're sorry that you are feeling neglected. We simply review what is sent to us, and when we get the time, we try to track down all of the new products that are out there. However, we can't help it if the majority of products that cross our threshold are off-road vehicles or parts for off-road vehicles. If you've read the magazine for a while (which, we're assuming you have in order to make such an observation relating to content), you must realize that the breakdown of new kit reviews equals about 50-percent off-road and 50-percent on-road. Also, we have given the F201 plenty of exposure; we have reviewed the Ferrari, "Carbon" and Williams kits, plus we've done a project hop-up article as well as an in-depth profile of Nolan Farmer's nitro conversion kit. Here's an idea: instead of complaining about what you don't see, why not write and submit some articles about what you'd like to see?

SIMPLE QUESTION, SIMPLE ANSWER

I need to know how to test the receiver in my R/C car.

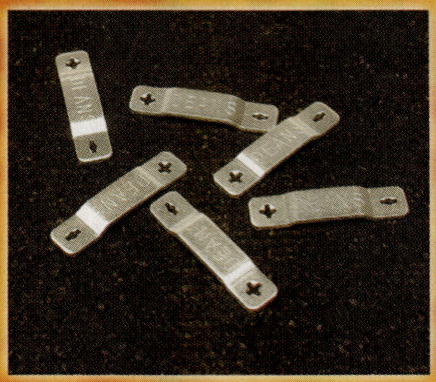
Taylor Addis
Via rc-car.com

Taylor, you can perform a simple range test by having a friend hold your car while you walk away while holding the transmitter. Ask your friend to tell you right away if he notices any glitching, i.e., unwanted movement of the servos or speed control. You should be able to walk a good distance, as most radios in good working condition should work well enough so that you will barely be able to see your car as more than a speck in the distance.

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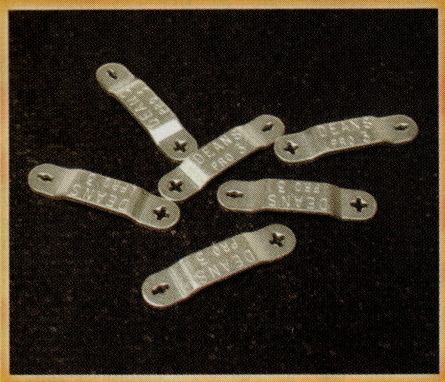
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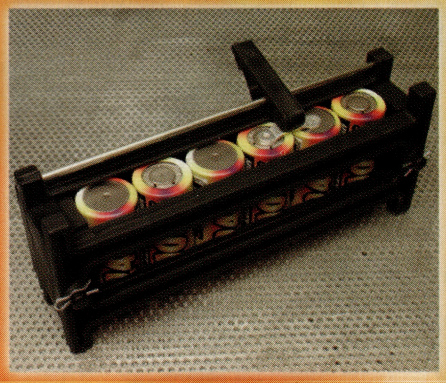
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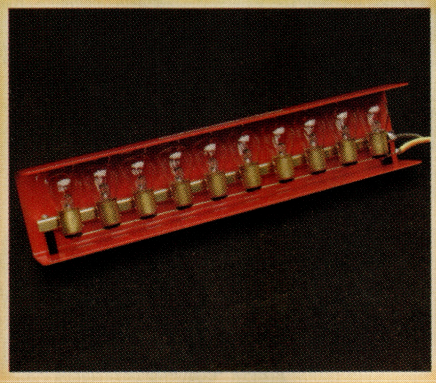
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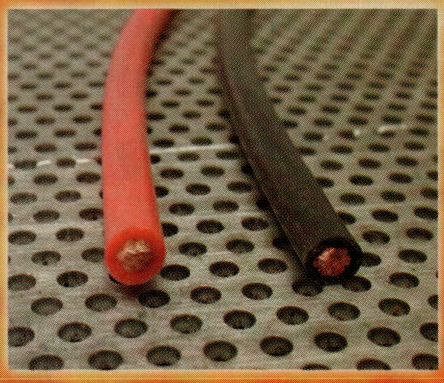
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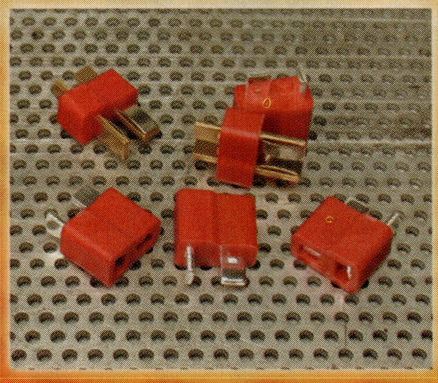
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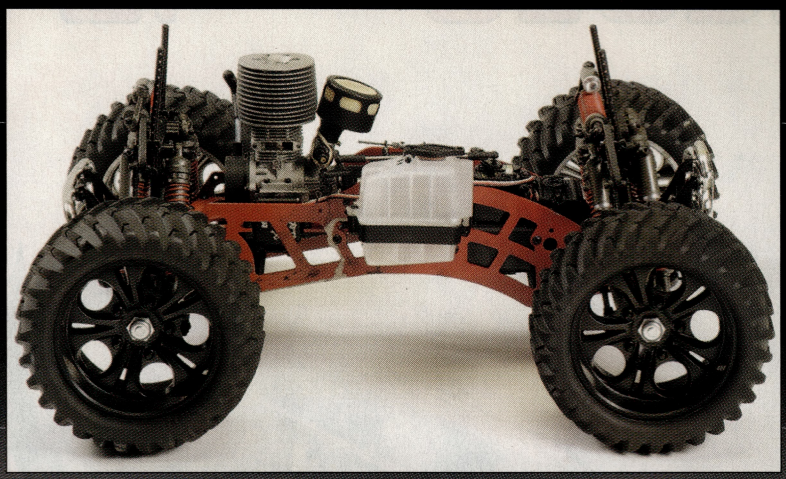
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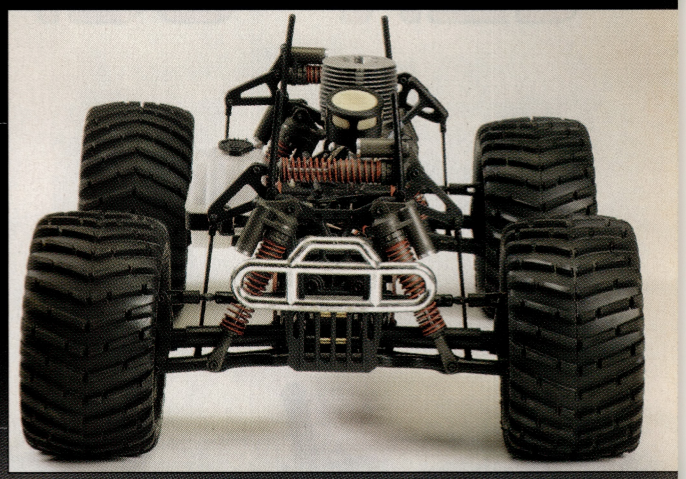
First Look: CEN Genesis .46

Putting the "monster" back in monster trucks

"Captain Kirk, Khan has the Genesis Project. He's threatening to upholster the Enterprise in Corinthian leather…" Oops, wrong story (with apologies to the producers of "Star Trek II: The Wrath of Khan"—best Star Trek movie ever). The real story here is CEN's own Genesis project, which is a monster truck, not a device to make planets inhabitable. It's easy to get the two stories mixed up; after all, the storylines are almost the same. In Star Trek, the Genesis Project breathed new life into a planet, whereas CEN's Genesis project is intended to breathe new life into the monster truck segment, and to boldly go where no monster truck has gone before.

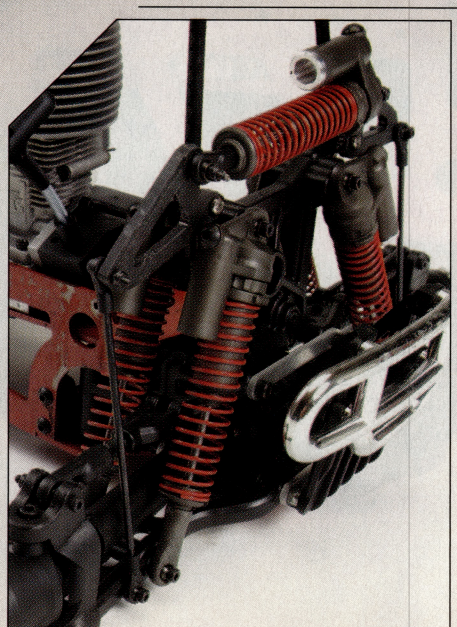


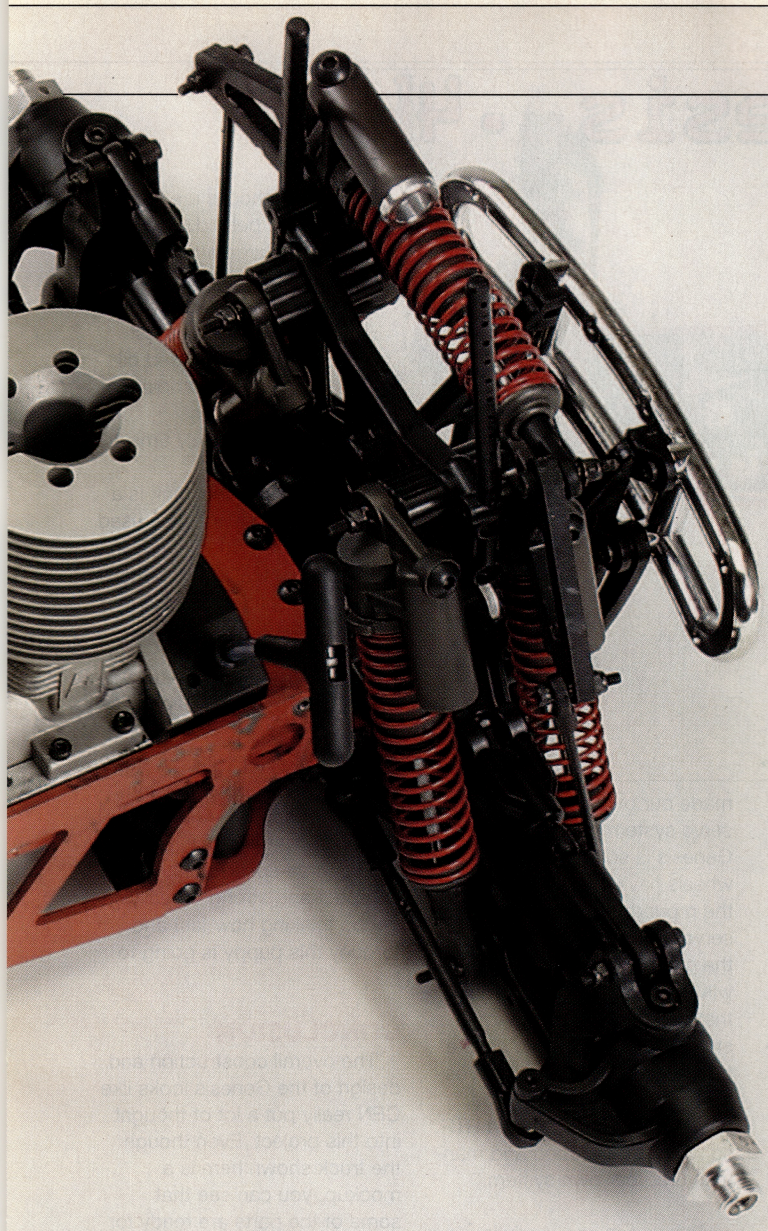


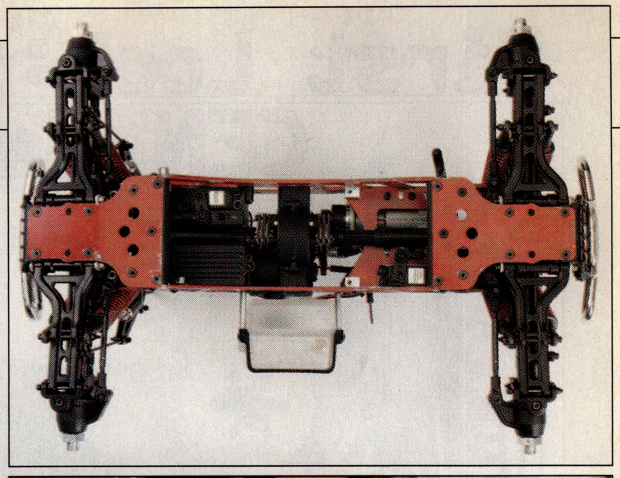


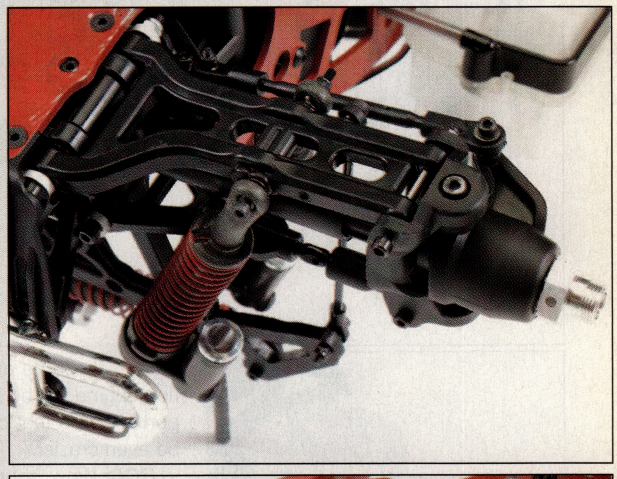


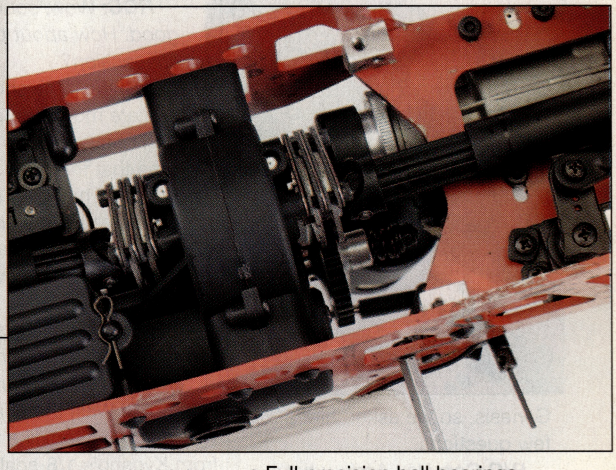
First Look:
CEN Genesis .46











Behold the Genesis .46, the biggest, baddest and probably the most awe-inspiring monster truck ever to be released. Of course, you (and we) will have to wait and see how this beast stacks up, because what you see before you is in reality a mockup—a cosmetic sample, if you will, of the production truck.

We saw Andy Smolnik (a major dude at CEN Racing) at a recent event. Knowing we would be there, and knowing how we like new stuff, Andy brought with him this mockup so we could get a real close look at it.

We had seen the Genesis before at a few trade shows, but it was in a glass case and it was hard to get a good "feel" for the truck. Now that it was sitting in our office, its sheer size was overpowering! Andy told us the Genesis is 1/8 scale, but if you asked us, it looks more like 1/7 scale—it's huge! Everything on this truck is large, and it almost has an "alien" look to it; there are a lot of innovations built into this truck that will surely make it a formidable foe of the current crop of monster trucks.

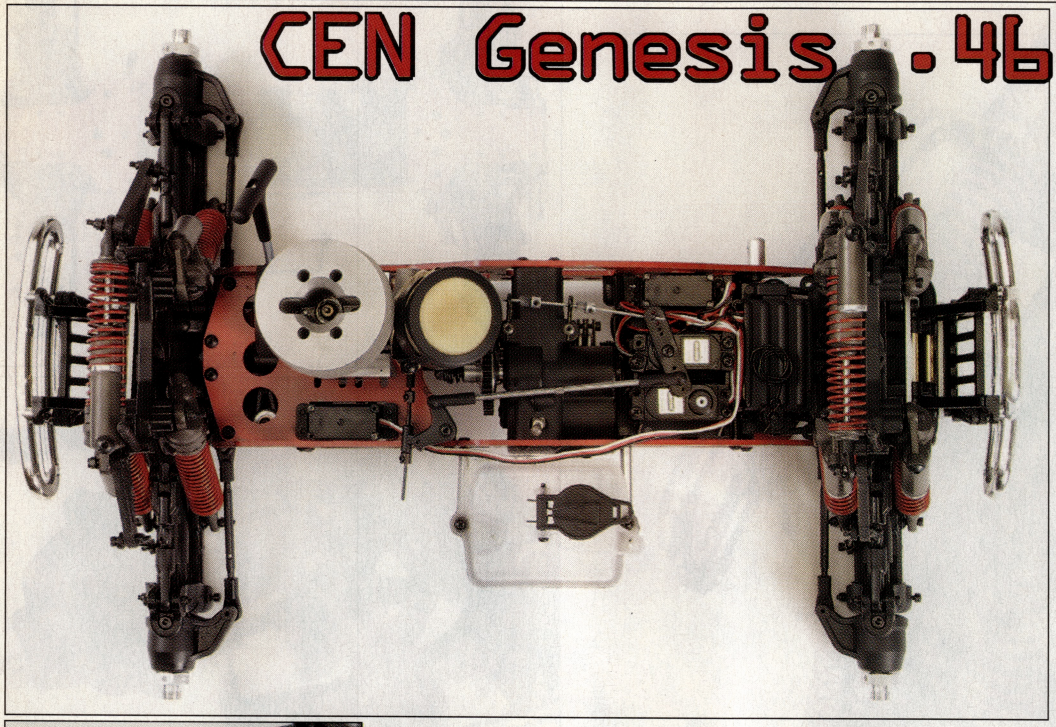
GENESIS FEATURES

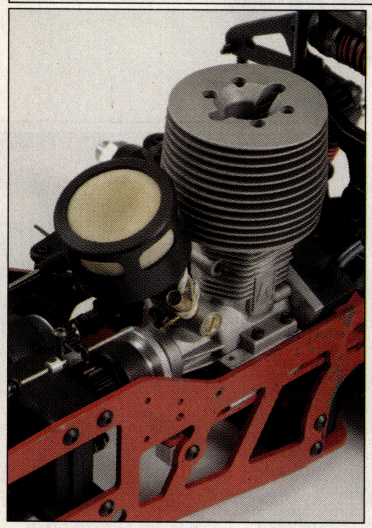
- Three-speed automatic transmission with adjustable shifting
- Four-wheel steering system (yup—that's right)
- Front and rear dual-disc brake system
- "Reverse engineered" .46 big block racing engine
- Racing tuned pipe with high-flow manifold
- Huge 7-1/2 inch wheels and tires
- Large 220cc fuel tank
- Reverse-engineered composite drivetrain
- Ultra "gliding" drivetrain
- Lightweight composite telescoping driveshafts (and center shafts)
- "Dimension X" (wasn't Gamera in that one?) ten coil-over shock system with functional piggyback oil reservoirs
- Sealed, oil filled, low CG front and rear differentials
- Convenient pull start with built-in shaft-start system
- Transmitter-controlled reverse
- Full precision ball bearings
- Adjustable toe-in/toe-out and camber (front and rear)
- High-impact chrome bumpers (front and rear)
- Protected radio box and battery case
- Adjustable turnbuckles
- Aerospace-grade chassis components

CONFUSED ANDY SPEAKS OUT

As you can see by the photos and its features, the new CEN Genesis is going to be interesting to go out and play with. We only know of one person who has driven the

First Look: CEN Genesis .46





Genesis, so we asked him a few questions.

R/C Car: *Hey Andy, what's up?*

Andy Smolnik: Not much.

RCC: *Good answer; so what's it like to drive?*

AS: Well, it's a total sample prototype, so we could not really work it over, but from what we did out in the back of the office, it was awesome. It is totally different driving a four-wheel-steering truck. It was really fun. I think, for the RTR person, this thing will be the ultimate monster truck. The three speed tranny was rad—it has great power with the .46 engine and it is fast. That's not even the correct engine in there, either. The production engine will be a rear port .46, and that one will be even crazier.

RCC: *Wow, sounds good. How about the new suspension?*

AS: Well, the shocks you see are mockups, and they don't have the same oil volume that the production ones will have. As it is, the mockups were working like we wanted. The production shocks will work even better.

RCC: *What are some of the things we can't see from outside the prototype?*

AS: Well, the diffs are way cool; they are like the diffs from Kyosho's 1/8-scale MP-7.5 Kanai Edition buggy. They work great and are way smooth. These diffs will also be used in our new 1/8-scale buggy. The tranny is also pretty cool. They really designed a bulletproof tranny to handle the load of the massive engine. The three speed is also interesting. It has two external gearsets, with one additional set inside the gearbox. You can tune that one to shift at a point that will get as much speed as you want.

RCC: *What about the electronics?*

AS: Oh yeah! We have totally made our own heavy duty servo system. Since the Genesis is so big, and the wheels have a lot of rubber on the ground, we wanted tough servos, so we made them from the ground up. We think you will like them. Also, remember that this baby has four wheel steering. We needed to have a transmitter and enough servos to handle all this. We will be offering the Genesis as an RTR, so we just developed and manufactured our own system.

As you can see, Andy is excited about the new Genesis. After talking with Andy we went through the truck and did a visual on all the components; this is what we found interesting ourselves.

The driveshafts are huge and look beefy, but the most interesting feature on the driveshaft is the U joint. It is a completely new design, with a single pin connecting it all together. The driveshaft is mounted to a steel, ball-type output cup. The design looks like something that could be a new wave in driveshaft design.

The shocks are something to behold. The bodies are large and hold a lot of oil; they look to be a one-piece design, and the molding looks first rate. With the added oil reservoir, the damping could be the best around—but only time will tell.

A 220cc fuel tank is a nice touch; we have used custom-made 250cc aluminum fuel tanks in many of our project trucks, and the extra run time is a huge plus.

CEN has added a shock-absorber-style sway-bar system onto the Genesis. The system was intriguing to us and we are curious to see how it will work.

The three-speed tranny looks compact and strong. It really got us thinking how fast and torquey this puppy is going to be.

CONCLUSION

The overall construction and design of the Genesis looks like CEN really put a lot of thought into this project. Even though the truck shown here is a mockup, you can see that some of the parts are ready for production. If this is the case, the Genesis could well be a first-rate monster truck. The plastic parts look well made and well designed. The aluminum chassis parts looked a little pre-fab, and could change before we see the actual model. As it stands, the structure was very stiff, and if anything, they could lighten those aluminum pieces before production. Overall, the Genesis looks as if it will be a remarkable truck, and we can't wait to perform a full review on it in a couple of months.

SOURCES

CEN, distributed by Genka Trading Corp., 1800 E. Miraloma Ave., #F, Placentia, CA 92870 • (714) 792-1923; fax (714) 792-1968.

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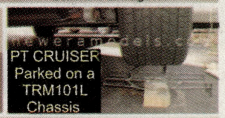
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TRM500RG	CLUTCH NUT FOR OS .21	$14.95
TRM501D	CLOSE HEADER FOR .21	$24.50
TRM502	UNIVERSAL FOR TRM107	$5.00
TRM503	RIPPLE PIPE FOR .21	$39.95
TRM505	BOLT ON HEADER ADAPTER FOR OS .21 RG (ANY HEADER)	$19.95
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TRM510	FUEL TANK .125CC FOR .21	$26.95
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TRE103	E-MAXX 3.2mm Alum. Chassis	$49.95
TRE107	E-MAXX Extended Main Chassis	$69.95

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HSV212	Lower Chassis & Skid Support (pr)	$17.90
HSV319SD	Super Duty Fr or Rr Body Mount	$24.50
HSV320-215D	Super Duty Fr or Rr Skid Cover 3.2mm	$19.50
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HSV333SD	Super Duty Lower Arms (pr)	$39.50
HSV334	Super Duty Center Skid	$19.95
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HSV337	Steer Knuckle Brace (4)	$19.95
HSV339	Aluminum Turnbuckles 5/16 Rod (4)	$24.95
HSV340SD	Super Duty Bulkhead Brace Fr or Rr	$12.90
HSV343	Angled Wheelie Bar w/Rubber Tires	$29.95
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HSV403	C Shaped Hubs Fr or Rr (pr)	$35.90
HSV405	Steering Knuckes Fr or Rr (pr)	$39.95
HSV407	Super Duty Springs (8)	$19.95



AGT203	Bi-Level Chassis	$79.50
AGT206	Bi-Level for .21 Engine	$124.50
AGT101	Rear Brace	$21.95
AGT102	Front Brace Tubes	$7.95
AGT910	3 Point Roll Bar	$39.50
AGT250	125cc Fuel Tank	$10.95
AGT302	High Volume Header	$24.95
AGT333	Frt Arms Aluminum	$34.50
AGT334	Rr Arms Aluminum	$34.50
AGT430	Frt Shock Tower Alum	$19.50
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AGT345SD	Servo Receiver Guard CNC Billet for RTR and TEAM	$16.95



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TEC101L	Steel Tube Upper Chassis	$169.95
TEC110	.21 Conversion	$125.90
TEC241	Big Tube Header	$23.95
TEC330-31	Super Duty Bulkhead (pr)	$85.00
TEC332-33	Aluminum A-Arms (8)	$99.50
TEC339	Alum Turnbuckles	$24.95
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TRS333	Rear Control Arms	pr. $34.00
TRS402	Rear Arm Mounts	pr. $23.50
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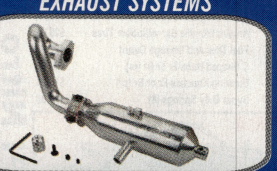
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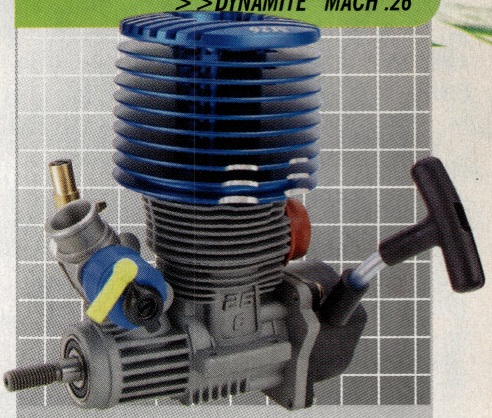


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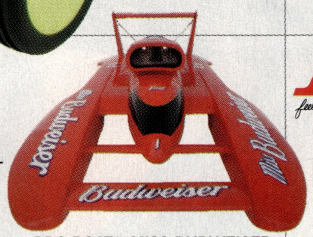
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D.	DYN6628	In-Line Exhaust System, Polished: TMX 2.5	59.99	49.99
	DYN2812	5 Pc Std Nut Driver Assortment		14.99
	DYN4007	Pit Peak 4-5 Cell Receiver Peak Charger	24.99	19.99
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	DYN6629	In-Line Exhaust System, Hard-Anodized: TMX 2.5	69.99	62.99
	DYN6630	In-Line Exhaust System, Blue: TMX 2.5	49.99	44.99
	DYN6631	In-Line Exhaust System, Red: TMX 2.5	49.99	44.99
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JRP3340Y	R-1 Pro FM, TX & RX Only, 75MHz	499.99	349.99
JRP3360Y	R-1 Pro PCM, TX & RX Only, 75MHz	549.99	389.99
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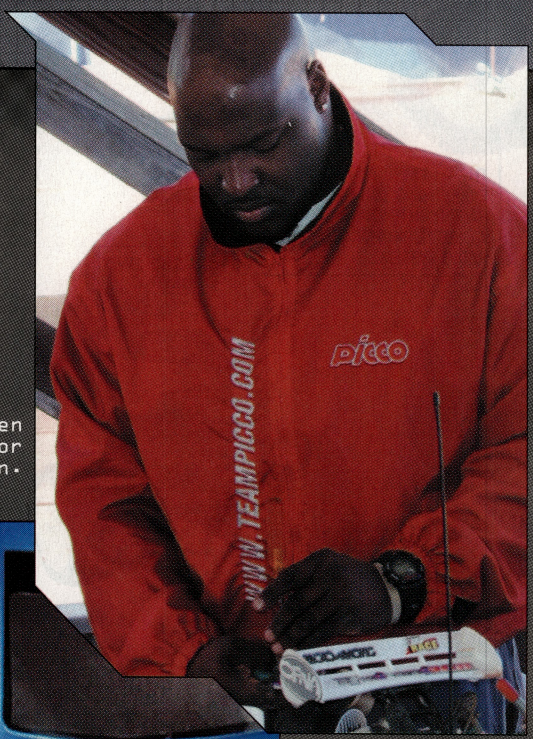
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First Look: OFNA Hyper GP4 &

Super-spy Skinny reveals two new racers

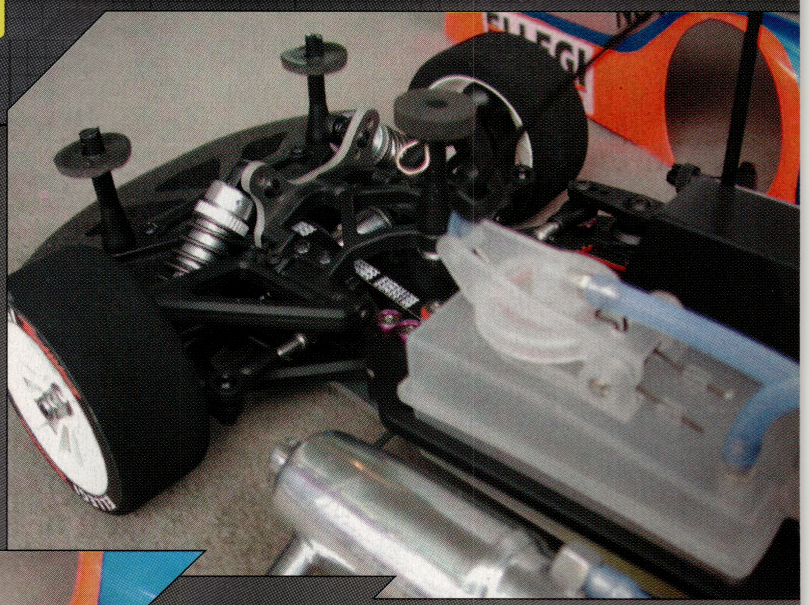
While attending a nitro off-road race in Florida recently (the Maxy's Fuels Challenge), our own Brian Skinner was able to photograph a pair of all-new vehicles from OFNA. Paul Coleman, OFNA's in-house nitro racing expert, was competing with the new Hyper RT (Race Truck), and also had in his possession a production prototype of an all-new, belt-driven 1/10-scale nitro touring car, named the Hyper GP4.



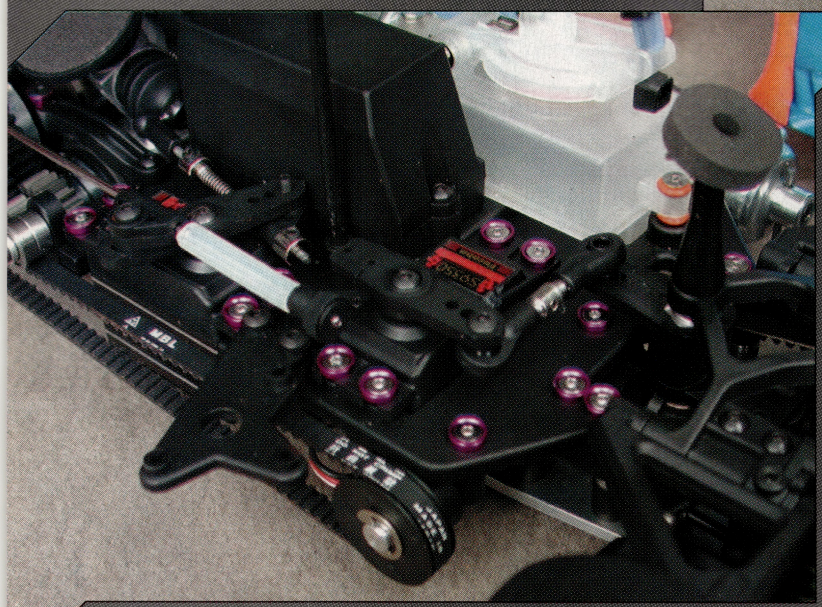
OFNA's Paul Coleman has been busy testing new products for this year's racing season.



Hyper RT



Nothing but good: The GP4 looks as if it's loaded for bear, with its fully adjustable double-wishbone suspension and beefy components.



HYPER GP4

It appears as if OFNA is looking to cover all bases in the nitro sedan wars, having both a competition-level shaft-driven car, the LD3, as well as a belt-drive car—this new Hyper GP4. The GP4 will be offered in two flavors: a RTR model, which will come with radio and OFNA Hyper 21 engine pre-installed, and a Pro model that will leave the choices of engine and radio equipment up to the racer. Rumor has it that this model will likely come with carbon fiber and carbon-composite parts. According to sources, the RTR will be the first model offered, and will be released some time around April of this year, with the Pro model to follow.

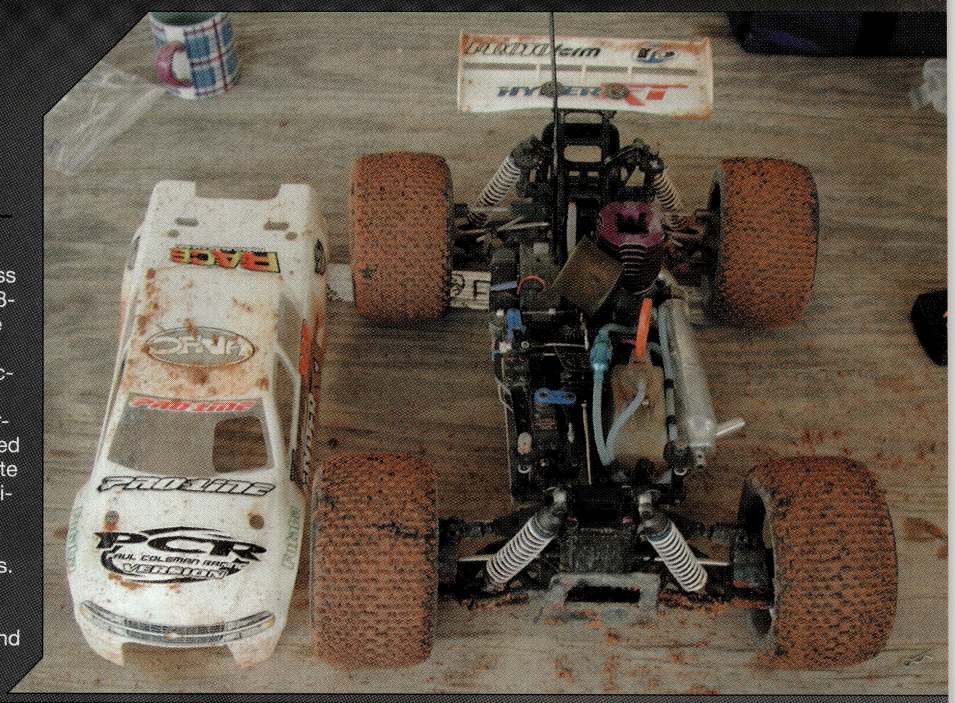
The Hyper GP4 has a unique top deck. The steering servo operates a single steering bellcrank with this innovative linkage setup.



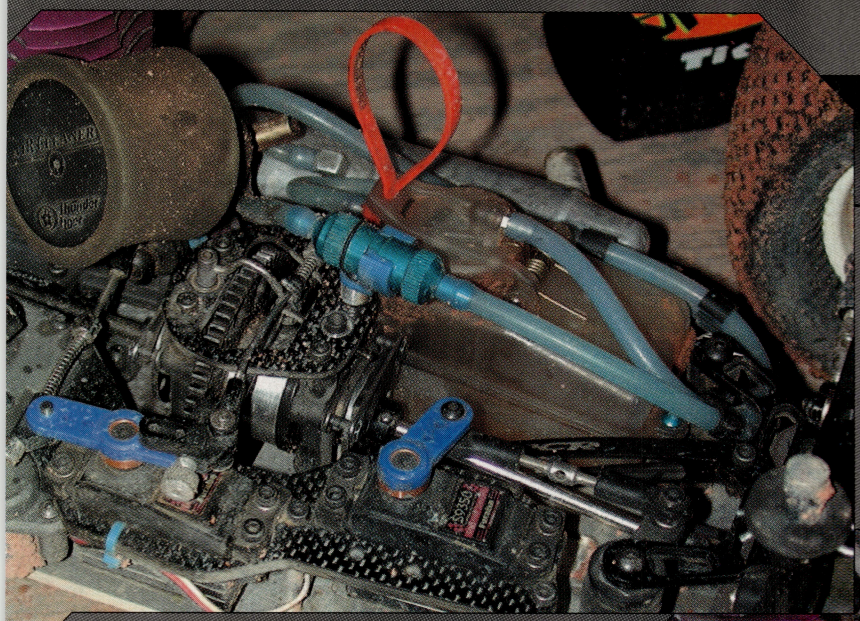
First Look:
OFNA Hyper GP4 & Hyper RT

HYPER RT

The Hyper RT (Race Truck) is OFNA's entry into the burgeoning "unlimited" class of truck racing. Based on the Hyper 7 1/8-scale buggy, the Hyper RT appears to be more than just a buggy with big tires. According to Paul Coleman, who was racing this prototype at the Maxy's Fuels Challenge, the production truck will incorporate several changes specifically tailored to improve performance. Of particular note will be a longer chassis as well as a modified center diff unit which will accommodate a larger, steel spur gear for use with the bigger monster-truck wheels and tires. According to Paul, the Hyper RT will be released by the end of the year, however very few specific details, such as price and specs, have yet been finalized.

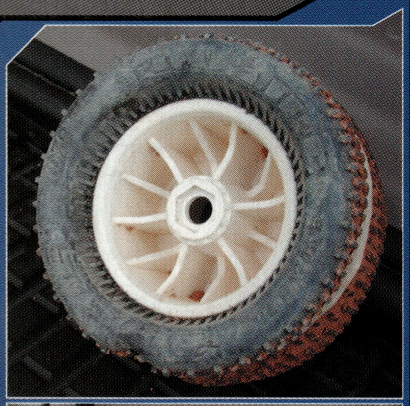




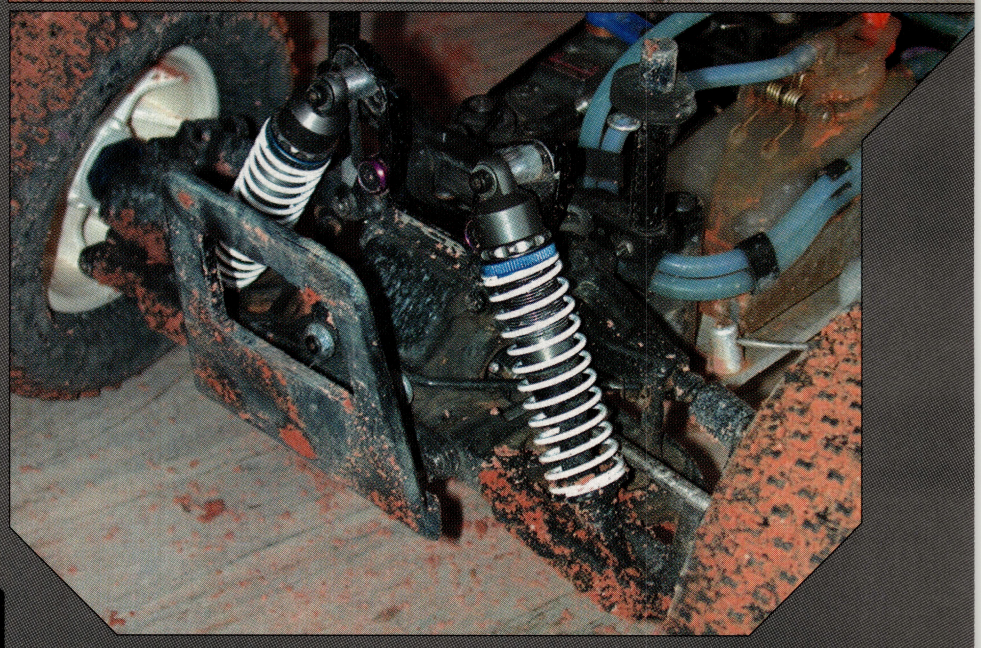


Left: A redesigned center diff area accommodates a larger spur gear, which is needed for the huge monster truck wheels and tires.







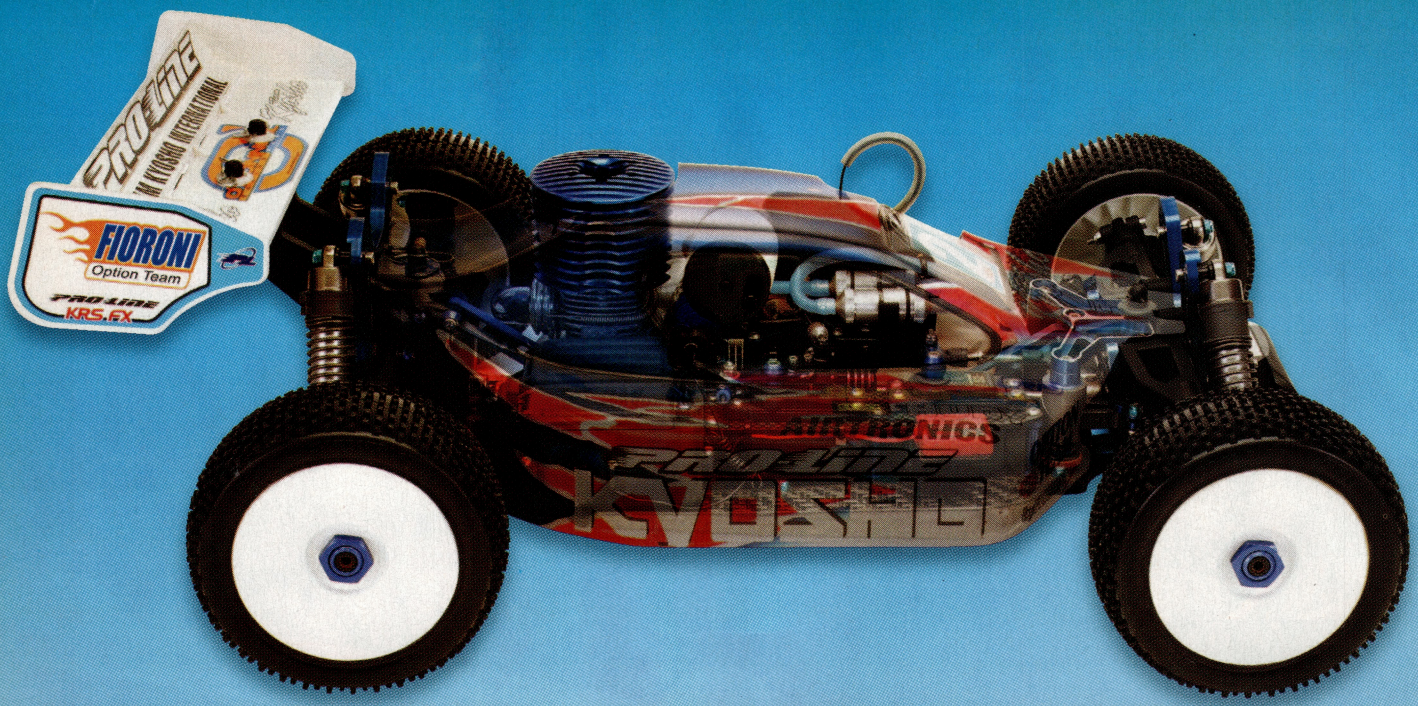


NEW OFNA MT WHEELS

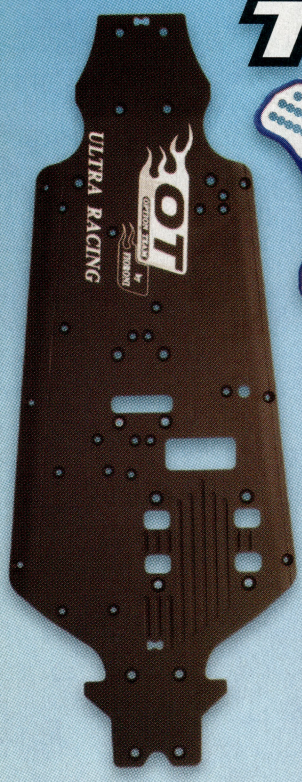
It will be a little while before you'll be able to buy your own Hyper GP4, and even a longer wait for the Hyper RT, however, OFNA's new monster truck wheels should be available by the time you read this article. Pictured here are prototype MT wheels that are designed to be super lightweight for racing. They will accommodate most popular MT tires, and will fit most popular monster truck chassis.

SOURCES

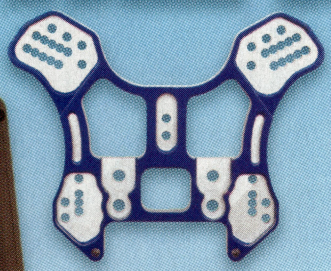
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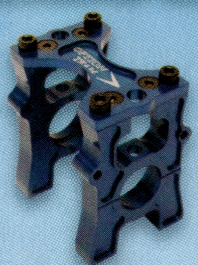
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OT-UR10 Hardened And Lightened 4mm Chassis



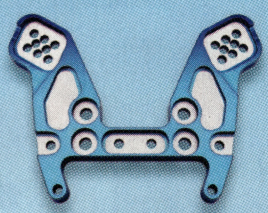
OT-UR02 6mm Lightened Rear Shock Tower



OT-IF105 Two Piece Center Diff Mount



OT-UR03 6mm Lightened Steering Upper Plate



OT-UR01 6mm Lightened Front Shock Tower



OT-UR06 Rear Arm Mount Set 1°, 2°, 3° of Anti Squat



OT-IFW112 Front Chassis Brace



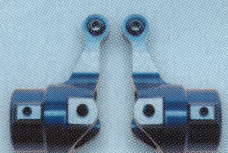
OT-IF118 Rear Chassis Brace



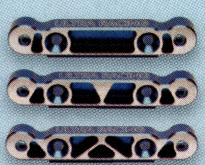
OT-ML05 Bumping Springs



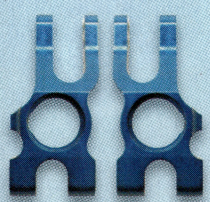
OT-UR08 Front Lower Suspension Plate



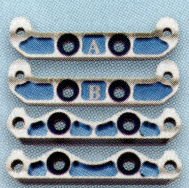
OT-IF06 Front Knuckles



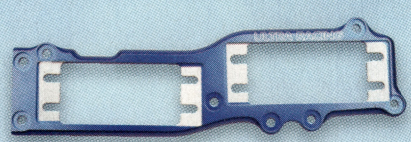
OT-UR04 Rear Toe-In Block Set 1°, 2°, 3° of Toe-In



OT-IF114 Rear Knuckles



OT-UR07 Front Upper And Lower Suspension Holder Set



OT-UR05 3mm Lightened Radio Tray

Mark Pavidis and Fioroni have been at the next level for some time now and they have the results to prove it. Just this year Mark has won the 2003 ROAR Nationals, the 2003 Silver State Nitro Challenge and he TQ'd the 2003 Kyosho Challenge with his Kyosho MP7.5 all tricked out with Fioroni's Ultra Racing and Option Team parts. Fioroni's Ultra Racing parts are made from precision CNC machined Ergal Aluminum for the highest quality fit and finish. Not only does Fioroni's Ultra Racing and Option Team parts make your buggy look cool but they will improve the performance and durability of any car dramatically. So check out all the cool Fioroni stuff at *www.generalsilicones.com* or get down to your local Fioroni dealer and get your car ready for the next level.



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IAS TOURING TIRES



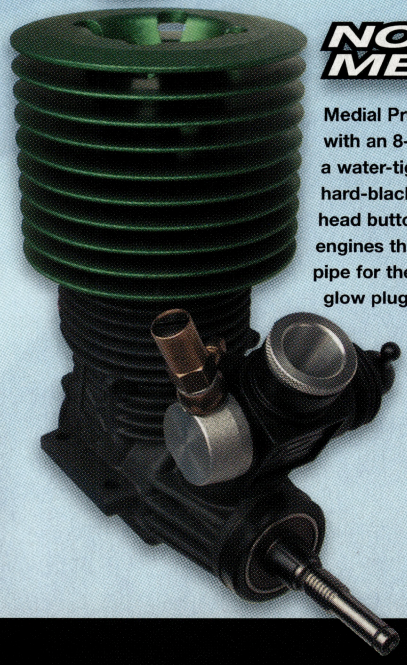
Medial Pro's IAS tire breaks new ground in tire technology as they feature one-piece built-in molded inserts. No more inserts to hassle or experiment with. The built-in insert provides consistent and smooth support for the tire contact patch to ride on. IAS tires are available in 25/soft, 35/intermediate, 45/medium, and 60/firm compounds for ultimate tuning on any surface. IAS tires are available un-mounted or pre-glued on Inch-Up BBS-style wheels. IAS tires are perfect for nitro or electric cars and are an excellent choice for a spec-class tire.



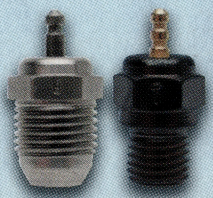


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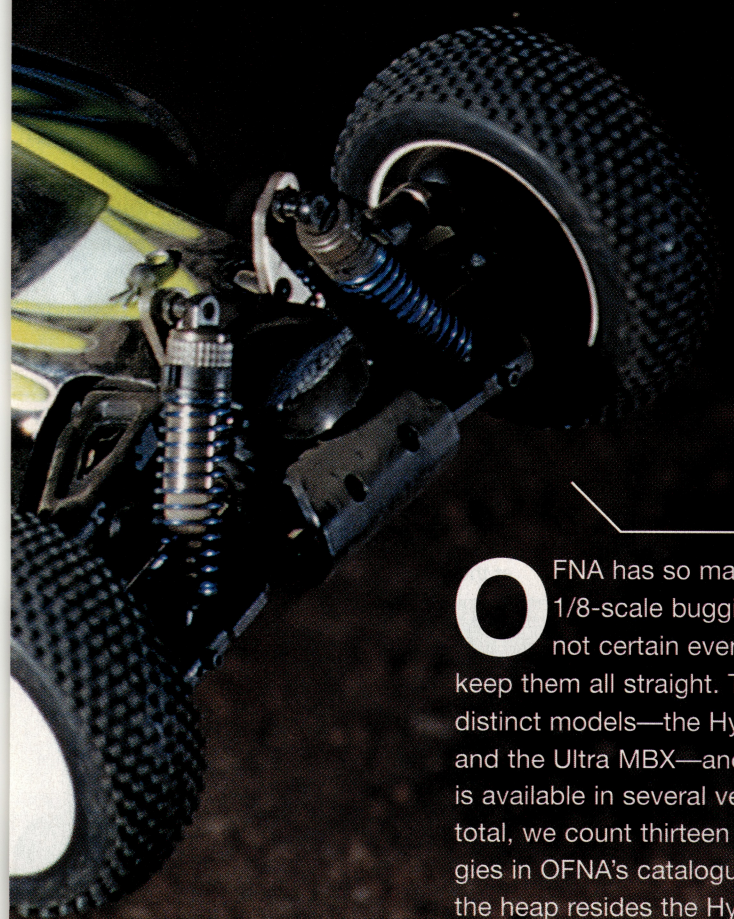
1/8 SCALE OFF-ROAD BUGGY

OFNA



Redefining the 1/8-scale RTR

HYPER 7 RTR-PCR EDITION



OFNA has so many different 1/8-scale buggies that we're not certain even they can keep them all straight. There are three distinct models—the Hyper 7, the 9.5 and the Ultra MBX—and each model is available in several versions. In total, we count thirteen 1/8-scale buggies in OFNA's catalogue! At the top of the heap resides the Hyper 7, which is available in five variants, including three RTRs, two kits, three models with engines, two models with C-hub front suspension, two with pillow-ball suspension, and one with both types of suspension. The newest Hyper 7 models are the PCR versions. PCR stands for Paul Coleman Racing (a hop-up subsidiary of OFNA run by in-house nitro guru and racer Paul Coleman), and as you'd expect, these models feature a ton of very cool hop-up parts. The Hyper 7 PCR we are testing here is the RTR version, which comes factory assembled, and includes a radio system and OFNA's potent pull-start Hyper .21 eight-port buggy engine.

nitro racing buggy

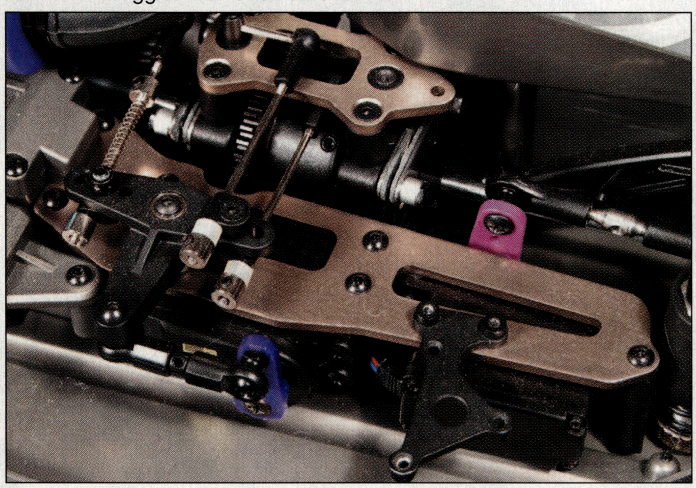
OUTSTANDING FEATURES

In terms of overall layout, all 1/8-scale buggies are the same. They all have four-wheel independent suspension, they all use shaft-driven 4WD with front, rear and center gear differentials, and all are equipped with big-block engines of at least .21 cubic inches of displacement. What separates the good from the great is the subtle nuances which contribute to the buggy's performance and, of equal importance, its durability.

In dimension and layout, the Hyper 7 PCR Edition is the same as all of the 1/8-scale RTR buggies we've tested over the years; but as we soon learned, it is a refined racing machine with features that may very well make it the Valedictorian of its class.

The PCR Edition shares much of its mechanical bits with the standard Hyper 7 model; however, there are quite a number of built-in factory hop-ups which make the PCR a more formidable machine no matter where it's driven.

Beginning with the chassis, the PCR Edition relies upon its sturdy foundation—a 3.2mm-thick aluminum-plate chassis, which has been hard anodized for increased durability. Generous front kick-up improves performance on bumpy tracks. Lightweight, molded angle braces are employed to guard against chassis flex at the critical areas on which the front and



One step further: The PCR Edition not only has a laid-down steering servo, but also a laid-down throttle servo. This keeps the CG low for improved handling.



The PCR Edition of the Hyper 7 gets this really swank pre-painted buggy body. This is without a doubt one of the nicest RTR shells to come along in a long while.

rear gearboxes are attached. As an added bonus, most of the hardware used for the Hyper 7 PCR Edition is Allen-headed.

The most significant element of the PCR Edition has to be the radio plate. Horizontal placement of the steering servo is rapidly becoming the hot thing for nitro buggies (the Mugen MBX-5 has this feature, for example), but the PCR Edition goes a step further by having both its steering and throttle servos mounted horizontally. The value of this is of course that the weight of the servos is lower in the chassis, which in any automotive engineer's handbook equates to better handling. The throttle and brake linkages are actuated by an ingenious bellcrank system, which pivots on ball bearings for smooth, slop-free action.

The PCR Edition's suspension is also "Not your father's Buick." New upper arms adorn this Hyper 7's PBS (not your Public Broadcasting System, but rather pillow-ball suspension). The new arms afford additional caster adjustment to the tune of a total possible range of between 17 and 35 degrees—perfect for tuning to virtually all possible track conditions.

Another nice feature of this car's PBS is its metal arm inserts, which greatly reduce the chances of a pillow ball stripping any of the nylon suspension arms. The insert allows the pillow ball to thread into metal instead of plastic, and each contains a setscrew that secures each pillow ball's setting once the suspension geometry has been set.

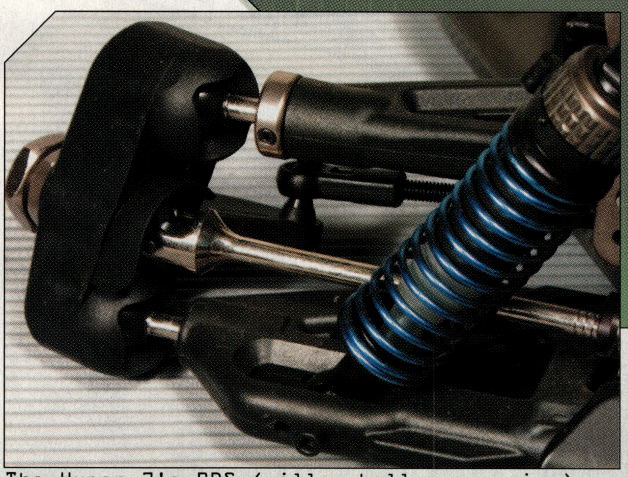
Hard-anodized aluminum shocks—of the large oil-volume order—are found at each corner of the suspension. They feature OFNA's blue springs and C-clip-style preload adjustment spacers. A standard 3mm-thick shock tower is used in back, but OFNA beefed-up the front of the car by installing a 4mm-thick aluminum tower, which will be next-to-impossible to bend, even during the hairiest crashes.

The Hyper 7's drivetrain has also received some attention from the OFNA team. Efficiency and smoothness are both improved by the addition of a pair of heavy-duty steel universal driveshafts for the front wheels. These operate with less binding at extreme steering angles, which not only smoothes out the steering, but also helps the car get through bumpy turns. Acceleration gets a boost thanks to center and rear driveshafts made from 7075 aluminum. These lightweight shafts replace the stock steel ones, and will improve throttle response significantly. In case you're worried that aluminum driveshafts might not hold up, OFNA designed these with an extra-large diameter.

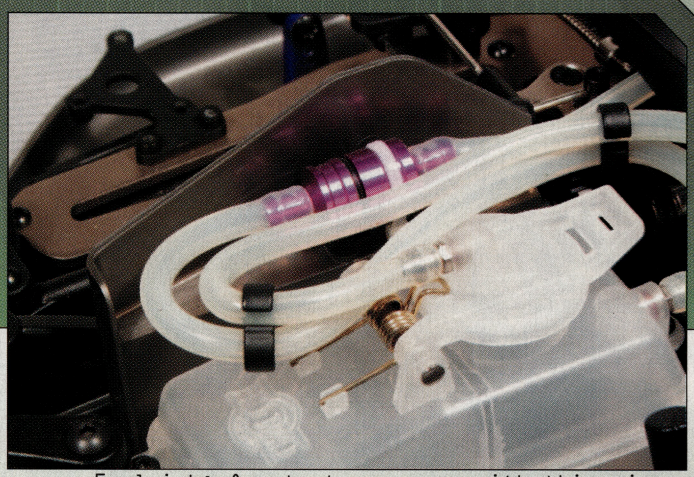
What would an RTR be without an engine (if, of course, it's a nitro RTR!)? OFNA wisely chose to fit the Hyper 7 PCR with its Hyper 21 eight-port engine. Some, if not many, Hyper 7 owners will undoubtedly wish to race their buggies, and they'll be happy to know that their Hyper 21 engine will fit within all track guidelines. Some RTR buggies come with larger engines, but in most instances, these buggies would not be allowed to participate in organized competition.

OFNA's Hyper 21 comes equipped with a handy pull-starter (for the starter-box-challenged owner), although a starter box can also be used if you have one. The rear-port mill breathes through a free-flowing aluminum manifold and tuned pipe. A really cool foam air-cleaner is positioned to the side of the engine so that it won't interfere with the airflow around the engine's aluminum heat-sink head (this is a great idea). OFNA also includes a clever plastic "cap" for the heat-sink head, which protects the head during rollovers. Of course, if it's really hot outside, you'll probably opt to remove the cap (it snaps on and off) to improve cooling.

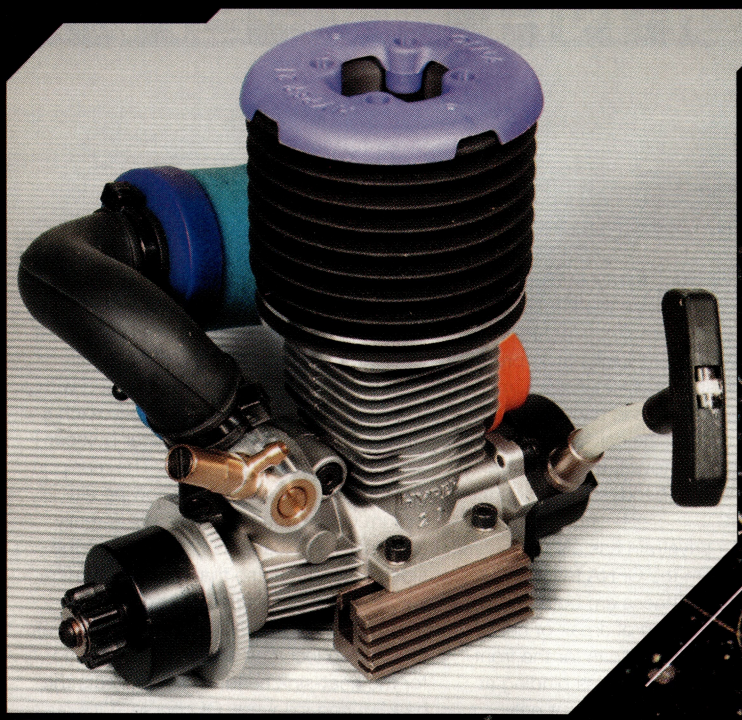
Finally, the PCR Edition gets its own special pre-painted body, which, in our opinion, is one of the best "screen finished" bodies we've ever seen. When you arrive at the track with this baby, even those with expensive custom-painted bodies may be caught sneaking jealous glances at your OFNA buggy! The only snag is that bodies such as this don't have clear windows, which are stipulated by most sanctioning bodies. Of course, this is only if you plan to race the PCR Edition seriously (which you can with very little effort).



The Hyper 7's PBS (pillow-ball suspension) comes with steel inserts for the upper arms. These ensure that the pillow-balls can't pull out. Note the front universal-joint driveshafts - another bonus feature.

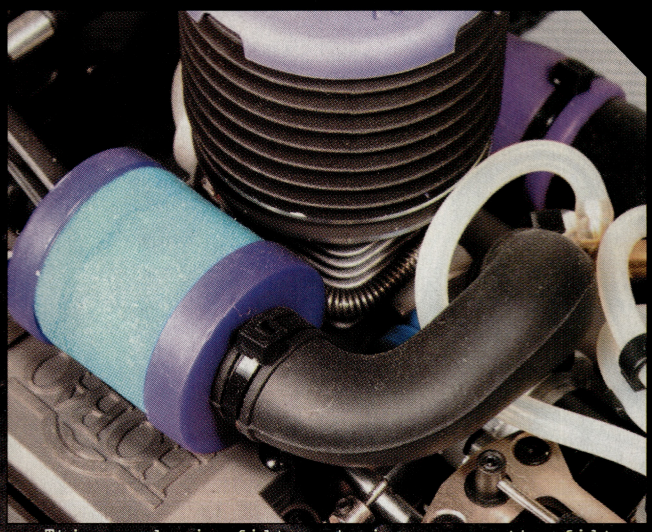


Fuel-ish: Our test car came with this nice, purple-anodized aluminum fuel filter. A large plastic splash guard protects the front brake disc from spilled fuel (and the oil in the fuel that can ruin brake performance).

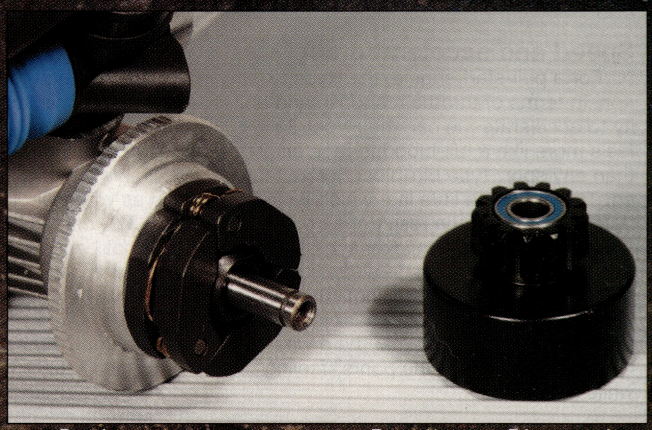


•OFNA's potent Hyper 21 engine comes standard in the PCR Edition RTR. Don't be fooled by the pull-starter; this mill churns out massive amounts of power. It thinks it's an Italian racing engine.

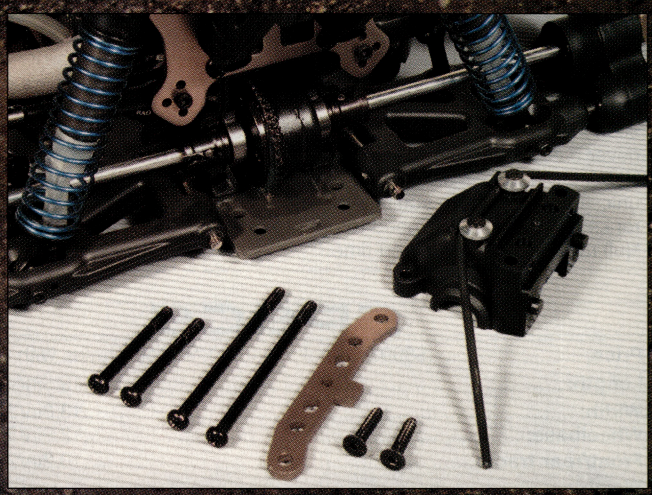
OFNA HYPER 7



This cool air filter design moves the filter out from in front of the cylinder head so that the head can receive more cooling airflow. The filter is secured to the radio box with a sturdy aluminum bracket.



Racing touches abound. The Hyper 7's racing style three-shoe clutch is a perfect match for the engine's broad powerband. Note also the heavy-duty steel clutch bell and the rubber-sealed bearings upon which its spins.



Easy access: Getting to the Hyper 7's diffs is a piece of cake. OFNA designed this car to be durable, as evidenced by the long machine screws and aluminum locknuts which hold together the front and rear diff cases. No self-tapping screws here.

OFNA HYPER 7



REPORT CARD

Test location: *R/C Car*'s secret (found) nuclear test track, Castaic, CA
Test conditions: dry off-road course with elevation changes and large, stadium-style jump sections

Speed and acceleration: A

For a pull-start engine, the Hyper 21 rips! In terms of throttle response and ability to accelerate the car, the Hyper 21 feels more like a full-blooded race engine than any sport-type big-block we've tested. There's only a little lag, which we determined to be the result of a not-too-fast throttle servo. A quicker servo—one with more torque as well—would improve overall response (and braking). The Hyper 7 PCR Edition was able to easily clear the large jumps without drama; there was none of that "seat of the pants" feeling while jumping.

Suspension: B

We found that the Hyper 7's suspension took a bit too much "set" after only a few tanks. The factory setting were initially fine, but we soon noticed that the car was sitting too low after only a few runs. As we didn't have the proper C-clip pre-load spacers needed to raise the car, we proceeded as is. Otherwise, the car was very well set up from the factory (it is an RTR after all—we had to continually remind ourselves of this little fact). The suspension is quite plush over small, sharp-edged holes and ruts, and it did an admirable job of soaking up the big jolts, such as when landing flat from a large jump. The car would have gotten an "A" had it not been for the sagging suspension (which can be easily fixed).

Cornering: B+

The stock diff setups were pretty good. The Hyper 7 turned-in well and required only a bit of braking assistance to initiate the tighter turns (the factory-set brake bias was nearly perfectly adjusted, with more force going to the rear wheels than to the fronts). The car also tracked exceptionally well through bumpy turns, as the front and rear diffs were loose enough to prevent the car from being deflected, yet tight enough to keep the unloaded inside wheels from "diffing." The only complaint we have is that the stock steering servo should be stronger and faster. The steering was good, but could've been better with a high-torque, high-speed servo (the same is true for all of the 1/8-scale RTR buggies we've tested to date).

Durability: A

In our opinion, the Hyper 7 PCR Edition is ready to handle an hour-long A-main straight from the box (although the stock steering servo might not be up to the task). The overall structure is just about bulletproof and the design is obviously race-tested and proven. Little details such as the pillow-ball inserts and the way in which the bulkheads are assembled (with long screws and aluminum nuts—not with self-tapping screws) will allow this car to withstand a great deal of abuse.

FINAL SCORE

Highs: Excellent parts quality and top-of-the-line design. The PCR Edition "lay down" radio tray is sheer genius. We've seen laid-down steering servos before, but never a laid-down throttle servo! The Hyper 21 engine is also a gem in this RTR; unless you plan on assaulting the pro ranks, you really won't need to update to a "full race" engine for a long time.

Lows: We write this about every RTR 1/8-scale buggy: the steering servo should be stronger and faster. Companies that make these buggies should take a cue from the monster truck market and package them with high-torque steering servos.

The verdict: The RTR buggy market is definitely on the rise, and there are a slew of solid contenders in this category. We've tested nearly all of them, which is why we can safely say that, in our opinion, the Hyper 7 PCR Edition is the best RTR nitro buggy we've driven. It gives away nothing in terms of equipment and design to the cars you'd see in any winners' circle. Just update the radio gear (when your skill level warrants it) and go race.

SPECS

Price:	$899.95 retail, $440.00 "street" (varies with dealer)
Length:	19.6in/498mm
Width:	13.8in/310mm
Wheelbase:	12.9in/327mm
Front/rear track:	10.2in/258mm
Weight:	7.7 lb.
Chassis:	3.2mm hard-anodized alum.
Bearings:	steel ball bearings
Suspension:	ind. double wishbone PBS
Tires:	V-pattern w/foam inserts; pre-glued
Wheels:	five-spoke white nylon

SOURCES

Airtronics, 1185 Stanford Ct., Anaheim, CA92805 • (949) 978-1895; fax (949) 978-1540
OFNA Racing, 22692 Granite Way, Suite B, Laguna Hills, CA 92653 • (949) 586-2910
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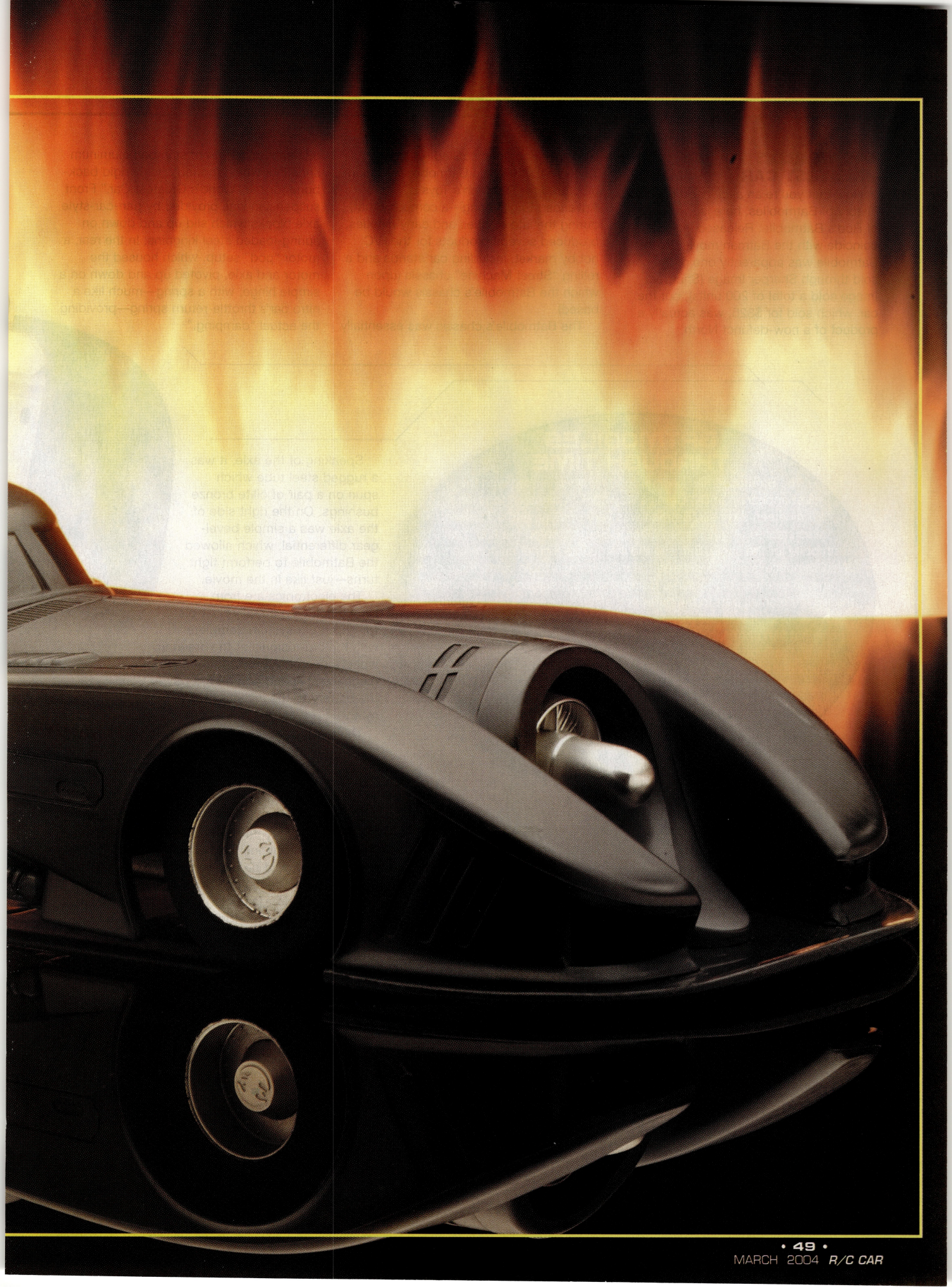
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RICHMAN'S TOYS BATMOBILE

The Dark Knight's favorite ride

Sometimes our readers send us some interesting photos of their cars. Case in point: Rod Armstrong's 14-year-old 1/10-scale Batmobile! It is a true-to-scale replica of the car that Michel Keaton drove in Tim Burton's Academy Award winning blockbuster "Batman," which starred Keaton and a very manic Jack Nicholson as his nemesis, the Joker. Rod came across this little gem quite by accident, and wound up getting it for just a fistful of quarters. When we got the call from Rod, and he told us more about his unique acquisition, we were very interested in such a rare find and asked him to send us the Batmobile so we could do some studio shots of this rare bird—err, bat.



BATMOBILE

THE WORLD'S GREATEST CAR

Now that you're an *aficionado* of the history of Batmobiles, here is the history of Rod's Batmobile. Released in 1989 to coincide with the Batman movie, Rod's Batmobile was apparently one of the cars sold through Sharper Image (Sharper Image sold a total of 200 units), but the car, which sold for $325, was actually a product of a now-defunct North Hollywood company called RichMan's Toys. The 1/10-scale Batmobile was manufactured for RichMan's Toys by Advanced Engineering—a company that, during the late eighties and early nineties, produced several products for the R/C hobby market, including car stands and a rolling "Street Machine" chassis (upon which the Batmobile's chassis would be based).

The Batmobile's chassis was essentially a U-shaped length of stamped aluminum sheeting, which formed a fairly rigid backbone for the "World's Greatest Car." Front suspension was provided by pan-car-style axle blocks which slid up and down on spring-loaded steel kingpins. In the rear, a motor "pod" setup, which housed the motor and axle, pivoted up and down on a simple hinge, with a spring—much like a nitro car's throttle-return spring—providing the actual "damping."



Speaking of the axle, it was a rugged steel tube which spun on a pair of oilite bronze bushings. On the right side of the axle was a simple bevel-gear differential, which allowed the Batmobile to perform tight turns—just like in the movie.

The electronics are from Hitec, including a really neat pistol-grip radio system complete with the bat-insignia at the steering wheel's center! A basic rotary-style mechanical speed control fed power from the battery to the included RS-540 electric motor.

The body is highly-detailed impact plastic, and is an incredibly well-done replica of the real movie car. Its realistic molded wheels are also true to the look of the movie car's 15-inch satin-finish rollers. The model's foam-rubber tires also duplicate the F1-style tall-sidewalls of the car that carried Batman and Vicky Vale back to the Batcave.

There were options for the Batmobile as well: a light system could be ordered and installed on the body for cool effects, and there was a Batman shell you could order which housed the car and radio for display and storage. The shell and working lights were exclusive mail-in items.

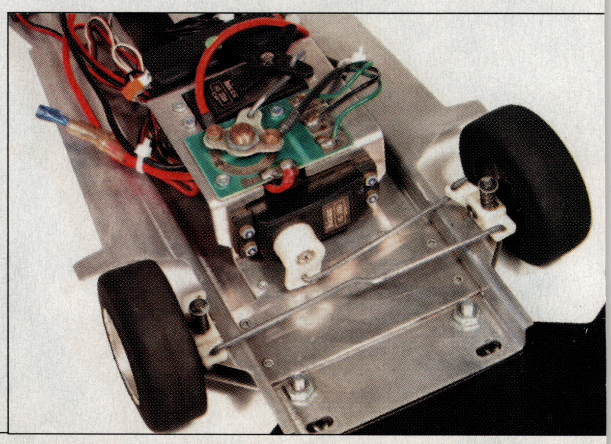
BATMOBILES THROUGH TIME

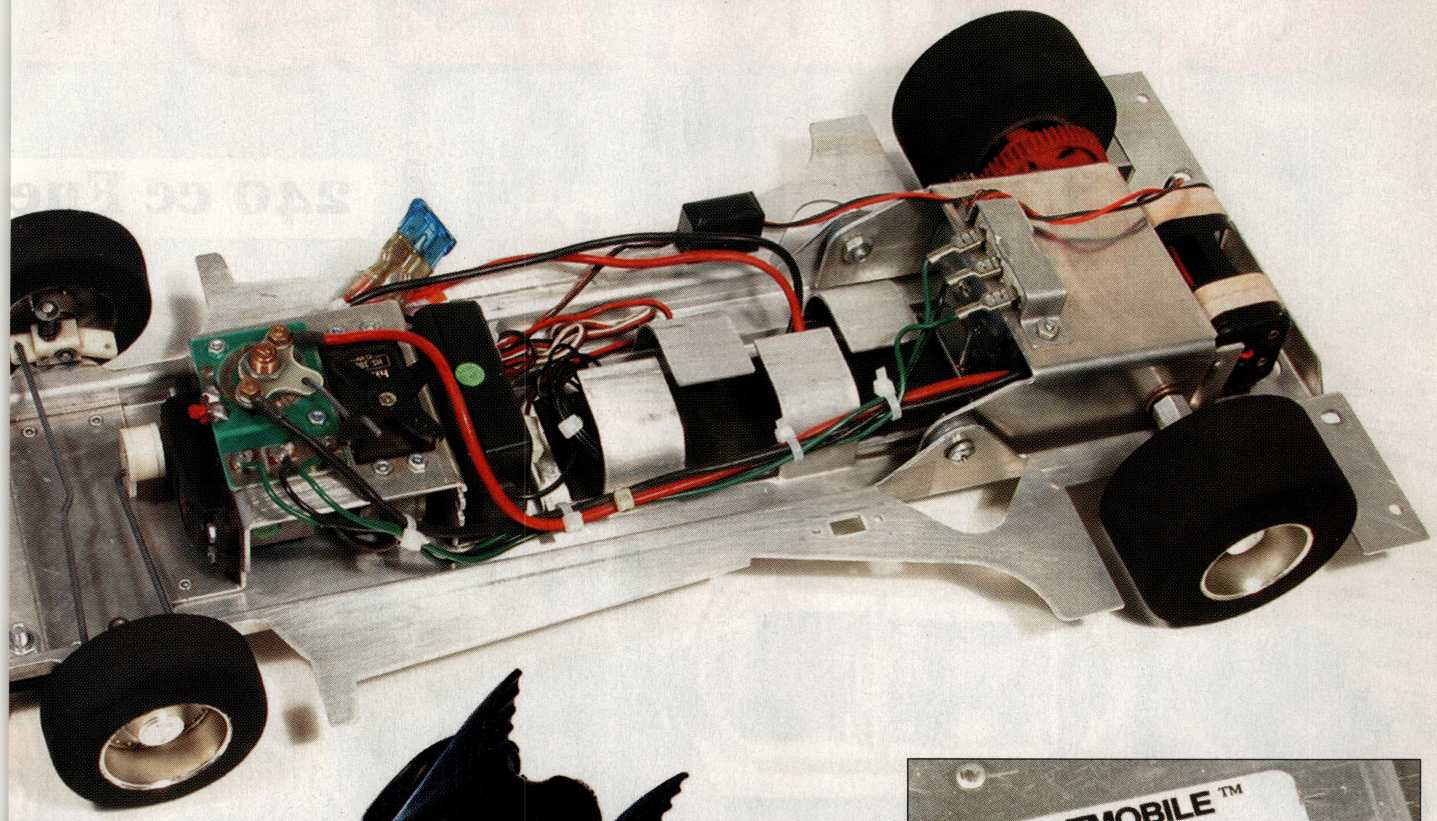
The Batmobile has been around for a while now, with the first appearing in DC Comics way back in nineteen forty-one. By nineteen sixty-six, Batman was very popular, and a TV series was created. A guy named George Barris created the first "real" Batmobile for the show. Barris is the inarguable king of custom cars, and his Batmobile is still considered *the* most recognizable custom car of all time. In nineteen eighty-nine, Batman saw a resurgence in popularity thanks in no small part to the huge box office success of the Batman film, and of course, it was the menacing, semi-gloss-black winged Batmobile from that film upon which the RichMan's Toys model was based. In the sixty-some-odd years the Batmobile has existed, there have been approximately thirty incarnations, but only three of those incarnations have become real cars, and only a handful of all the Batmobiles have been reproduced into toy cars. Only one has been made into an R/C car.

BATMOBILE SPECS

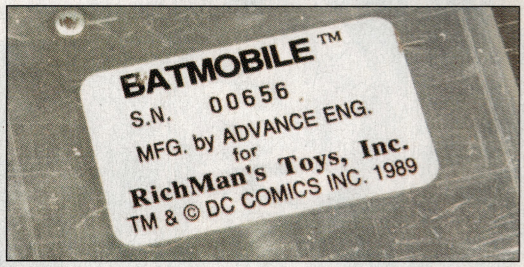
Engine Type:	Jet Turbine
Thrust:	1500 lb.
Torque:	1750 lb./ft
0 to 60 mph:	3.7 seconds
Top Speed:	Unknown
Brake Rating:	Excellent
Wheelbase:	141.0 inches
Width:	94.4 inches
Height:	51.2 inches
Wheels:	Cast alloy, 15 x 6.5 inches
Tires:	High aspect L60-15
Fuel Requirement:	High octane 97 percent special
Retractable protective armor	
Weapons systems	
Gauges:	aircraft type with on board computer

**All specifications are subjective*

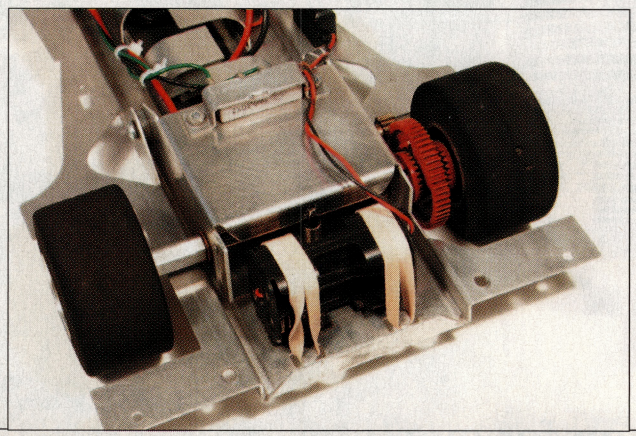





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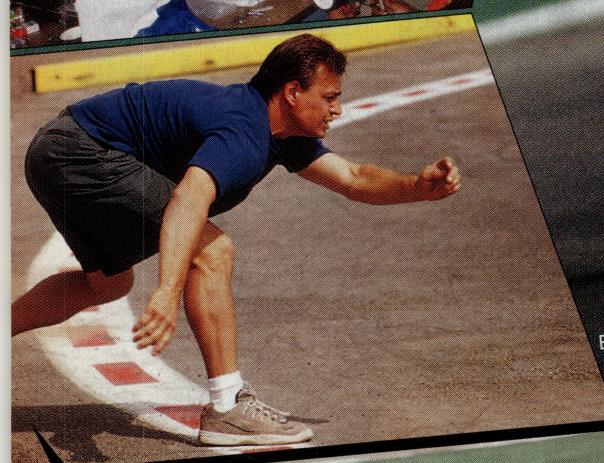

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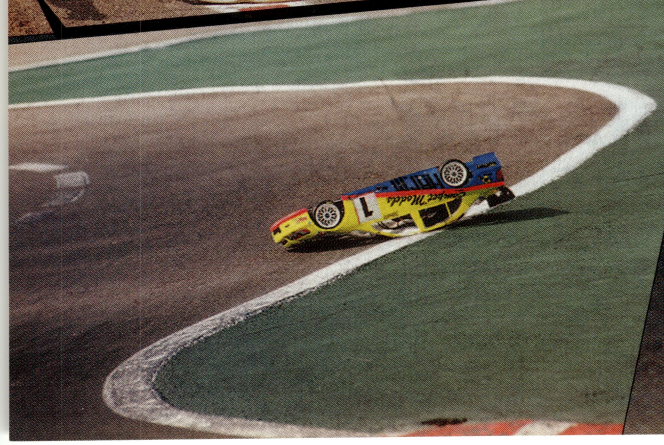
IFMAR 1/5-SCALE WORLD CHAMPIONSHIPS

A grand event on a grand scale



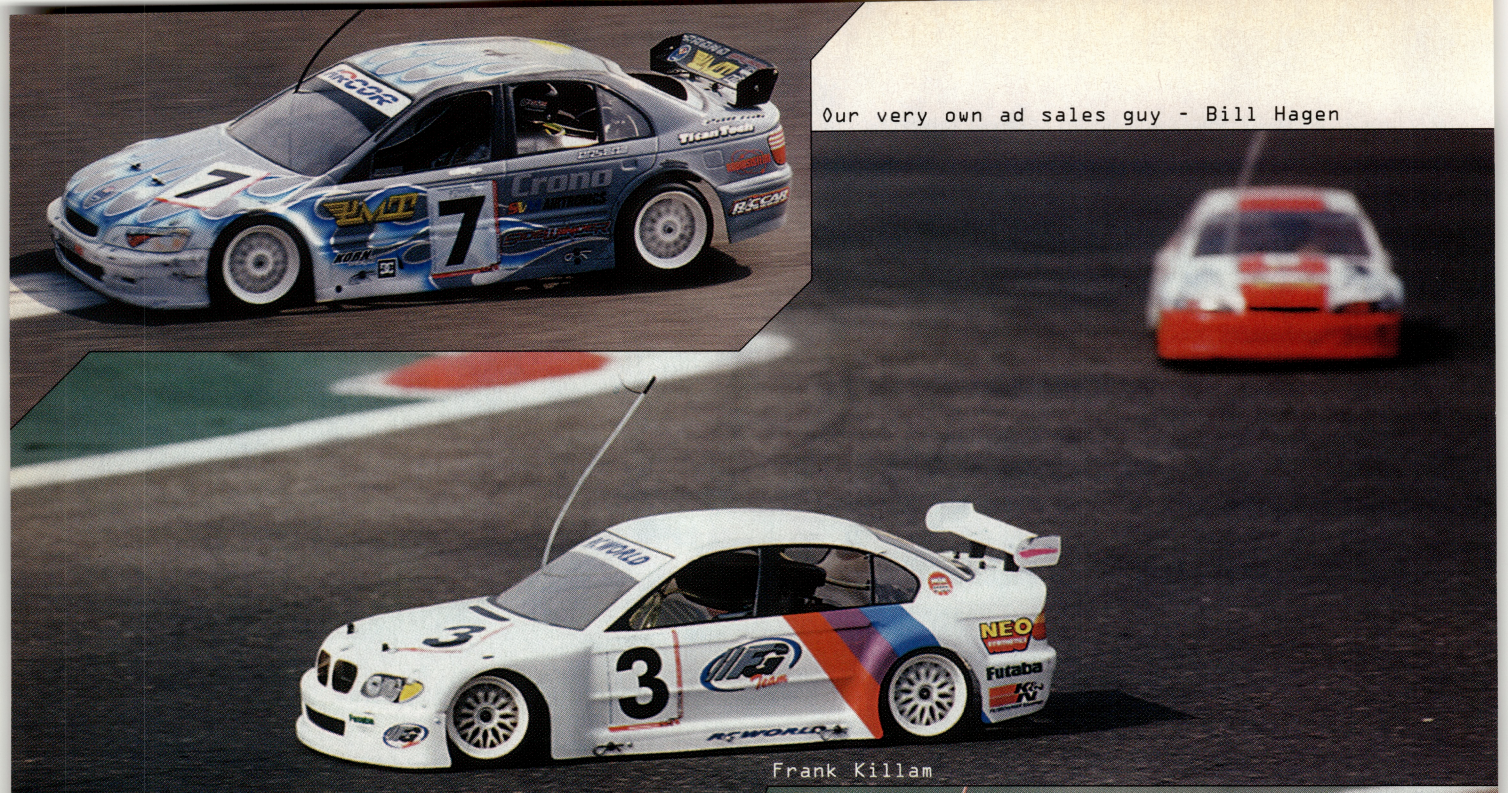


Bowling for fifth scales - naw! This perky young lad is showing proper form in tossing a 1/5 scale back onto the track.



Although this was only the second world championship for these big 1/5-scale cars, we are glad the powers that be chose the good old U.S. of A in which hold the race. The event was held at KZ Speedway in sunny southern California during the month of September, and it was a weeklong affair. With racers from all over the country, and all over the world, it was a grand affair.





Our very own ad sales guy - Bill Hagen

Frank Killam

Lamberto Collari

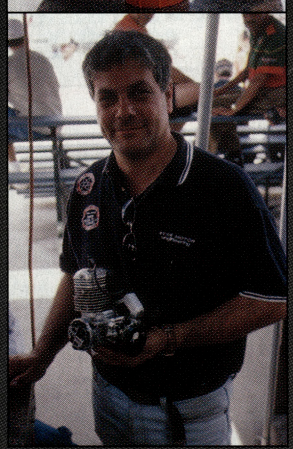
A TOUR OF THE PITS

At the 1/5-scale Worlds, being in the pits was almost as exciting as what was taking place out on the track. Check this out: the track provided rental containers for many of the top European teams and manufacturers—just like Indy and F1 garage paddocks!

We ventured into a couple of the containers to see what was inside, and they were totally dialed. They had air-conditioning, computers, stacks of spare parts, large workbenches, and power tools—the whole nine yards. It was pretty impressive, to say the least, and we would like to get one of our own.

As you walked from the containers into the main "common area" pit, you were greeted by rows and rows of pit tables. KZ provided covered tables for all, and each area was designated by country, with large signs showing where each team was from. It was really fascinating to watch all the action going on and hear all the different languages being spoken. Nearly every country you could imagine was represented, and again, it all added to the splendor of the event.



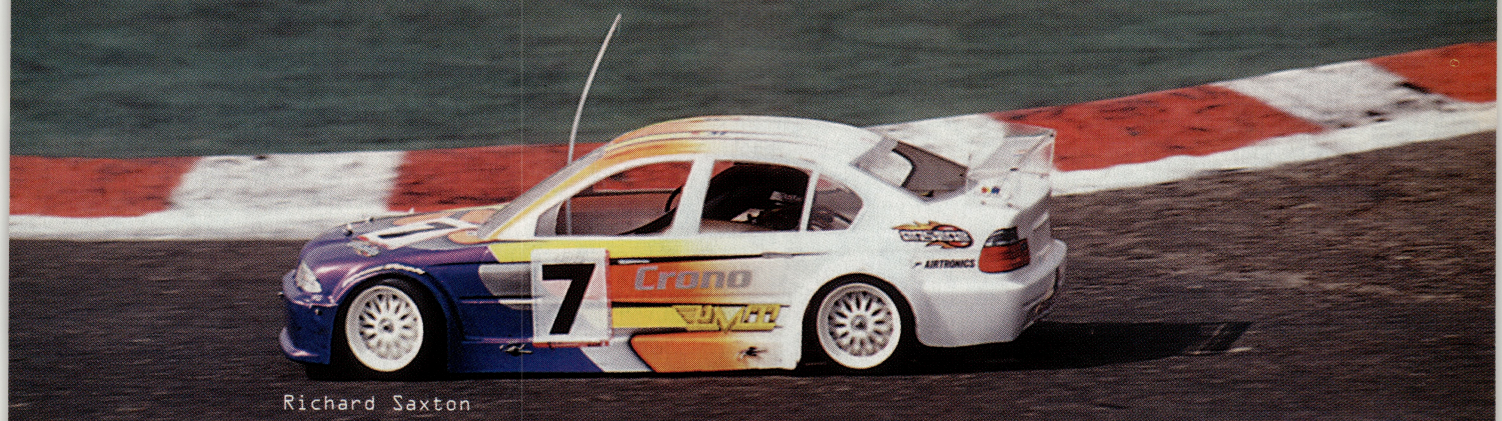


■ As we walked through the pits we were lucky to meet Mr. Sirio (maker of all those wonderful nitro engines). Although he was very busy getting his team drivers' cars dialed-in for the track, he did stop long enough to say hello and to show us his newest creation—a totally hand-machined 23cc reed-valve engine. This engine had a totally "works" look, and Mr. Sirio also told us to be on the lookout for some exciting new nitro engines coming out soon.

■ We also met with the fellows from PMT, which is a major tire manufacturer in Italy. PMT produce many types of tires, including ones for 1/5-scale cars. PMT had just released its Eclipse tire, and was the most popular tire at the event. Everybody was clamoring for them, and we talked to some of the U.S. drivers and learned that indeed these tires were the hot ticket. Many of the top drivers had dropped their lap times by using the Eclipse tires, and they were in so much demand that someone actually stole a case of them from the event. We guess this says a lot about PMT tires. These tires were so much of an advantage that people would do anything to win.



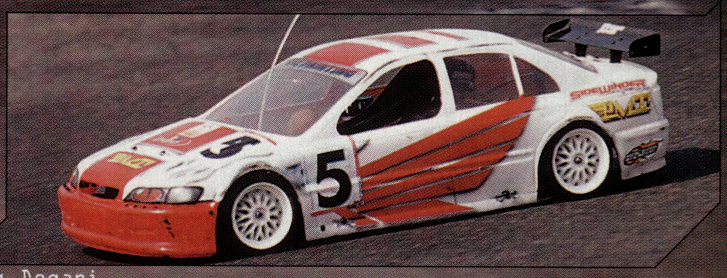
IFMAR 1/5-SCALE WORLD CHAMPIONSHIPS



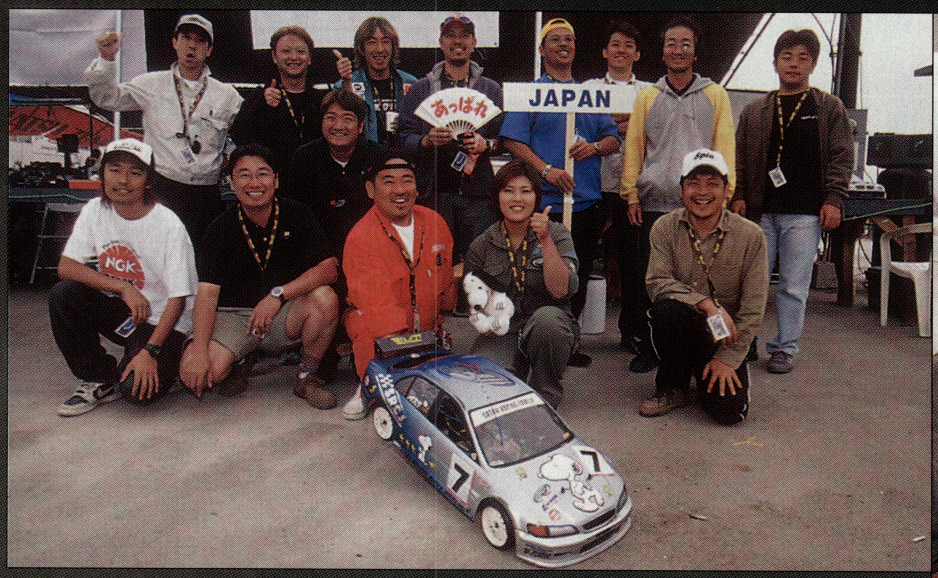
Richard Saxton

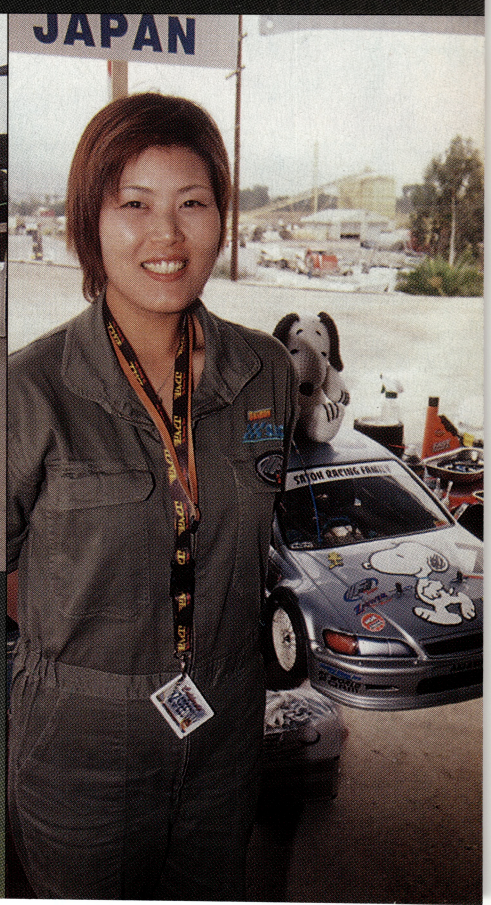


Barry Baker



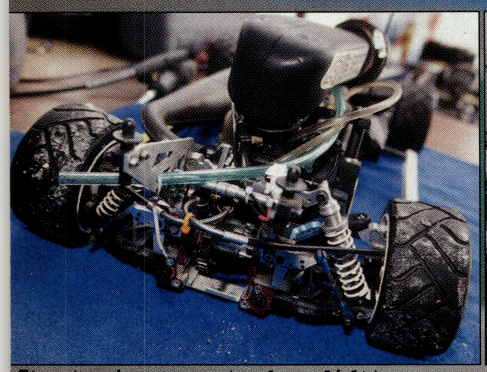
Greg Degani



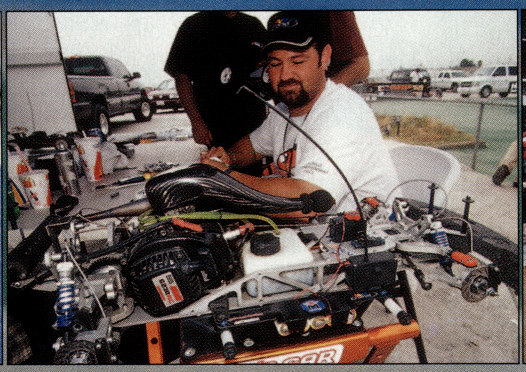


Japan is a great country and its people always embrace things enthusiastically. Case in point: the Japanese team was the most enthusiastic and most fun to be around. They were sporting cool racer-style jumpsuits, and were the only team at the Worlds to include a female driver. Her name is Akira Moriyama, and she did pretty well, too; she beat a lot of the boys this weekend, and she and her boyfriend really livened up the place. What's really amazing is that Akira started racing less than a year ago. Fifth scale is pretty popular in Japan, and we will be seeing even more Japanese drivers as this segment becomes larger. We could all learn a lesion from the Japan team, and have just a little more fun at these events—their enthusiasm was infectious.

IFMAR 1/5-SCALE WORLD CHAMPIONSHIPS



The business end of a fifth scale. Notice how gooey the tires look after a 20-minute run.



Bill Hagen gives his SVM Crono a loving look before battle.



Team Italy: Mr. Sirio and Collari show off their favorite magazine.

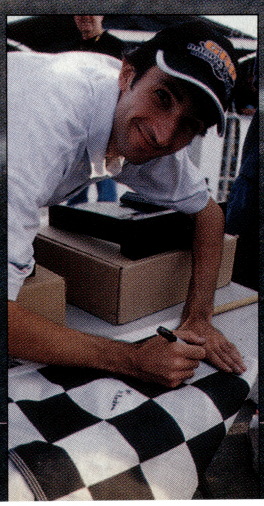
This was the first time we have attended a "big" event that truly felt like a spectacle. KZ did an excellent job of promoting the event and did a fine job in running it. We were glad to see an effort made in making an event feel like something big. Too many times this year we have attended a large event, only to come away feeling that we just attended a big club race. For once, an R/C promoter got television and local newspapers to come and cover an event, and this resulted in larger amounts of casual spectators. From the conversations we had with them, they liked what they saw.

WEEKLONG QUALIFYING

After a week of qualifying, it looked like the U.S. team was a little outgunned by the Euros. Holland's Hessel Roskam was TQ, with Germany's Markus Feldmann in the number two slot and the "darling" of the 1/5-scale industry, Italy's Lamberto Collari (who had just won his sixth world championship in 1/8-scale on-road) rounding out the top three.

How did the "home team" do? Surprisingly, it was the off-road crew upholding our honor. Richard Saxton, Greg Degani and Bill Hagen —all off-road specialists—were doing an excellent job adapting to their big 1/5-scale SVM Crono cars, but it was Factory FG Modellsports pilot Frank Killam—a 1/5-scale specialist—who was leading the U.S. pack. Frank seemed to be the best hope for the U.S. team.

Of the top fifteen fastest, seven were from the U.S. They were Barry Baker, (our very own) Bill Hagen, David Jun, (eighth-scale off-road world champ) Greg Degani, local driver Eric Poholsky, Richard Saxton and, of course, Frank Killam. All were looking to bump to the main, and it looked like the US might get a shot at a top finish. We all had our fingers crossed going into the next day of racing, and the final.





MAIN EVENT DAY

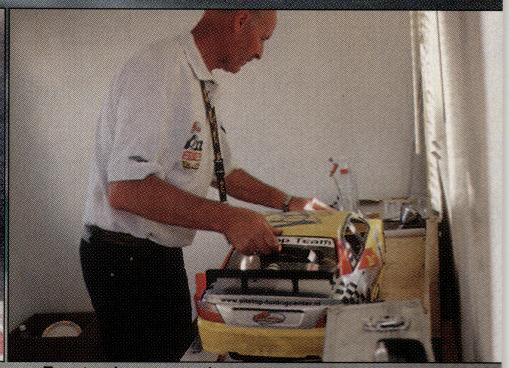
The day began with the running of the lower mains. While we watched the action unfold, we also wondered who would win this world title. We hoped it would be one of our own, and it would be great to see one of the off-road guys take home the gold, but we were betting on Lamberto Collari. After all, he had won the first 1/5-scale worlds in Europe,



Heavy hitters at the fence: The first person to correctly name all the major industry honchos in this picture will get a one year subscription for free.



After a week of racing, there was a lot of rubber on the track. Most of the corners looked like this by the end of the week.



Tech inspection was the most thorough we have ever seen.

but was disqualified for a technicality with his fuel. Really, his name sounded so cool we just had to bet on him.

Lamberto Collari and his father are synonymous with European excellence in R/C racing. A six-time IFMAR World Champion in 1/8-scale on-road, Lamberto and his father are also the makers of the fabulous Collari lineup of high-performance nitro engines.

A AND B SEMI-FINALS

As the last two mains before the A Final rolled up, we were eagerly watching, because our best hopes were in these two semis. This was a chance for the U.S. drivers to bump up.

• Semi A—As the flag dropped, Britain's Ian Oddie jumped into the lead with Sweden's Lars Hansson on his tail. Both drivers were running Lauterbacher cars. Lars and Ian were totally glued to each other for the first few laps, but Ian made a mistake allowed Lars to squeeze by. Meanwhile, Barry Baker was sitting in third, but his car looked like it was giving him fits, and he is eventually called in for a stop-and-go penalty because of it. This put Barry out of contention. Bill Hagen was looking good coming into this semi, but a late night wrench session, brought about by the request of his sponsor, must not have worked well, because Bill was all over the track. He eventually had to drop out with a fried steering servo. David Jun was driving well, but could not erode the lead of Hansson and Oddie, who both bumped up.

• Semi B—This was the last chance at the A Final, and the U.S. Team had a good chance. This semi had off-road world champ Greg Degani, off-road "King" Richard Saxton and two of the best American 1/5-scale drivers—Frank Killam and Eric Poholsky. We were on the edge of our seats as the flag dropped. Bernard Arnaldi jumped into the lead right off the bat, and was setting a killer pace. Killam was on the rear bumper of second place Martin Bayer, while Degani was recuperating from his teammate Saxton punting him in the first corner. Saxton was working on the fourth place position, and Degani got right back on the gas and was back in the heat of things, only to have huge troubles with his car. He "pinballed" around the track and really should have pulled off. Thankfully, he broke and was sidelined.

Trouble seems to run in pairs. Saxton went flying down the back straight, and kept going, and going, right under the back straight fence and onto the off-road track! We don't know what happened, but Saxton was out on the dirt doing donuts (and was probably having flashbacks of the Uruguay off-road worlds!).

IFMAR 1/5-SCALE WORLD CHAMPIONSHIPS



Eric Poholsky



SVM Crono owners, Melanie and Gigi, sit with their team drivers - off-roaders Bill Hagen and Greg Degani.

Killam and Martin Bayer had just squeezed through a wreck that left Arnaldi in the air and upside down (just so you know, there are no turn marshals in 1/5-scale racing; your pit man is the one to run out and right your car). Now Bayer was in first and Killam second. As the two flew down the straight, Killam had the horsepower on Bayer, but Bayer would not yield entering the corner following the straight, and this caused Frank to bump him. This sent Bayer's car into the fence and sent Frank into the pit for a stop-and-go penalty. We felt this was an unjust penalty call, and wondered if a European driver had done the same, would he have gotten the same treatment? This allowed Jorg Schummer to move up to first. Bayer Zwas driving erratically in third. The cause of the problem soon became evident when a wheel flew from Bayer's car!

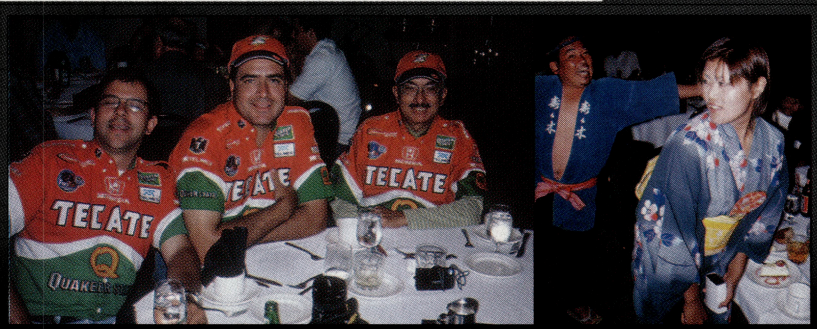
If this weren't enough excitement, Poholsky had moved into the third place—and the final bump position. In the end, Schummer suffered brake fade, which let Killam make the move for the win. This was by far the best race of the day, and it was action-packed from start to finish!

A-FINAL FOR ALL THE MARBLES

In the A-Final, there were the best the Europeans had to offer and the two best the United States had to offer; it was shaping up to be a classic battle.

At this year's Worlds, there was to be one mandatory fuel stop. But it was decided that instead of a regular fuel stop, a horn would be sounded at the 30-minute mark, and the entire field would stop in its place. After the field had stopped, the officials would mark the position of each car. The cars could then go in for fuel and a brief rest; no car could be worked on, only fueled. Then, after the brief break, all the cars would be restarted at their mark and the race would continue. Now *this* would be interesting!

As the flag dropped, Hessel Roskam of Holland jumped into the lead and never looked back. He was setting a blistering pace and was



THE BANQUET THAT SHOULD ALWAYS BE

■ After the finals, a banquet was held at a posh hotel in Burbank. It had all the pomp and circumstance an event of this nature should have. We say this all the time, but the U.S. R/C sanctioning bodies need to take a clue from the world, and from our own real racing organizations such as the AMA, NASCAR, and CART. They need to make a grand affair out of a national or world event. KZ Speedway did, and it came off great. We bet that the racing aspect would grow more in line with the sales aspect of our industry. It was really cool to see all the countries in one room, many of whom were wearing their team colors. The fun-loving Japanese wore some neat traditional clothing and kimonos. It was also a great place for a journalist to meet people and to get photos.



3-2-1-Stop! In the middle of the hour-long A-main, the entire pack came to a complete halt for refueling.



Eric Poholsky has been on a 70's kick lately, and was sporting this way cool 'do. It was working, too; it netted him a top ten finish.



Hessel Roskam

clicking off 22-second lap times, while most of the pack was turning laps in the 23 to 24-second range. Markus Feldman was in second place, but was not up to the speed of Hessel. By ten minutes into the race, Hessel had nearly lapped everyone. Meanwhile, Collari and Killam were having a great battle for third and fourth. Eric Poholsky was fighting his own battles, and was mid pack in the first half of the race. This is how it stayed for the first part of the race.

As the final minutes of the first half ticked off, suddenly, everything just came to a complete halt! The entire field just stopped in its tracks—it was an amazing thing to see. Now the fuel would be put in and a fresh set of batteries installed, and off they would go again!

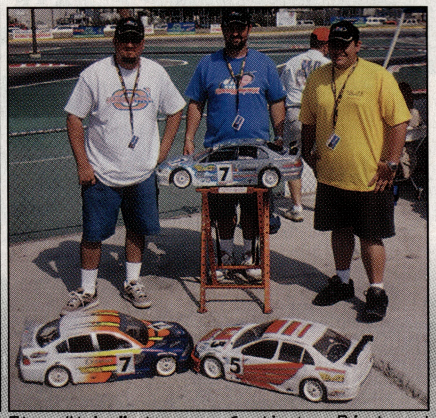
THE SECOND HALF

As the officials set the cars back up, we were wondering if this new rule would affect the outcome of the race. After all, it is like staring all over again, and we would think a racer might loose his momentum or concentration. To us, it looked like Killam had been on a roll in the first half of the race, and we wanted to see him win, or at least pass Collari for third. As they raced off again, you could see that the cars were not handling as well as when they stopped. This hurt Killam at the start, because Collari was able to pull away. When they had been dog fighting, Collari could not shake Killam.

Mechanically, all the cars stayed together, and at the finish it was Hessel in first with a large lead, followed by Germany's Markus Feldmann and Collari. Our hero, Frank Killam, crossed in fourth. Hessel drove one heck of a race, and was way faster than the rest. He drove an excellent race and he was a heck of a nice guy. There will be other chances for the U.S. drivers to win, and they are definitely catching up quickly with the rest of the world in 1/5-scale.



The new 1/5 scale World Champion - Hessel Roskam.



The "big" boys of dirt. Richard Saxton, Bill Hagen and Greg Degani, raced their SVM Crono cars. They were doing pretty well until hit by "stupid little things."

FINAL RESULTS:

Pos	Laps	Time	Name/country
1.	154	70:05.20	Hessel Roskam/Holland
2.	154	70:11.81	Markus Feldmann/Germany
3.	.154	70:18.09	Lamberto Collari/Italy
4.	.150	70:05.67	Frank Killam/USA
5.	.150	70:23.33	Ian Oddie/Great Britain
6.	.147	70:08.17	Lars Hansson/Sweden
7.	.140	70:14.25	Olivier Sampietro/France
8.	.139	70:24.94	Jorg Schummer/Germany
9.	.135	70:01.55	Eric Poholsky/USA
10.	.100	65:23.66	Harrie Schiks/Holland

THE MOST DOMINANT TRUCK FOR 2004

TNX

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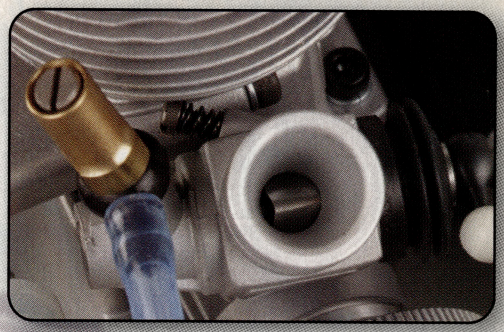
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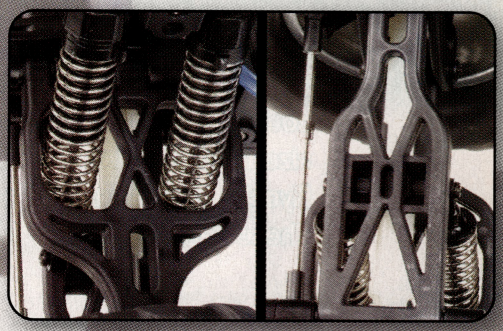
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The All New TNX Features:

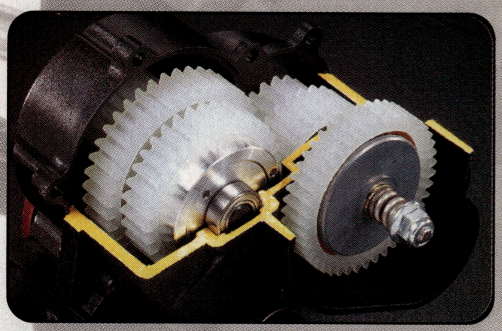
- New pin-type 2-speed
- Lightweight main clutch for better response off the corners
- Machined steel differential gears
- Lightweight flywheel for quick engine response
- Aluminum wheel hubs



Made in collaboration with O.S. Engines, the 3.0cc FS-18RS nitro engine features a high performance dual-needle slide-valve carburetor, race inspired crankshaft and aggressive porting that provides power output that rivals many .21 engines.



The total weight is dramatically reduced to put the TNX in the same weight category as most 1/10 monster trucks without sacrificing durability. Lightweight suspension components reduce unsprung weight for sharp handling and stability.



The TNX features a new forward only transmission with a pin-type 2-speed for solid and consistent shifting. Ultra strong hardened steel drive shafts and joint cups deliver power to the differentials.

High-Powered Engine

Engine made in collaboration with O.S. Engines Mfg. Co., Ltd, Tamiya FS-18SR

3.0



Tamiya introduces a new era in nitro monster truck performance with the new TNX. Our designers took a 1/8 chassis, reduced the weight to that of a 1/10 scale and put an engine with the power of a big block to produce what may become the most dominant nitro monster truck in the market, straight out of the box! On the track, the TNX has a massive power-to-weight ratio advantage that enables it to out accelerate, out corner and out run just about any other truck in its class. For more information call (800) 826-4922 or visit www.tamiyausa.com.

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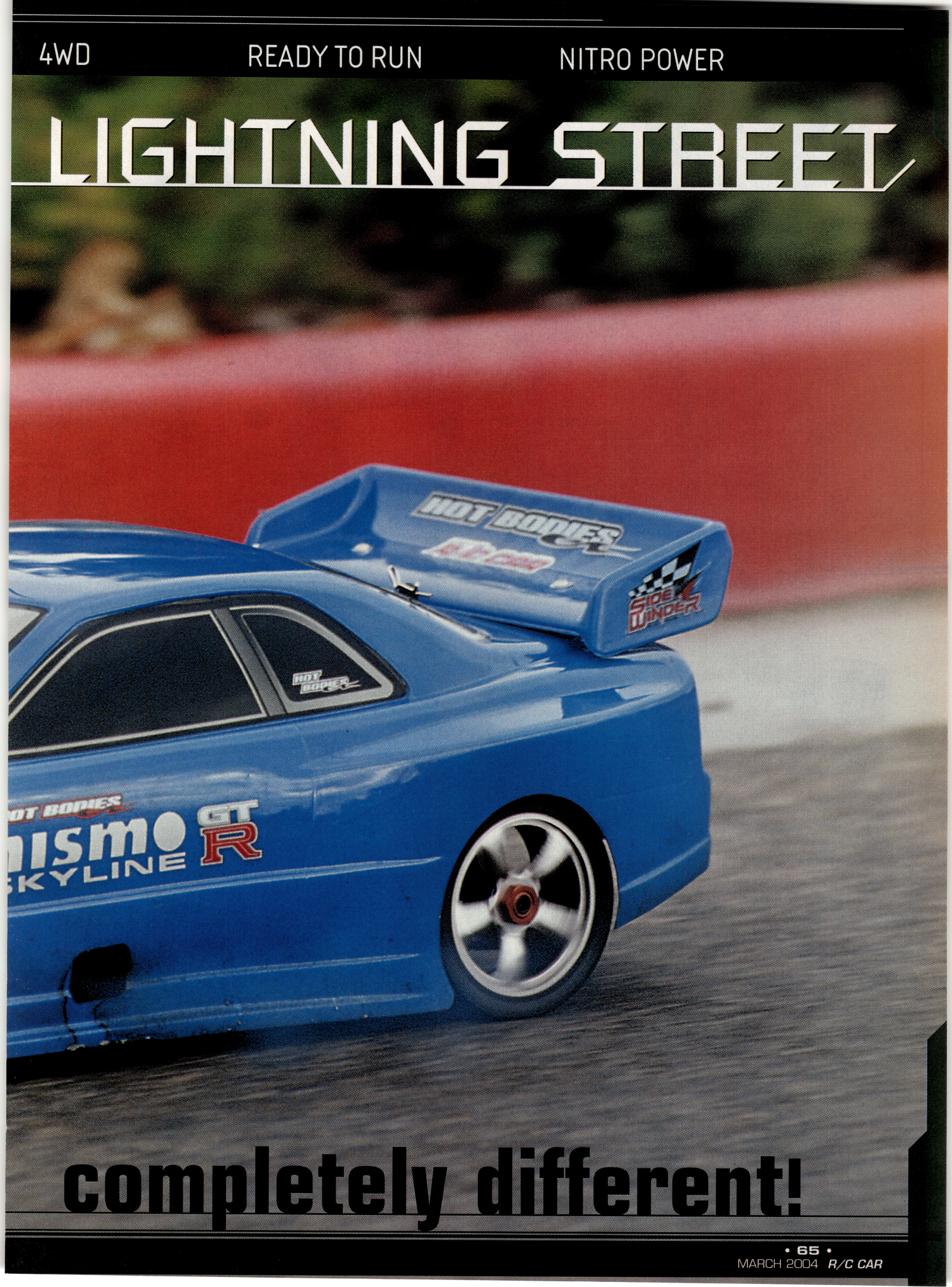
HOT BODIES

Let's say that you would like to get into touring cars, but the 1/10-scale models are not large enough for you. Perhaps you have a very large, paved area in which to run; perhaps your vision isn't what it used to be. Regardless of the reasons, you want something bigger. Of course, you can investigate the "super-sized" sedans, i.e., the HPI Super RS4, the Kyosho SuperTen and the Tamiya TGX. These cars are roughly 1/8 to 1/9 scale, and are a little easier to see - plus, they more easily "fill" a track. Still not large enough? There are always 1/5-scale cars, or, what we like to call the "big daddies." Too big? Until now, you'd pretty much be out of luck - that is until Hot Bodies released its Lightning Street, a road-going version of its 1/8-scale Lightning off-road buggy that's proportioned to be 1/7 scale. Confusing, we know, but one thing's for sure: there aren't many nitro touring cars this big!

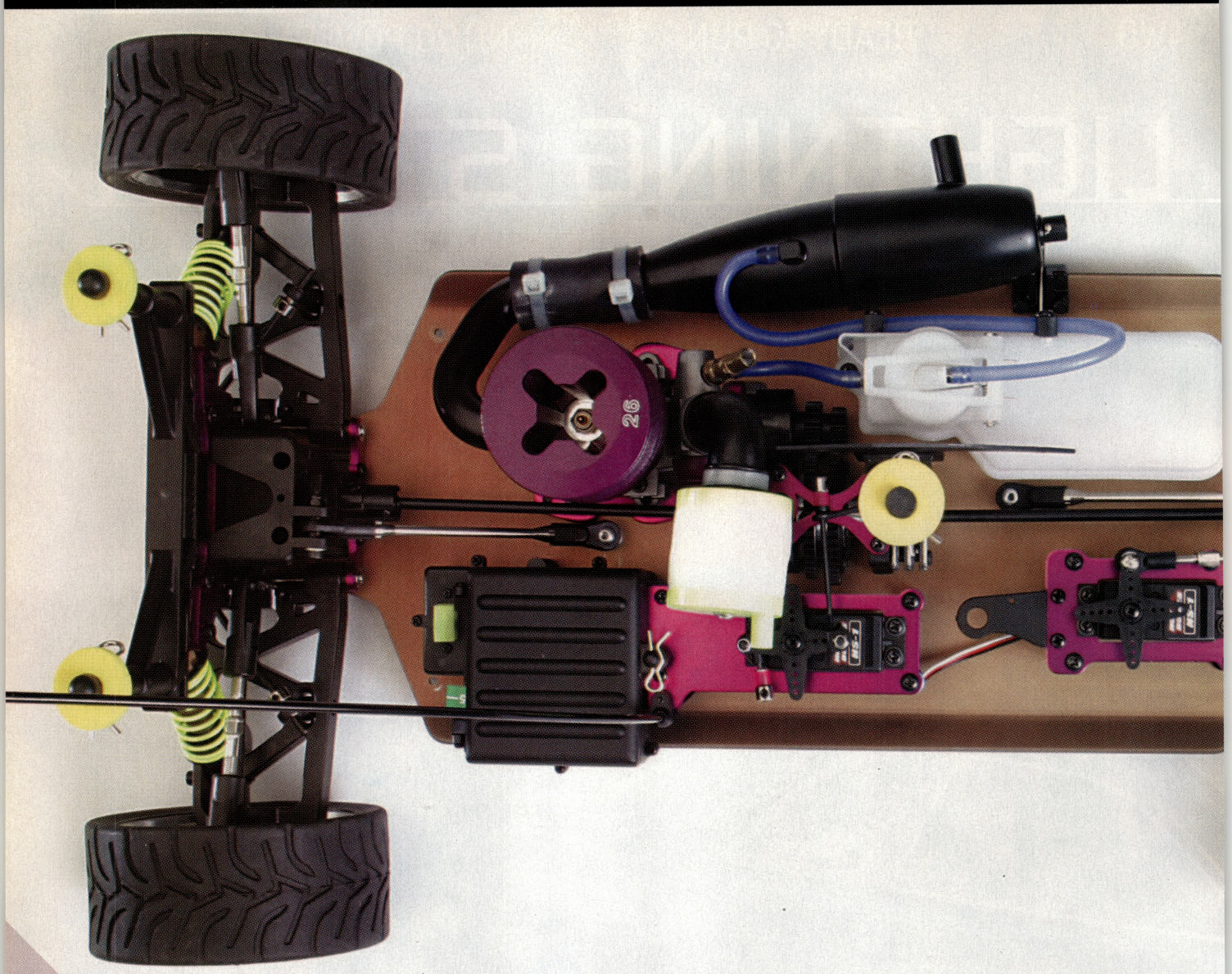


And now for something

LIGHTNING STREET



completely different!



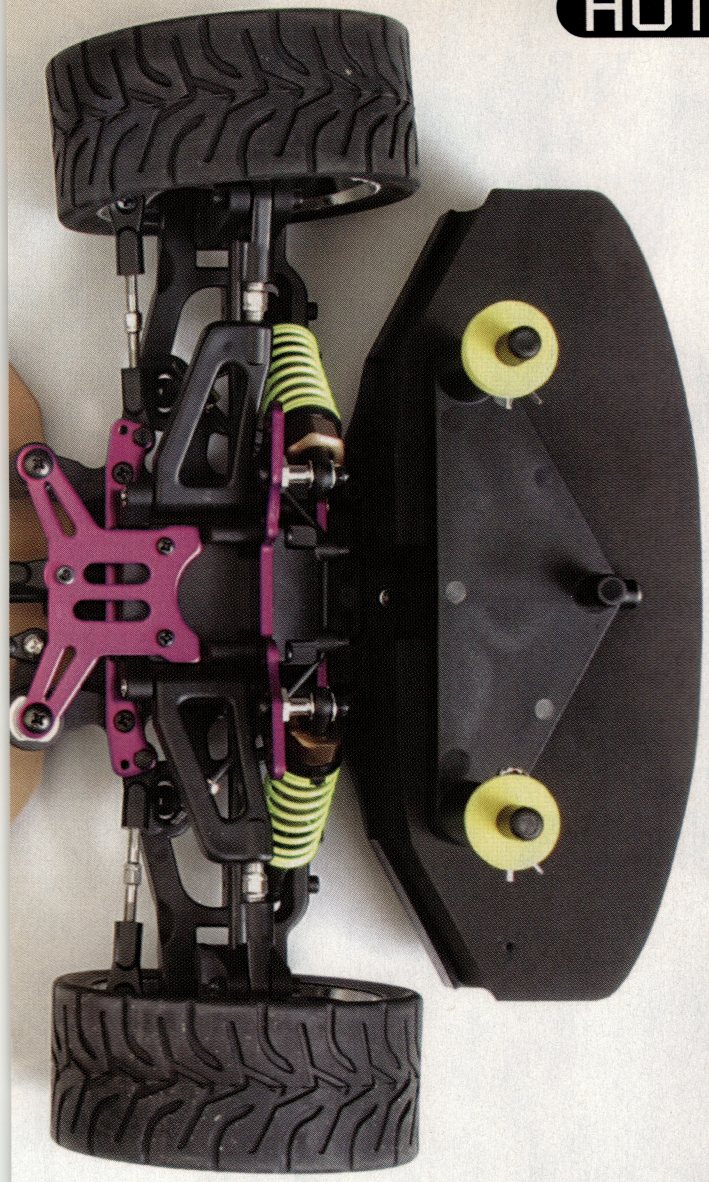
OUTSTANDING FEATURES

In order to convert the Lightning buggy to a touring car, Hot Bodies had to perform quite a bit of engineering surgery. First, the car's wheelbase had to be stretched to achieve the proper scale proportion. For this purpose, a new, gold-anodized 2.5mm-thick aluminum chassis was created. The Lightning's sealed gearboxes were retained for use at the front and rear of the street version, however new, longer center driveshafts were designed to accommodate the extended wheelbase.

In the middle of the car resides a beefy two-speed transmission. On the buggy version of the Lightning, there is a center differential to apportion power between the front and rear end. On the street car, the two speed provides equal 50/50 distribution of power. For bulletproof durability, both of the two-speed's spur gears are made from steel. For stopping power, the Lightning Street has a dual-disc brake setup at the front of the two-speed. The discs are made from nylon, which is prone to melting and premature wear, however, the brakes on our test car worked extremely well, with little sign of wear.

The overall appearance of the chassis is "spread out." There's a lot of room on there, so Hot Bodies decided to go crazy and install a huge 200cc fuel tank - nearly twice the capacity of a typical 1/8-scale buggy. This tank will provide about 15 minutes of run time between refuels; more track time for sure! Again, this is a large chassis, but without much bracing in the middle. As a result, there's some disconcerting chassis flexing occurring just around the two-speed area. We didn't notice its effects on handling, however we'd like to see this area bolstered a bit.

The motivation for this nine-pounds-plus land-missile comes from Hot Bodies' very own .26 rear-exhaust nitro engine, which moves the Lightning Street with surprising authority. The response from the dual-needle carburetor is fantastic, thanks in part to a very direct linkage between the carb and the throttle servo. Hot Bodies' very own version of HPI's Roto Start (HB calls theirs the Jump Start) is included with the car, so you'll need to scare up an old six-cell pack in order to enjoy the convenience of electric starting. This starting system consists





Hot Bodies includes nearly everything needed to run the Lightning Street. You have to buy fuel and a six-cell pack for the starter.

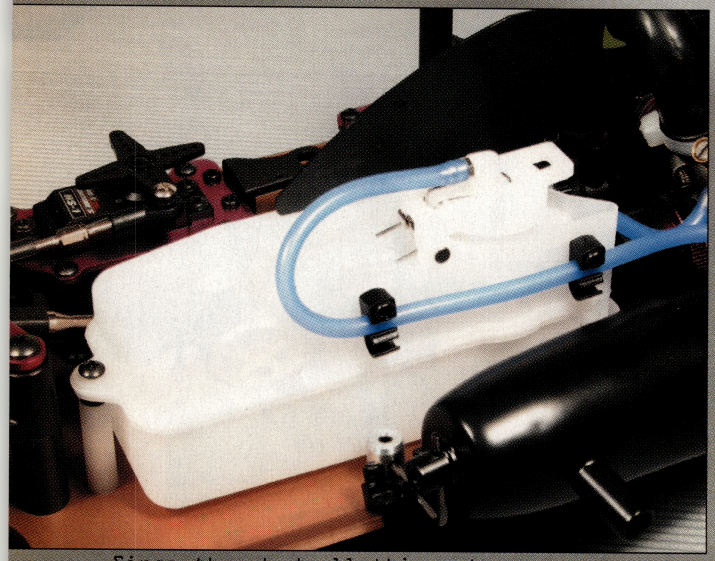


Dubs: These huge road meats not only look great, but provide decent traction. The five-spoke chrome wheels add "bling."

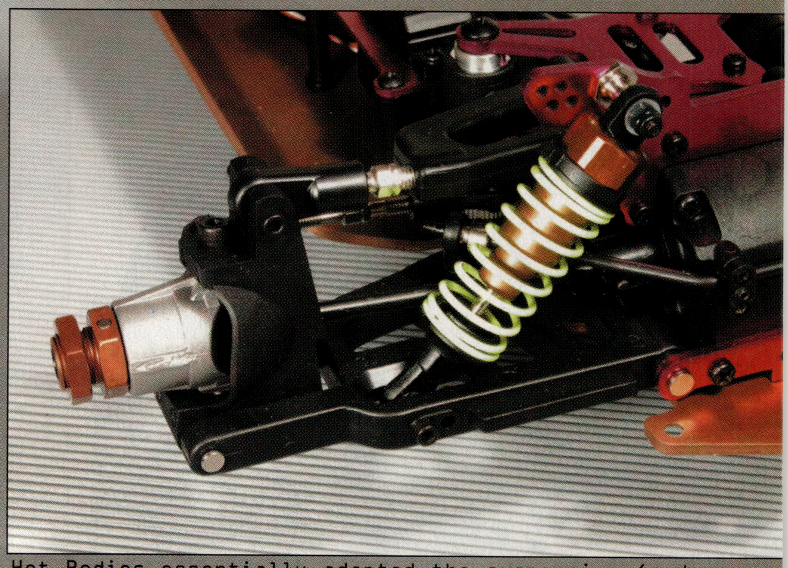
of a handheld 12-volt starter motor and a hexagonal steel shaft, which inserts into a drive cup located at the engine's backplate. It sure beats yanking on a pull-starter. An aluminum, tuned exhaust-pipe comes standard, and gives the Lightning Street its mean-sounding engine note.

Fully independent suspension helps the Lightning Street stay in contact with the road. Long-travel double-wishbone suspension is used up front, with traditional C-hubs and adjustable-length upper wishbones for easy camber tuning. In back, the Lightning Street uses beefy lower A-arms and adjustable upper turnbuckle tie-rods. All four suspension assemblies are damped with large-volume, oil-filled aluminum shocks. Cornering is further improved with wire-style anti-roll bars at both ends.

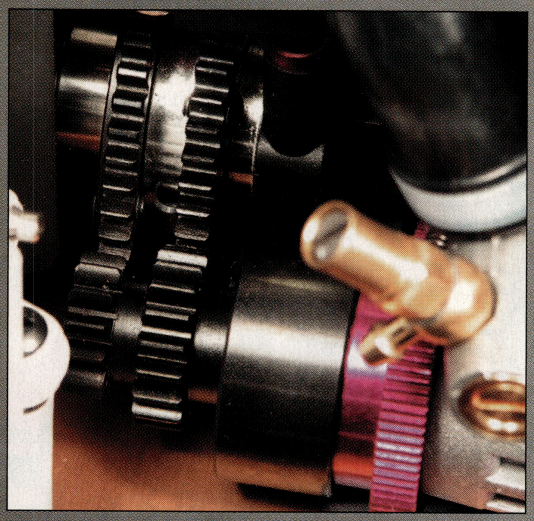
The Lightning Street comes nearly ready to run straight from the box. The body comes pre-painted (in blue only - but it's a nice shade), and you must apply the supplied pre-cut decals and attach the rear wing using the provided hardware. The two-channel pistol-grip radio has already been setup to match the pre-installed servos. You don't even have to supply batteries; Hot Bodies provides twelve AA cells for the radio system. You'll also be pleased to see that the Lightning Street also comes with a glow-plug igniter, a large fuel bottle and a T-handle wheel/glow-plug wrench.



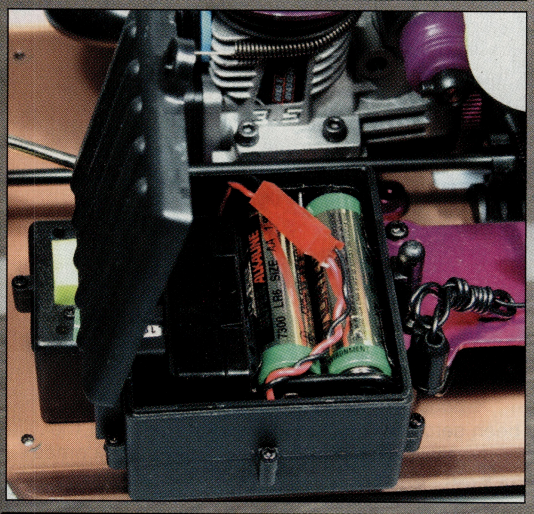
Since they had all this extra room on the chassis, Hot Bodies gave the Lightning Street a huge 200cc fuel tank for extended run times.



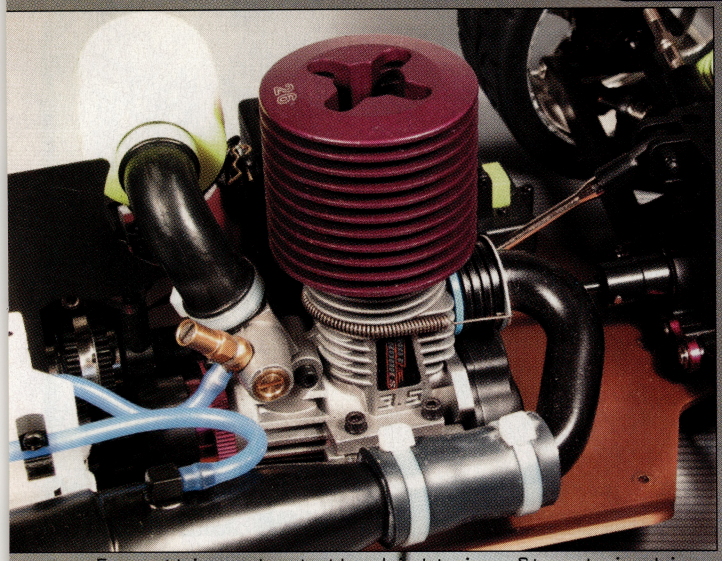
Hot Bodies essentially adapted the suspension (and much of the rest) of its Lightning 1/8-scale buggy to create the roadgoing Lightning Street.



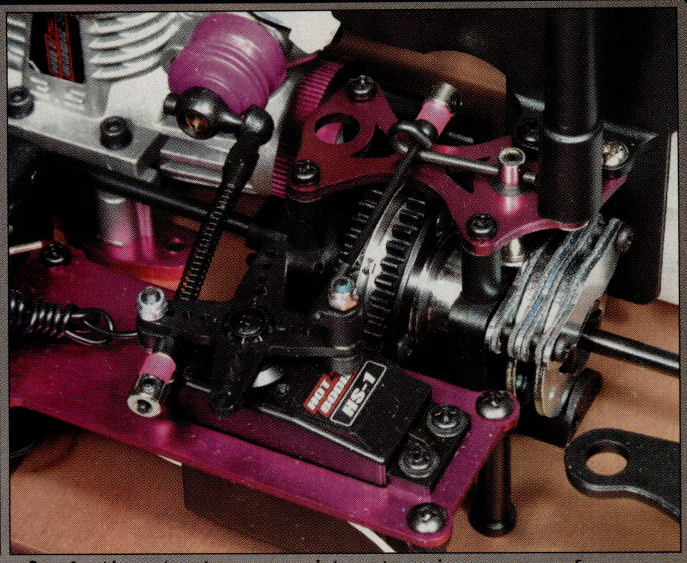
A beefy two-speed transmission comes standard. Note the heavy-duty steel spur gears. You won't strip these puppies.



A large radio box makes it easy to change crystals or batteries by the removal of just a single retaining clip.



Everything about the Lightning Street is bigger – even its engine, which is an immense .26 big-block!



Dual-disc brakes provide stopping power for all four wheels. As there is no center diff, the drive is split 50/50 between front and rear wheels.

HOT BODIES LIGHTNING



REPORT CARD

Test location: KZ Speedway, Sun Valley, CA
Test conditions: large, permanent asphalt roadcourse

Getting started: A

It's very easy to get the Lightning Street up and running. The only items you'll need to supply are fuel, a six-cell battery pack and a C-size battery for the glow igniter. Everything else is provided. The engine's factory settings were very good for initial break in.

Acceleration and speed: B+

Surprisingly, the Lightning Street doesn't feel as large and as heavy as it is when driven. The big-block .26 engine, coupled with the two-speed transmission, really moves this big sedan. Acceleration is brisk, and it was really easy to initiate low-speed donuts by burying the throttle. Once the tranny shifts into second, the Lightning Street really takes off. Our top speed runs were limited by space (the car needs a huge area to really max out), however we estimate the car's top speed to be in the neighborhood of 47 to 50 mph.

Low speed steering: B-

With an inflexible 50/50 drive ratio between the front and rear wheels, the Lightning Street tends to push at lower speeds. It's easier to enter tighter turns by initiating a drift using the brakes, rather than by using the steering alone. Once the rear end is broken loose, the car is fairly controllable using the throttle. Some type of front one-way drive would improve low-speed steering response. We added a bit of toe-out to the front wheels, which seemed to help the car's turn-in steering.

High speed steering: B

Once the car is up to speed, the steering response becomes sharpened. Throughout fast sweepers and when exiting turns on power, the Lightning Street holds a fairly tight line and feels quite nimble and responsive. It remains flat during fast left-right transitions, thanks in no small part to the stiff anti-roll bars and shock springs.

Braking: A

We had to dial-out a lot of the Lightning Street's brakes because they were too strong. As set from out of the box, the brakes are way too powerful, and will lock up all four wheels in a split second. As the radio doesn't have an EPA feature, the brakes must be adjusted by resetting the linkage.

Durability: A

This is a big, burly car, and it's built to be rugged. The massive front bumper also contains a large hunk of impact-absorbing foam rubber to ward off those high-speed snafus. The nylon suspension pieces are also up to the task of handling more than the normal amount of abuse. The proven, shaft-driven 4WD system is virtually impervious to damage from dirt and rocks.

FINAL SCORE

Highs: Unique size definitely draws stares! Tons of fun to drive on any paved surface (provided there's enough room). Overall quality is very good, with excellent assembly quality and factory settings. The Nissan Skyline GT-R body is nicely sculpted and looks supremely cool in this size.

Lows: Low-speed understeer, chassis flexing.

The verdict: We love it when a manufacturer breaks from convention, and this is what Hot Bodies has done with the Lightning Street. This car is made for fun, and fun is what you will have. Nothing short of off-roading will slow this car; rough and bumpy pavement poses no problem whatsoever. If you like nitro on-road, but would like a car that's more substantial than the typical 1/10-scale, definitely check out the Lightning Street.

SPECS

Price:	$559.99 (varies with dealer)
Length:	27.75in/704mm
Width:	11.2in/285mm
Wheelbase:	16in/406mm
Track (f/r):	9.8in/249mm
Weight:	9 lbs, 3.2 oz (RTR)
Chassis:	2.5mm gold-anodized aluminum
Drivetrain:	shaft-driven, full-time AWD
Bearings:	full ball bearings
Driveshafts:	steel dogbones
Suspension:	ind. double wishbone
Shocks:	aluminum oil-filled
Tires:	treaded radial w/foam insert
Wheels:	five-spoke chrome



Big brother: As you can see, the 1/7-scale Lightning Street dwarfs a standard 1/10-scale nitro sedan.

SOURCES

Hot Bodies, 27469 Colt Court, Temecula, CA 92590 • phone (909) 296-9340; fax (909) 296-9343
SideWinder Performance Racing Fuel, produced by Morgan Fuels, P.O. Box 311201, Enterprise, AL 36331 • phone (334)347-3535

Get the most out of your monster!

3PM-FS

Synthesized FM Computer Radio

Ground poundin', hill climbin', car crushin'...that's what monster truckin' is all about. And just when you thought it couldn't get better, along comes a radio that allows you to change your frequency whenever you want!

The 3PM-FS from Futaba is designed with the serious monster trucker in mind — especially owners of top-of-the-line trucks like the Traxxas® T-Maxx™ and HPI Savage. With the 3PM-FS, you'll enjoy precision control and razor-sharp response, thanks to its advanced computer technology. If you're into functions, the 3PM-FS has 'em in spades...and you'll be amazed at how easy it is to access and program every one. Plus, this radio is synthesized, so you can change your frequency when another driver is using the same channel.



Once you've upgraded your monster truck model with the sophistication of the 3PM-FS, you'll wonder how you ever got along without it!



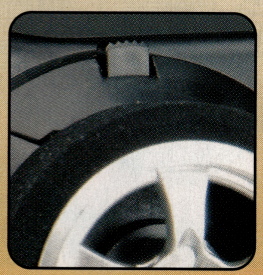
A special section in the instructions shows you the perfect radio setups for the T-Maxx and Savage!



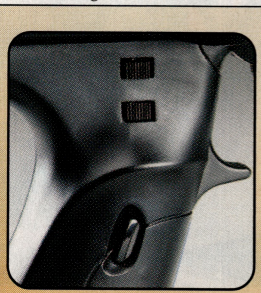
Menus and functions are clearly displayed on the high-resolution LCD screen.

You want features? Check these out:

- High Response System (HRS) compatible
  - -Digital servos required
- Condition switch
- Alarm buzzer
- LCD screen with high intensity blue LED monitor
- 10-model memory
- Model copy and clear functions
- Model naming
- ABS braking
- Brake mixing for large cars
- One-channel program mixing
- Steering and throttle exponential
- Servo reversing on all channels
- End Point Adjustment (EPA) for all channels
- Multi-function timer up/down with 100-lap memory
- Steering dual rates
- Throttle ATL
- Digital trims
- Function select dial/switch
- Steering speed
- Charge jack for optional NiCds



The digital trims are placed directly above the wheel for convenience while driving.



Dual rates are located on the grip. Right below is the programmable 3rd channel switch, which you can use to keep reverse (or 4WD, engine starting, lights, etc.) within easy reach.



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The Rising Stars

Check your six

We're all familiar with our sport's superstars—they get most of the press, win the really big titles and sometimes have their own lines of products and kits. Just as these racers are on top of their game, there is also another level of talent waiting in the wings—the up-and-comers of tomorrow. These drivers might not receive the attention of the big names, so you may not have heard of them. However, we're very confident that you soon will. We recently attended two big events in Texas and California—the Nitro Open and The NORRCA Off-Road Nitro Nationals, respectively. These were end-of-the-year events and served as a reminder to us that two of these next level pilots need to be introduced and applauded for an outstanding year of racing.



RACER PROFILE: DEAN SEXTON

Age: 40
Hometown: Costa Mesa, CA
Has been racing for: 6 years
Sponsors: Kyosho, O'Donnell, Panther Tires, JT Racing, Airtronics
Career highlights: 2003 The Dirt/Pro-Line Series (first place overall, 1/8-scale pro class); Silver State Nitro Challenge (fourth place); top third at IFMAR worlds
Favorite pastimes: Being with the family, snow skiing, motocross and fishing

DEAN SEXTON

At forty years old, Dean Sexton is an inspiration to all older (err, more mature) racers, and he proves that you don't need to be a spring chicken to race at the top level of R/C. And on the subject of chicken, Dean is one of California's top poultry salespeople, and if you see him wearing a shirt with a chicken on it, or see the words "Chicken Man" on his buggy's wing, you will know why.

Dean is what you would call a specialist. This means he only competes in one discipline of R/C. His choice? One-eighth-scale buggies. His weapon of choice? Kyosho's Inferno MP-7.5.

Dean officially turned pro three years ago, after finishing well at the Silver State Nitro Challenge in Las Vegas, and following this, he was moved up to Kyosho's "A" team. Unfortunately, Dean struggled a bit last year, having a difficult time keeping pace with the top pros. Although he had some good finishes, he was still frustrated.

This year, Dean has addressed his shortcomings and has really been on the attack out on the track. Dean told us that he has worked through the teething issues of car setup, and for the last part of '03 has worked on improving his personnel demeanor, to become a better rounded racer and a more focused person in general. It all seems to be coming together for Dean, as during the last part of '03, he has really started to excel in the pro class, and has been barking at the heels of his teammates Jeremy Kortz and Greg Degani.

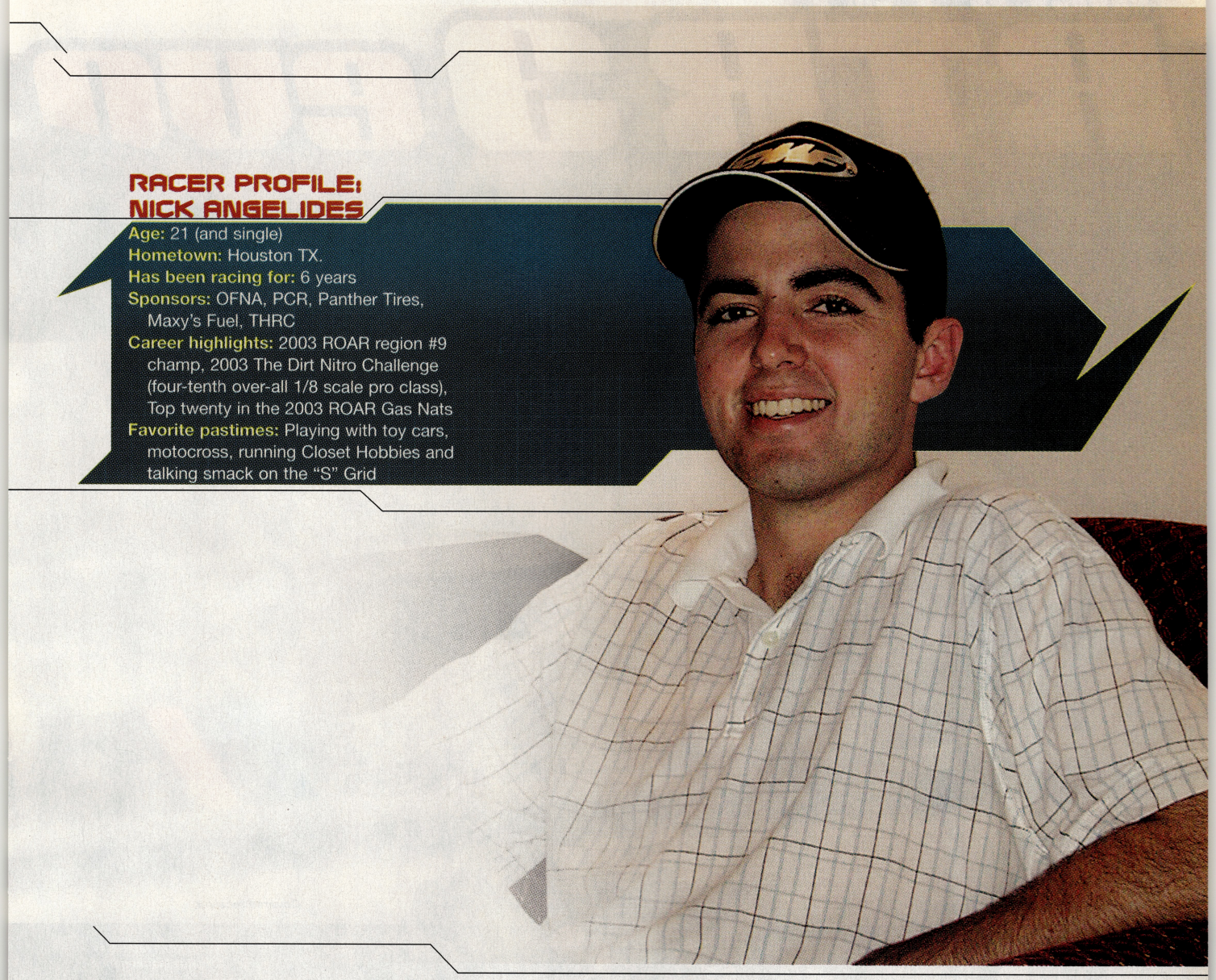
Dean capped off the race season with an overall win in the pro class at The Dirt and Pro-line's highly competitive Saturday Series. Dean also did well at the Silver State Nitro Challenge with a fourth-place finish, narrowly missing out on third place behind teammate and current World Champion, Greg Degani. He is currently twenty-seventh in the nation, and ranked in the top third at the '02 IFMAR world championships in Uruguay.

Going into the '04 race season, Dean has his goals set and his work cut out. As this is a Worlds year (IFMAR holds its world championships every two years), Dean's main focus will be on finishing in the A-main in Sweden (location for the upcoming Worlds). In preparation for this goal, Dean plans on going to the next level, consistently finishing in the top three at major events—and working on staying consistent.

Life is not all R/C for Dean. He likes to relax and spend time out with his three sons. The four of them can often be found together, riding motocross bikes, snow skiing and, if they can get the chance, a little fishing is always on the menu.

Dean Sexton is definitely a rising star, and we wish him the best of luck for this year's season. Dean is a worthy investment, and his sponsors can be proud of his accomplishments.

# of Nitro Off-Road



RACER PROFILE: NICK ANGELIDES

Age: 21 (and single)
Hometown: Houston TX.
Has been racing for: 6 years
Sponsors: OFNA, PCR, Panther Tires, Maxy's Fuel, THRC
Career highlights: 2003 ROAR region #9 champ, 2003 The Dirt Nitro Challenge (four-tenth over-all 1/8 scale pro class), Top twenty in the 2003 ROAR Gas Nats
Favorite pastimes: Playing with toy cars, motocross, running Closet Hobbies and talking smack on the "S" Grid

NICK ANGELIDES

Nick Angelides is one of the new crop of racers to come out of Texas. The Lone Star state is really becoming a hotbed for R/C, and "Little Nicky," as he is often called, is one of fastest of this emerging group.

At 21, Nick has been into R/C for six years, and in '02, he decided it was time to race the pro class. This proved to be a good decision, as he has done rather well following this move. Nick dominated ROAR's central region in '03, and finished in the top twenty at the '03 ROAR Off-Road Fuel Nationals in the very difficult 1/8-scale buggy class. Nick also did an excellent job—finishing fourteenth—at The Dirt Nitro Challenge, where most of the top pros go to warm up for the coming season.

Nick's performance soon caught the eye of Team OFNA, and for '04, Nick will have a full factory ride with them, traveling to most of the nation's most important events. Nick told us that Paul Coleman (OFNA's in-house nitro expert) has taken him under his wing, and Nick has now become Paul's unofficial "sidekick." Paul plans on grooming Nick for pro racing, and by what we have seen from OFNA's other young protégé, Josh Wheeler, Nick is on the road to success. Paul should open his own nitro *dojo*.

Nick's main push is in 1/8-scale racing, but he does race 1/10-scale trucks whenever he can. Next year, however, it will be all about 1/8-scale for Nick, because he really wants to do well at the Worlds in Sweden. On this subject, Nick asked us to inform you that he has started his own "Send Little Nicky to the Worlds" fund (details of this fund can be found by logging into the Starting Grid forum—*www.rc-racing.com*.)

Being an industrious lad, Nick has also started his own online business, called Closet Hobbies. The name stems from the fact that the inventory for Nick's "store" is kept in a closet—pretty clever.

We have seen Nick in action for ourselves, and he definitely has what it takes to challenge the established hotshots in the world of nitro off-road. Not only is he fast on the track, but he is also gracious and willing to help his fellow racers. These are two great qualities to have in a sponsored driver, and OFNA should be pleased to have Nick on their team.

Prepainted, Predecaled Body

2-Speed Transmission

Composite Tuned Pipe

High Performance T-15 Engine

Chrome Wheels

Tube Aluminum Header

nitro rs4 RTR3 evo

FOUR WHEEL DRIVE
4WD
MAXIMUM TRACTION ON ANY SURFACE

Chrome Split Six Wheels

Covered receiver

Removable radio tray for easy maintenance

High Performance T-15 Engine



T-15 FEATURES

- ABC construction
- Aggressive porting
- More power for higher top speed
- Large heatsink head for extra cooling
- Dual needle 5.5mm rotary carburetor
- Lightweight aluminum connecting rod
- Stealth black case for extra cooling
- Roto Start for easy starting

Tube aluminum exhaust header

Two-speed transmission

Dual chamber tuned pipe



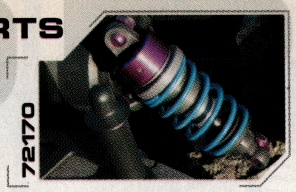
Complete Set of Ball Bearings Included



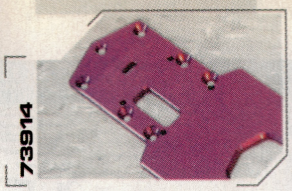
Pre-painted, trimmed body with decals applied!

AVAILABLE
OPTION PARTS

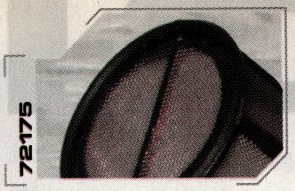
We offer a wide range of option parts to maximize the speed and performance of the RTR Nitro RS4 3 Evo. Visit our website for a complete list of parts at: www.hpiracing.com



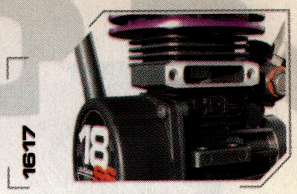
72170 Threaded Alum. Shock Set



73914 Super Chassis 3mm Alum.



72175 Performance Air Cleaner



1617 Nitro Star 18SS Engine



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Easy!
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#10002 RTR Nitro RS4 3 Evo with Dodge Viper GTS-R Body

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Carpet Cutting with the Losi XXX-S

Set your sedan for warp speed on foam tires!

By Todd Hodge

Most R/C racers usually head indoors during the winter (in most parts of the country at least), and switch their rubber slicks for foam tires, which are the hot setup on carpet. Running touring cars with foam tires on carpet is about the fastest thing you can race indoors. Strapped with a seven or eight turn motor, these 4WD bullets can be very fun to drive—especially since there is so much traction available on carpet. They can also be a handful if set up incorrectly. My goal with this article is to help you get your Team Losi XXX-S dialed on the rug. As with most of my tuning articles, many of the setups and tips can be applied to other brands of car as well.

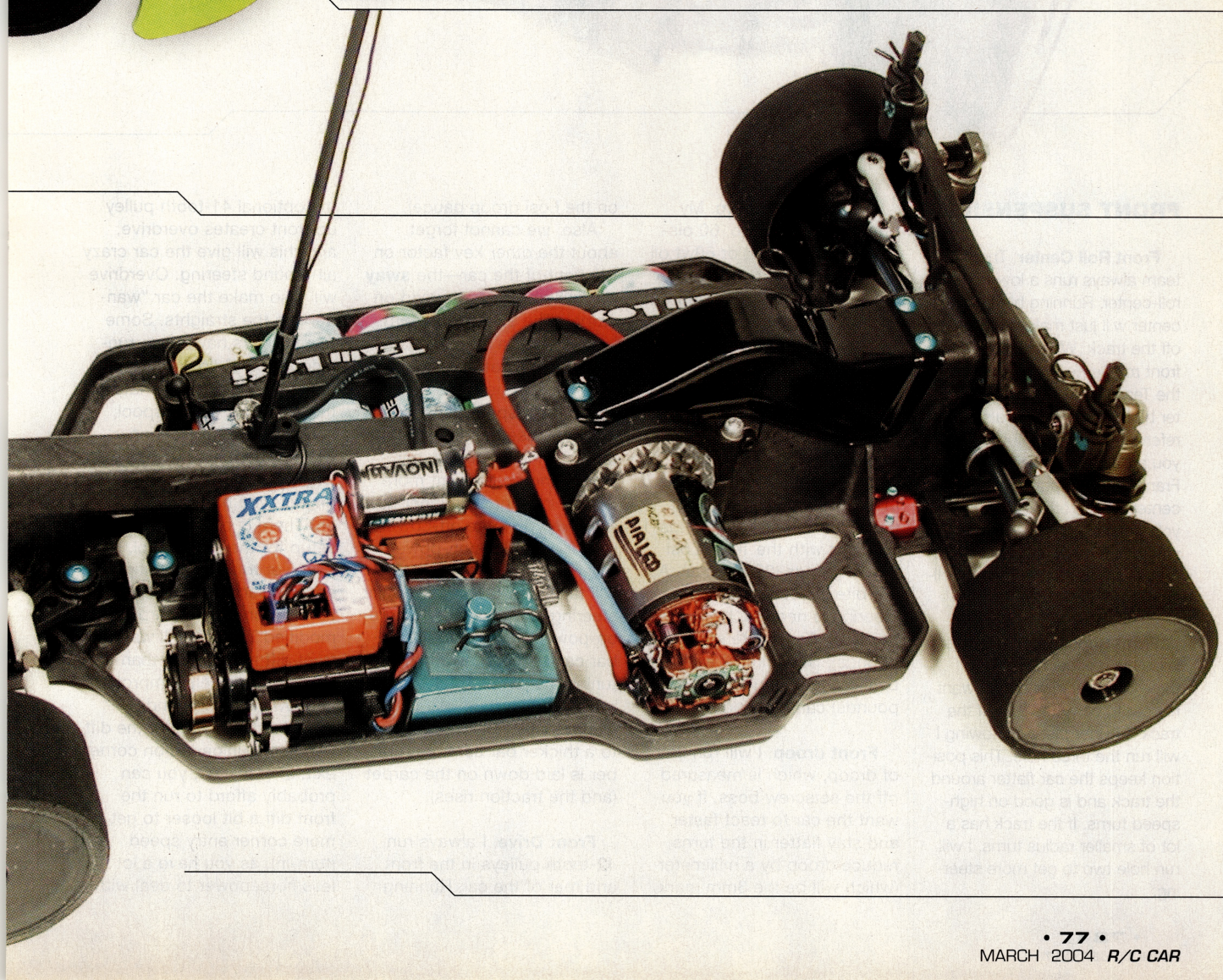


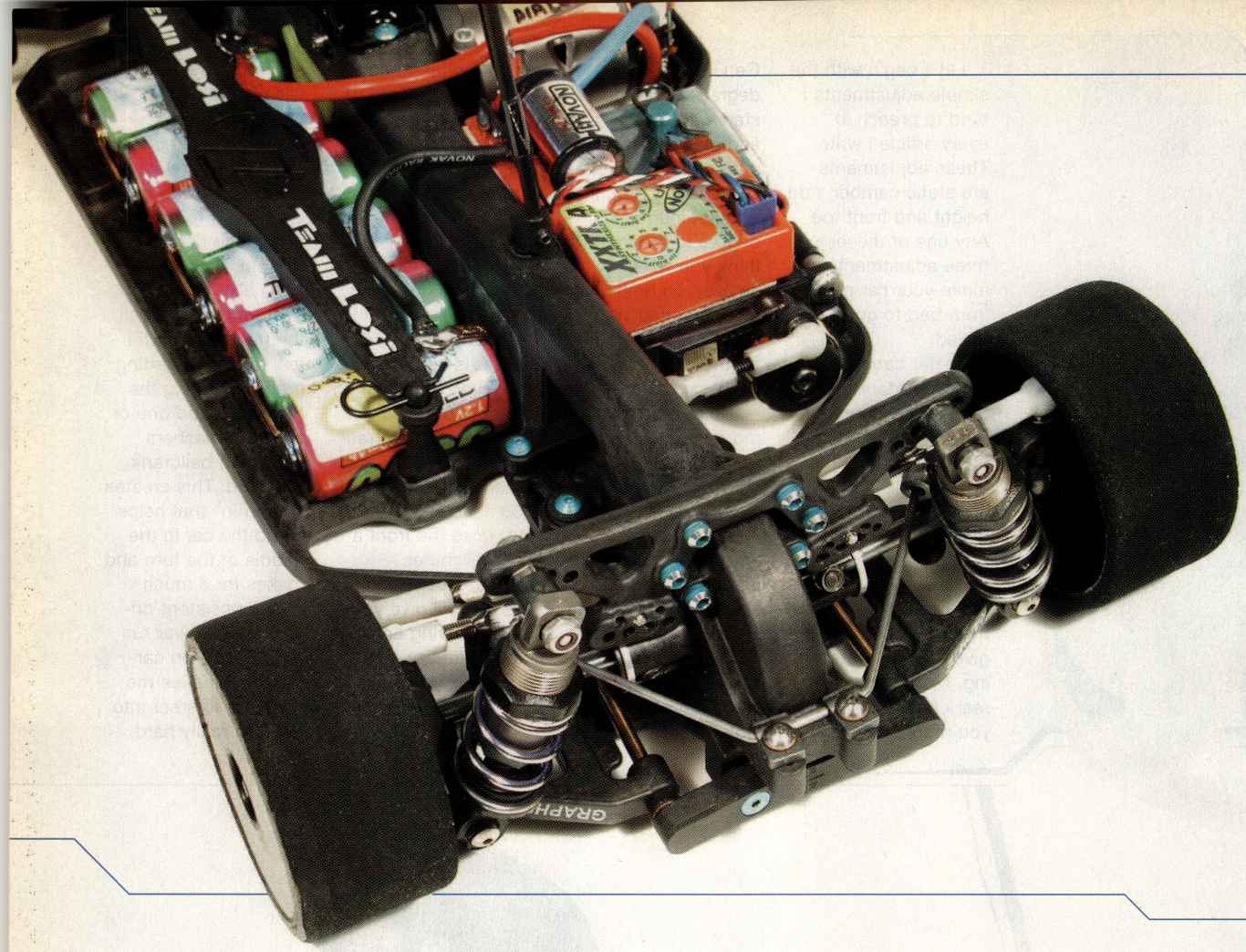
Let's begin with the simple adjustments I tend to preach in every article I write. These adjustments are static camber, ride height and front toe. Any one of these three adjustments can make your car go from bad to good to dialed.

Static camber is a very important tuning tool. A lot of racers like to get their camber adjusted so their tires wear evenly. This is a good way to start things off. You can adjust your steering by how much camber you have. More negative front camber will give you more steering. More negative rear camber will give you more rear bite. Generally, about one degree is good to start with on the front and rear. If you need a bit more steering entering the turn, just add another half-degree to the front. I think you will be amazed on how much more steering you will gain. The same goes for the rear. If you need more stability or rear bite, add a little more negative camber.

Next is **ride height**. Obviously, the lower the car, the better. You want to be careful on how low you go since you can start to seriously rub the carpet, which slows you down. You can simply see the rubbing by looking at the bottom of your chassis and noting the amount of built-up rubber. Some motor spray cleans that right off. Most tracks will want you to run at least a 4mm ride height so you don't snag their carpet. That's cool; you have to respect the track. Trust me, that carpet is not cheap! However, try adjusting the rake of the chassis by raising the rear to gain more steering entering the turn. Or if you need less steering, raise the front a half-millimeter.

Front toe. Running toe-out will give you more steering entering the turn and less on the exit. Too much toe-out can make the car wander down the straightaway. Toe-in will give less steering, or a smoother steering feel, entering the turn, and more steering on the exit. I generally tend to run about one degree of toe-out. Along with this I also mess with my bump steer at all the tracks I visit. If I feel my car is getting grabby entering the turn, I will add one or two gold washers under the bellcrank ball-stud. This creates "bump-in" that helps scrub the car in the middle of the turn and makes for a much more consistent driving feel. I never run "bump-out" on carpet, as it makes the car want to steer into the turn really hard.





FRONT SUSPENSION

Front Roll Center. The entire team always runs a low front roll-center. Running high roll-center will just make your car flip off the track. When I say low front roll-center, I mean using the Team Losi low front roll center blocks that can be also referred to as mid roll-center. If you are going to use the Matt Francis Red Anodized low roll-center blocks offered by Trinity, you will have to use .075-inch shims between the chassis and the mount to match the mid roll-center height.

Front Shock position. This will stay in either hole two or three depending on how I want my car to carry the turn. If the track is super fast and flowing I will run the three hole. This position keeps the car flatter around the track and is good on high-speed turns. If the track has a lot of smaller radius turns, I will run hole two to get more steering.

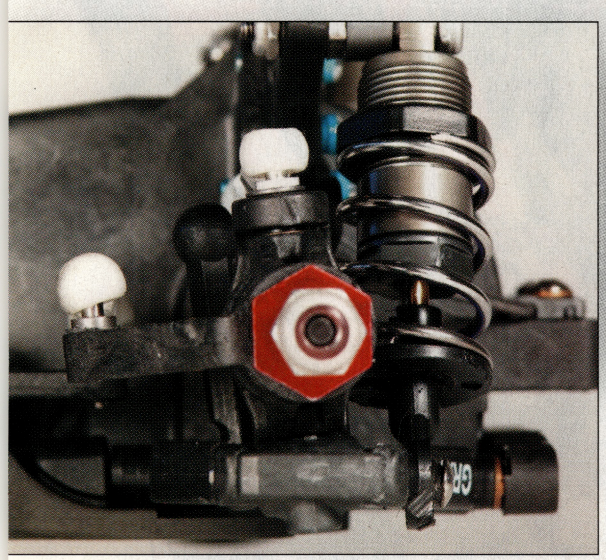
Front Shock setup. My basic setting is a no. 60 piston (tan) with 50wt or 60wt oil. The reason for so much pack in the front is to keep the front end from dumping over itself so easily. As for changing the oil, it depends on how much grip is available. If the grip is low, lighter oil is better, as it will give you a car that is faster to react. As the bite increases, I will bump up the oil by 10wt to make the car more consistent. For springs, I will start with the Team Losi Black springs (25 pounds). As the bite increases, and less steering is needed, I will go to the Team Losi white spring (30 pounds). Sometimes, even the Losi orange springs (35 pounds) can be used.

Front droop. I will run 2mm of droop, which is measured off the setscrew boss. If you want the car to react faster and stay flatter in the turns, reduce droop by a millimeter (which will be the 3mm mark on the Losi droop gauge).

Also, we cannot forget about the other key factor on the front of the car—the **sway bar**, which is always used on carpet. The sway bar helps keep the car a lot flatter over the front, makes it easier to drive and at the same time increases responsiveness. I generally use the .070-inch or the .080-inch diameter bar depending on if I want more or less steering. A thinner bar will give you more off-power steering and less on-power steering, and the thicker bar will take away some off-power steering and give a little more on-power steering. A sway bar can be used as a helpful tuning aid as the track's bite increases. I will usually begin with a thinner bar, then move to a thicker bar as more rubber is laid down on the carpet (and the traction rises).

Front Drive. I always run 42-tooth pulleys in the front and rear of the car. Running the optional 41-tooth pulley up front creates overdrive, and this will give the car crazy all-around steering. Overdrive will also make the car "wander" on the straights. Some team drivers have been running "spools" (locked front diffs), but I personally hate those things. With a spool, you will have no steering when entering the turn, and when you pick up the throttle on exit, you had better hold on! There is probably a decent setup for the front spool, but I have yet to find it. Diff tightness is also an important setting for running on carpet. In modified TC, you will want the front diff a bit tighter than the rear diff. This helps improve on-power steering and reduces the chance of the diff becoming unloaded on corner exit. In stock TC, you can probably afford to run the front diff a bit looser to get more corner entry speed (turn-in), as you have a lot less horsepower to deal with.

Carpet Cutting with the Losi XXX-S



SPRING RATES

Here is a list of springs that are commonly used on carpet with foam tires. The springs are identified by color and rate.

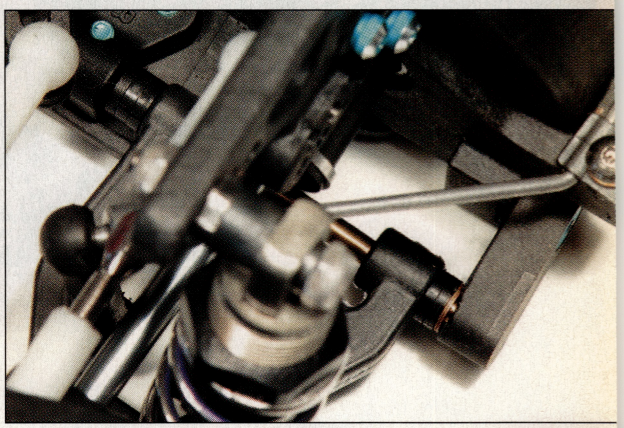
Team Losi carpet springs

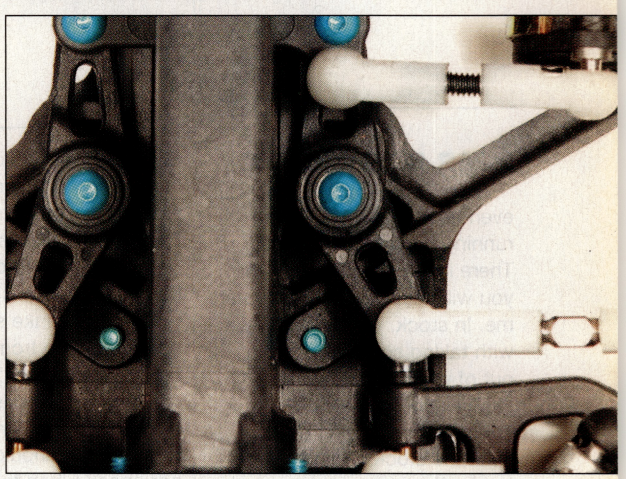
- Purple: 20 lb.
- Black: 25 lb.
- White: 30 lb.
- Orange: 35 lb.
- Yellow: 40 lb.

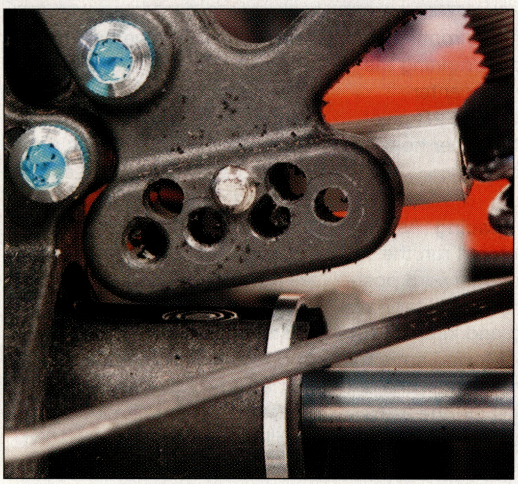
Trinity "Congo" springs

- Blue: 25 lb.
- Purple: 30 lb.
- Yellow: 40 lb.

Front kick and caster. Ninety-nine percent of the time we run minus two degrees of front kick, which is called anti-dive, and then run six degree caster blocks. This gives us a total of four degrees of total caster. The advantage to running anti-dive is that it keeps the front of the car flatter through the center of the turn and gives the car more on-power steering. This tends to make the car smoother to drive versus running zero degrees of kick with four degree caster blocks. You can take away some caster in the blocks by running four degree blocks; this will give you more overall steering and a faster reacting car, which may be good on tracks that have a lot of chicanes. One thing to remember when you switch to less caster in the blocks: you should compensate with at least one .030-inch washer on the bellcrank to keep the same bump steer. Just in case some of you that do not know how to get the minus two degrees of anti-dive in your car, all you have to do is run the "0F" block in the low roll center holes with the Team Losi low roll center blocks provided with the XXX-S Graphite Plus kit.

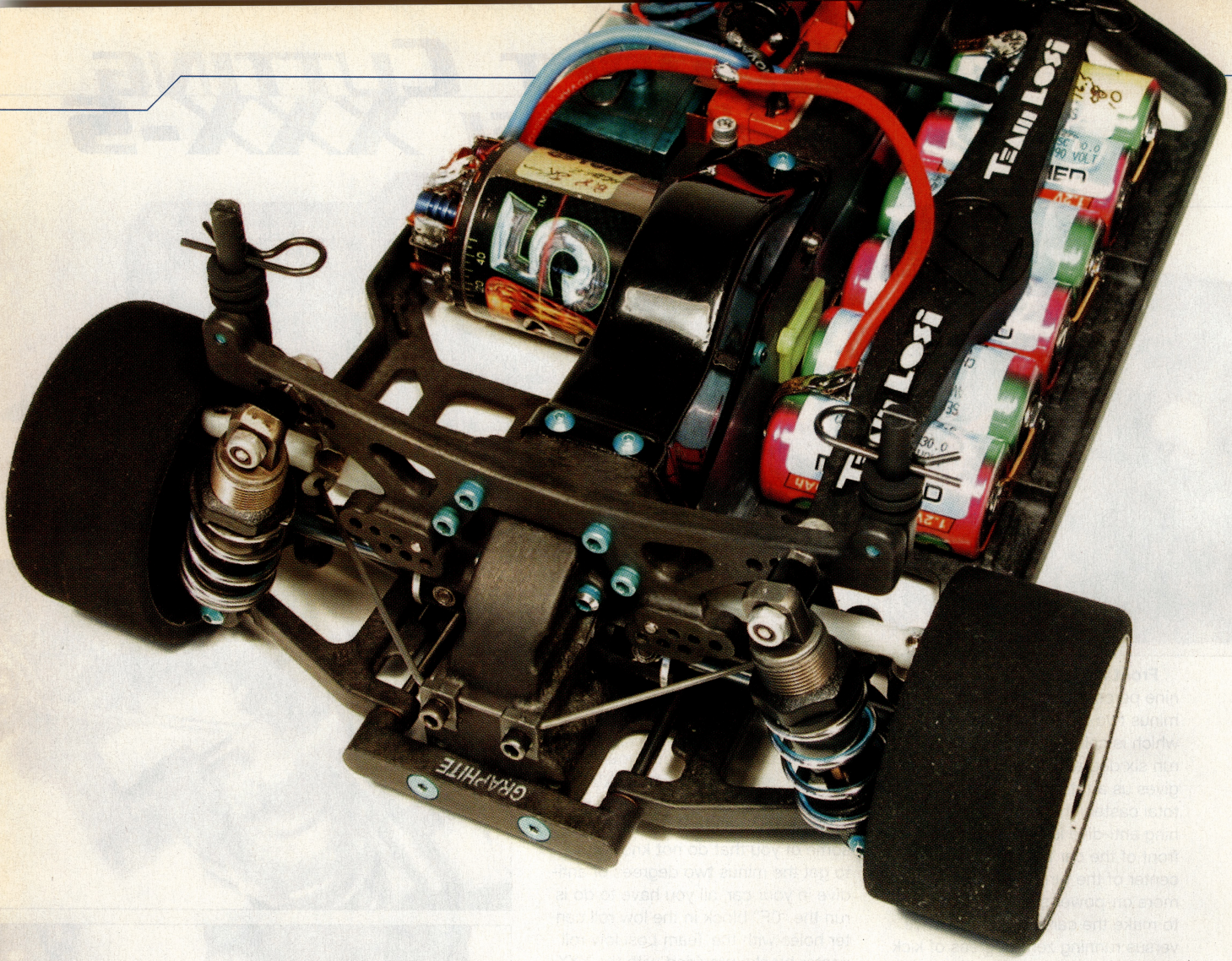






Front Camber position. Most of the time I will run a new optional hole that I have drilled. This hole is above and between holes two and three in the shock tower. This camber link takes away some of the camber gain and gives the car a flatter feel when the bite comes up. If I am on a lower bite track, I will run hole three to gain steering, but as the bite increases, and the car becomes harder to drive, I will raise the link to the optional hole.

Front arm spacing allows you to shorten or lengthen the wheelbase of your XXX-S and Graphite Plus. It also affects the angle of your dogbone. On carpet I will run my arms from all the way forward to, plus another 0.10-inch forward. Moving the arms further forward just decreases steering and sensitivity. You can move the front arms even further forward by trimming 0.10-inch from the front pivot and then adding the same thickness in shims to the back of the front arm. I feel this helps smooth out the car's steering quite a bit and makes for a more consistent car. Other drivers tend not to like this since it takes away steering. Once your arms are moved forward, you must compensate with the Ackerman. This is done by moving the steering posts to the forward holes in the chassis and flipping the bellcranks 180 degrees (so the short end of the bellcrank is to the front of the car). If you didn't flip the bellcranks, you would gain a little more steering around center and some additional on-power steering.



REAR SUSPENSION

Rear Toe. Why would you even need rear toe-in when running on high-bite carpet? There is plenty of traction, but you will need rear toe-in—trust me. In stock, you can get away with taking some rear toe-in out of your car to help the straight-line speed and corner speed. In mod, you need at least the stock amount of rear toe-in. If you want the car to be more stable, you can add more rear toe-in. Doing this will give the car a more hooked-up feel, but with less overall steering.

Rear roll center. The only roll-center you will need to run on carpet is the lower one. The high roll-center will only make your car traction roll and feel too hooked up. I have heard that some racers are cutting .080-inch from the rear roll center mounts to lower the hinge pins even more. They first cut the mounts with a Dremel tool, then sand them perfectly flat. You can also have the mounts custom milled. Just make sure the parts are even from left-to-right and that they're perfectly flat. Performing this modification "frees" the car in the turns, which should help corner speed when the bite comes up.

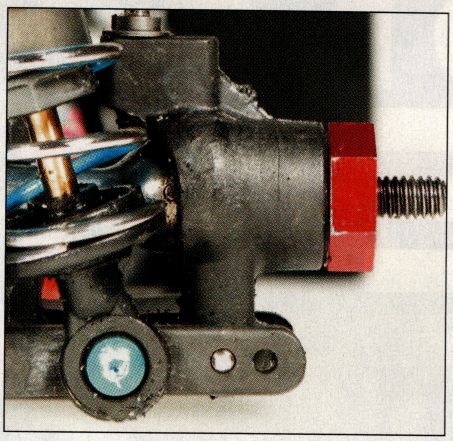
You obtain the same zero degree squat by using a 2R block in the low roll-center holes. I mostly run the 0R rear pivot-block, which provides zero degrees of squat. At the ROAR On-Road Carpet Nationals in Minnesota, the track demanded a lot of on-power steering, so I ran about two degrees of pro-squat (when the rear of the hinge-pin is higher than the front). This was achieved by running the standard low roll-center blocks, but with the 2R pivot mounted in the upper holes on the diff cover.

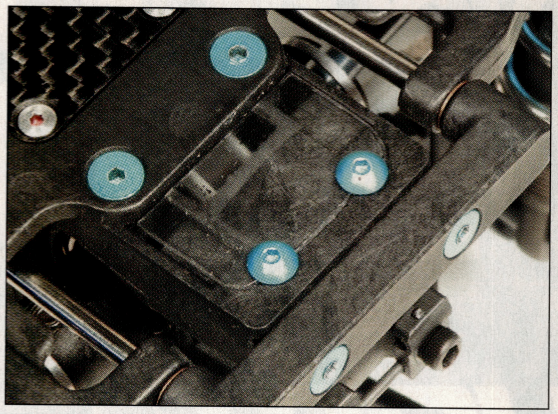
Rear arm spacing. As with my asphalt setup, I run the arms in the full-rearward position, as this helps the car have more steering and keeps it easy to drive. Moving arms forward will increase rear bite and help the car initiate the turns more quickly.

Rear camber links. For a high-speed track with a lot of flowing turns, the 1/B position is probably the most consistent and easiest to drive. For tighter tracks, I like a slightly shorter link. I will normally start with the 1/A position, as this has good steering entering the turn and will let the car "bleed" the exit of the turn. If you want less steering into the turn and more on the exit, then 2/B will work best. A lot of this is personal preference, so try each link and see what works the best for you.

Rear Shock setup. My base setup is kept at no. 55 (orange) pistons with 50wt or 60wt oil. If grip is low, lighter oil is better, as it will give you faster reaction. As the bite increases, I will bump up the oil by 10wt. I will begin with Team Losi black springs (25 pounds), but as the bite increases and I want the car to stay flatter, the Losi white springs (30 pounds) are used. As for shock position, I keep them in the number three hole in the tower and the outside hole in the arms (which is never changed).

Carpet Cutting with the Losi XXX-S





Todd's XXX-S doesn't have a rear bumper. Instead, Todd covers the opening with a piece of scrap lexan. Weight savings? You be the judge!

Rear Arm length. On the Graphite Plus kit, you have the option of running a short rear arm or long rear arm (these parts can be purchased as options for standard XXX-S owners). On carpet with foam tires, we always run the shorter arms with more offset in the hub, as this provides more overall steering, which is so vital on carpet. The longer arms work, but usually yield slower lap times since the car is more hooked up.

A WORD OR TWO ON DROOP

To get the correct droop on my cars I will over-limit the front and rear shock and then unscrew the eyelet to get the correct droop. I install an additional .030-inch limiter in front and an additional .09-inch limiter in back. Setting the droop this way it makes the car much more consistent, as you are not worrying about the droop screws flexing on the bumpers. Rear droop is set at 5mm. If I add droop (4mm) to the rear of the car, it will hook up more in the center of the turns, and also make the car carry over the rear more when exiting the turn.

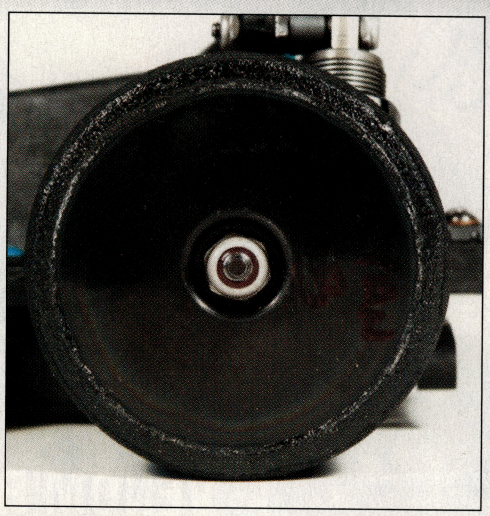
Other notables. The battery is always run in the forward position. I also use Team Associated drive hexes to space the wheels out so there is more room for the wider 26 to 28mm tires. You will also want to mount your body as low as you can—within the rules, of course. Having the weight low on your carpet TC is vital.

Tire Selection. I usually run TRC Plaid fronts and TRC Purple rear tires. If you want more rear bite, then a TRC Tan is the ticket. If you want more front grip, try a TRC Marble, and if even more front grip is needed, try a TRC Cyan. You can really change the way your car handles by just playing with tires.

Another adjustment tool is tire size. The larger the diameter, the more traction the tire will provide. On lower-bite tracks, a tire in the 59-60mm-diameter range will work well. When the bite starts to increase, you can true the tires down to 57-58mm to get the car to drive flatter and have less grip. Another tip for truing your tires is to make the fronts a bit smaller than the rear tires. This will under-drive the car, giving it less steering and making a lot easier to drive. I will run my front tires about 0.2mm smaller than my rear tires.

Another trick is to glue the outer sidewall of the front tire. This helps stiffen the sidewall and will make the front tire slide over the carpet instead of gripping and rolling over.

You can also play with tire sauce. I will usually sauce the full width of the rear tires and two-thirds of the insides of the front tires. If you want more steering, sauce more of the front tires, and if you desire less, only sauce about a third of the fronts. Normally, in stock racing, you will end up saucing less of the front tire since you will have more steering than with a mod motor.



TIRE HARDNESS GUIDE

Here is a list of the TRC tires, by hardness, that we use for carpet racing:

Front tires

Compound	Durometer Reading
Cyan	35 inside ring/45 outside ring
Marble	37 inside ring/45 outside ring
Plaid	40 inside ring/45 outside ring

Rear tires

Compound	Durometer Reading
Magenta	35
Tan	37
Purple	40
Lime	42

CONCLUSION

That should cover it for this month's installment of "Hodgimoto 101." Remember, if you have any questions about this or any of the articles I have written, you can email me at *thodge@horizonhobby.com*.

SOURCES

Team Losi, Inc., 4710 E. Guasti Rd., Ontario, CA • (909) 390-9595

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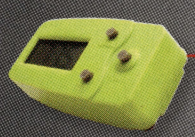
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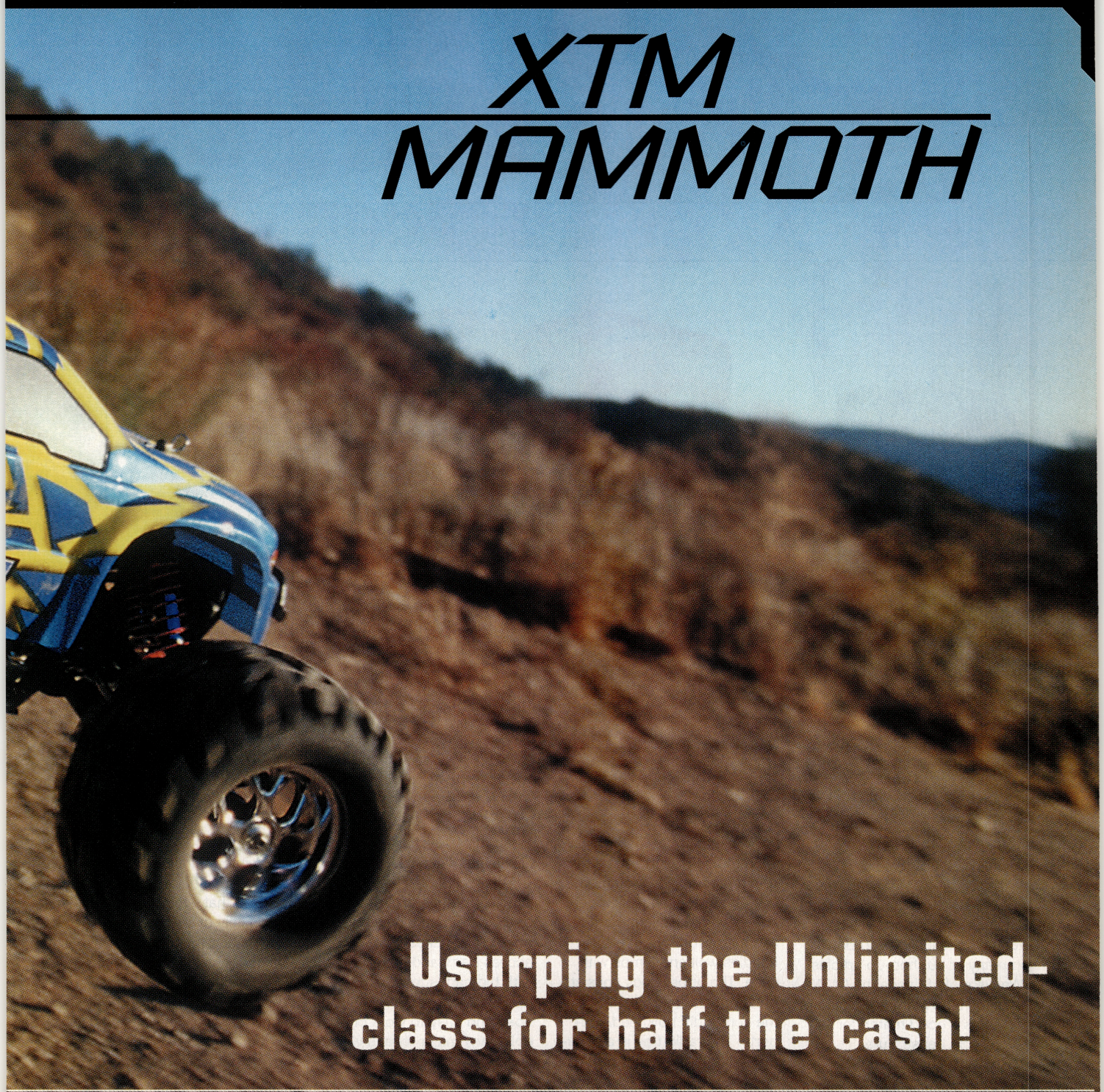


BATTERY MONITOR

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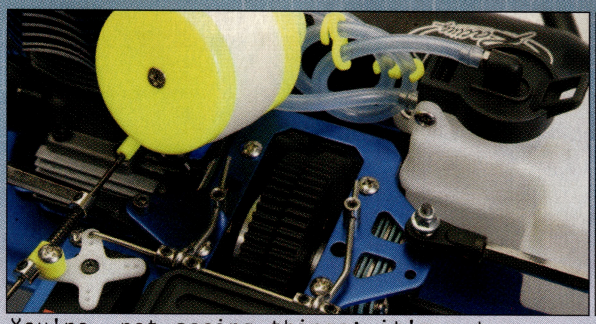

XTM
4X4

XTM MAMMOTH

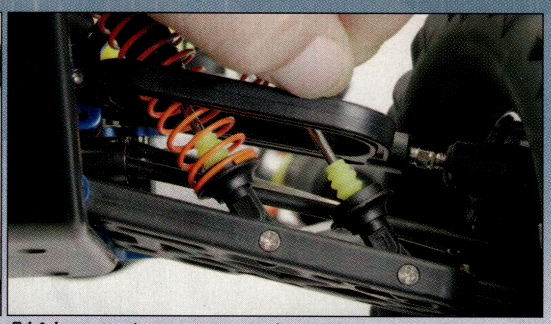


Usurping the Unlimited-class for half the cash!

We love Mammoth, California. Great snow skiing, great motocross and great mountain biking. So when the new XTM Mammoth monster truck crossed our desks, we instantly were thinking of fun. Boy, we were not disappointed. The great minds at XTM Racing are on the ball once again, putting out another great RTR—this time on a HUGE scale! When they call this truck the Mammoth, they weren't joking; this thing dwarfs other monster trucks—even the Tamiya Terra Crusher. Just look at the comparison photo—it makes our project big block look like a mini truck. This is an RTR to be given serious attention—it's big, fast and it stays together. But enough gushing—is there more to the Mammoth than sheer size?



You're not seeing things: it's a two-speed transmission!



Silicone bumpers reduce harshness during violent suspension compression





OUTSTANDING FEATURES

OUTSTANDING FEATURES

POWER PLANT

The XTM 24.7 is one of the best "budget" big block engines you can get. We have touted its reliability and power in many of our hop-up articles. We were glad to see the 24.7 engine in the Mammoth, and its power is a good match for such a big beast. Sure, it's not a P5 or an O.S., but it has plenty of power and its delivery is on par with the best engines. Combine the 24.7 with the Mammoth's two-speed tranny, and you have some serious speed. As with all the 24.7s we have tested, this one performed well and ran like a top for our test.

CHASSIS & LAYOUT

The Mammoth's platform is an aluminum pan chassis that is 3mm thick—and seems to go on forever. The Mammoth has one of the longest wheelbases we have seen, but it seems to work out; the truck handles well and jumps with ease. The upper deck consists of two parts: the radio tray, and the center diff bulkhead/supports. The radio tray is a separate unit, and is easy to work on. The radio box is huge, and could be used as extra-parts storage! It is really easy to get to your electronics. After all, that's what RTR is supposed to be—easy to use. The center diff is also used as a brace for the chassis, and it's tied together to the bulkheads by two turnbuckles. This is a simple yet effective brace system, and helps make this long drink of water stiff, yet lets the chassis have some lateral flex.

The overall chassis layout is simple, and because of the size of the Mammoth, it is very open. This makes it easy to access parts and easy for guys with big hands to work on (such as our own Shrek). It's so open and easy to work on that doing any major repairs will be a snap. Again, for an RTR, this is smart thinking.

DRIVETRAIN

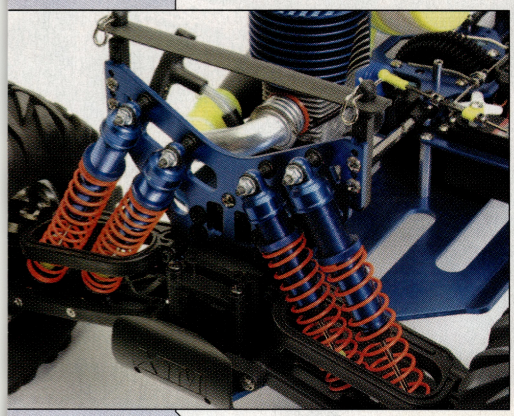
In layout, the drivetrain is similar to that of a 1/8-scale buggy, but the center diff is actually not a diff—it is a two-speed gear setup, and for once, someone has gotten it right. XTM went with a mammoth (pardon the pun) two-speed gear setup and has taken the load off the engine and clutch. Most of the Truggies we have seen have gearing that's too tall, and this effectively overworks the engine and fries the clutch components. Not with the Mammoth; the gears were designed with a big truck in mind and they make good use of the 24.7's broad powerband.

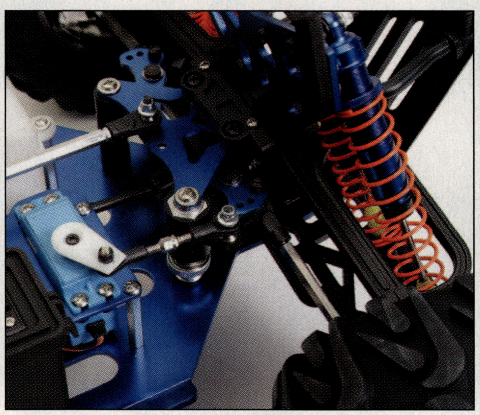
The diffs—one at each end of the truck—are borrowed from the X-Factor and X-Cellerator—we're not sure which, but there are similarities. The diff gears themselves are definitely borrowed from the X-Factor, and hold up well. To tie all the power together, XTM went with beefy steel dogbone driveshafts for the center, with large CV-type driveshafts for the wheels. When we say beefy, these things are some-

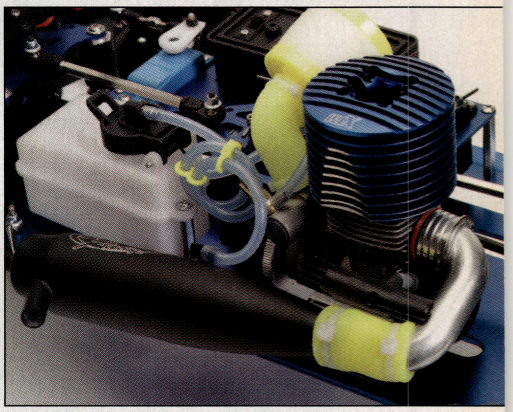
XTM MAMMOTH

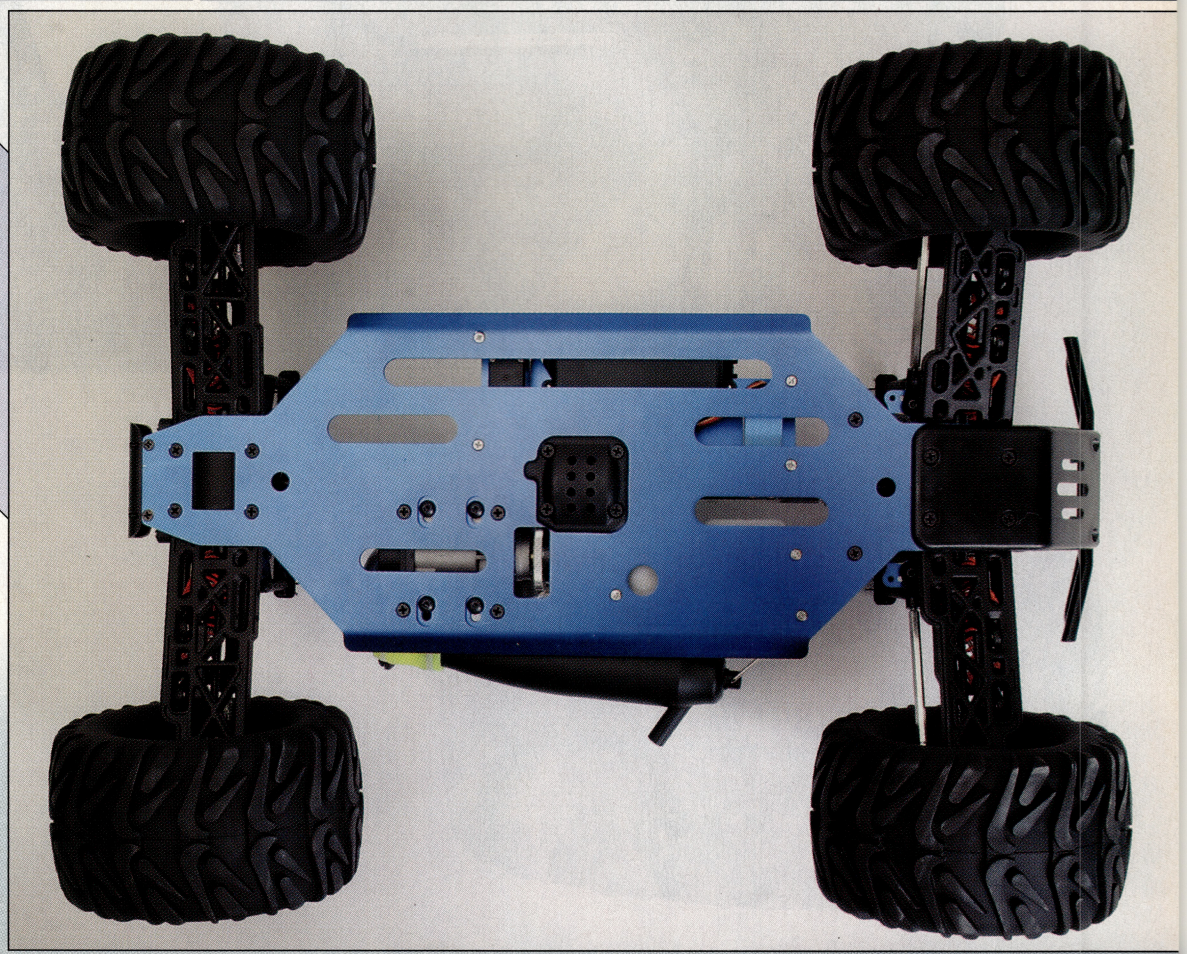
A TRUE "TRUGGY"

When XTM decided to name this truck the Mammoth, they couldn't have picked a more suitable moniker. But don't let its size fool you; the Mammoth is quick and handles pretty darn well for an RTR. In fact, we have a little story to tell you. Once upon a time, at the 2003 NORRCA nats at Hot Rod Hobbies, a stranger pulled up with a brand-new Mammoth freshly purchased from Hobby People. He entered the Unlimited Monster Truck class and broke in the engine during practice. We could not have been happier, because we had just received our test model and had yet to run a tank of fuel through it. Skinny got to see it in action (and feel its wrath) because he was running in the same class. Amazingly, this $400 RTR made it to the A-main against $1000-plus Truggies—which, by the way, the Mammoth is considered because it has a 1/8-scale buggy derivation. The moral of the story is that RTRs are becoming better and better, and XTM is leading the pack in quality, affordable RTRs for every class of R/C. By the way; XTM now has a top-ten national number under its belt, and I bet they don't even know it!

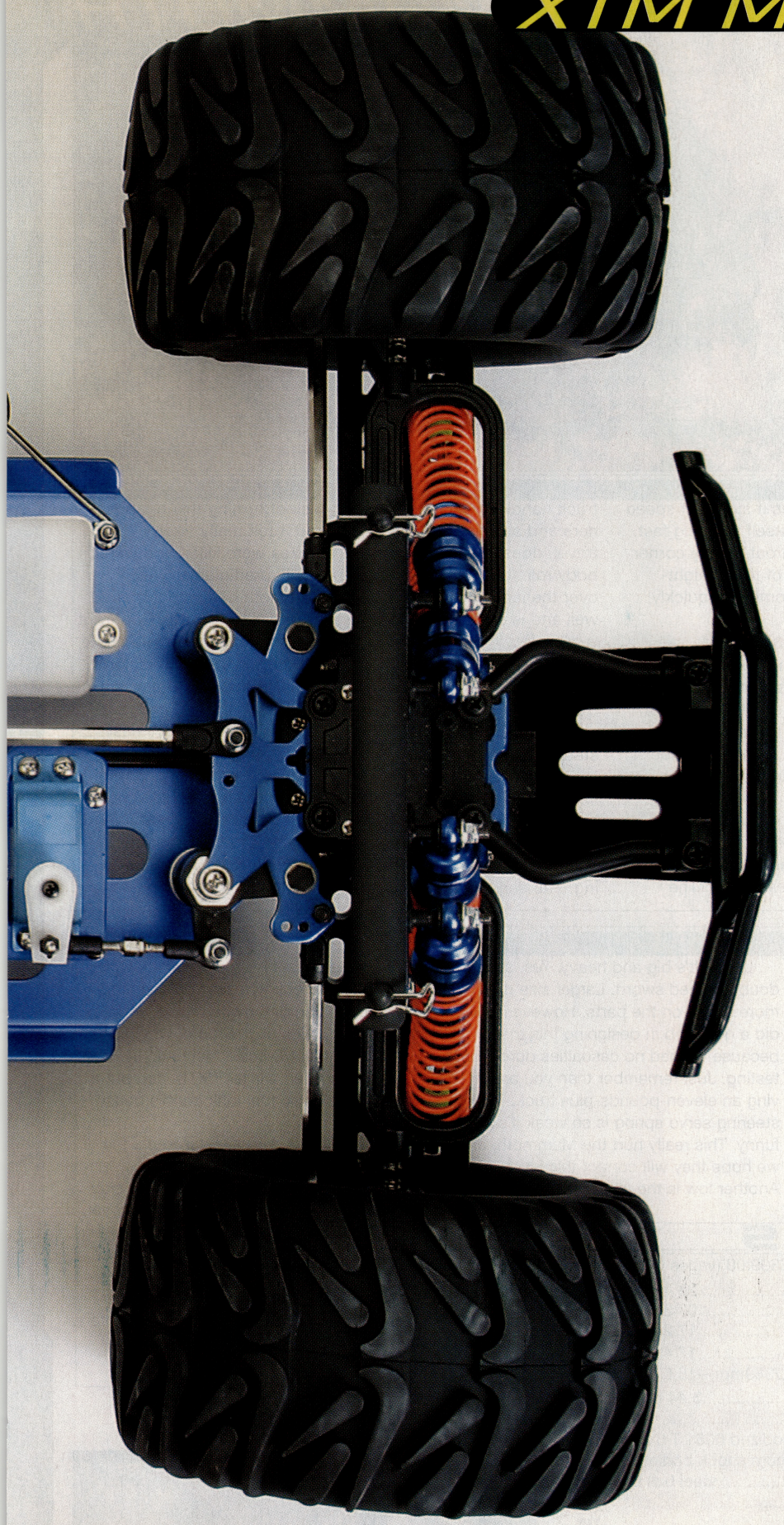








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thing like 4mm in diameter. We don't forecast many of these breaking, but the CV pin is a little on the small size. It's probably better for the pin to break than the whole shaft; it's much cheaper to replace the pin rather than the whole ball of wax.

SUSPENSION

When you first look at the Mammoth, you will see that the shocks are side-by-side; they're not laid out in the typical monster-truck fashion. The shocks worked well during our testing, although we do recommend that you put thicker oil in the Mammoth once you start to push it more. After we became used to how the truck handled, we started to blow through the suspension quickly. We will say this, however; the shock layout was a breeze to work on. It was very easy to change the oil; we went to 65wt and we saw better performance right away. To tell you the truth, we don't know what to think of this type of shock layout. It brings to mind too many variables to think about, i.e. spring rates, shock tower strength and A-arm flex. But we can say that it did work well and only time will tell if this layout is the new wave in monster truck suspension.

After looking at the suspension for a while, we got some ideas on additional shocks along with some interesting layout ideas. We expect the future arrival of some cool aftermarket products for the Mammoth—there are a lot of possibilities for sure.

The shocks themselves, on the other hand, were strictly top-shelf stuff. Aluminum threaded bodies, cool yellow "bottom-out" bumpers and decent springs. We were already thinking of other applications for these cool shocks, such as future project vehicles.

Overall, the suspension is good, and the A-arm and shock setup is a provocative design. We are curious to see how this system will work out in the long run.

XTM MAMMOTH



REPORT CARD

Test location: KZ Speedway, Sun Valley, California, (818) 771-1003

Test conditions: SoCal winter conditions—sunny and warm! Dry hard-pack with bits of loose soil

Acceleration & speed: A

Once you get this beast tuned in, watch out—it flies! The two-speed tranny was well suited to the XTM 24.7 engine's 2.6 horsepower. For an RTR, the Mammoth will hang with even the most potent Truggy. Its long wheel base makes it stable at speed and lends itself to going fast. Just watch out for the corner at the end of the straight-away—it comes up quickly!

Suspension: B

Out of the box, the Mammoth's suspension should have gotten a "C." It was much too soft for a truck of this size, although, once you dial it in, it gets much better. We gave it a "B" because it is quality stuff; for an RTR, the shocks are very nice and the suspension design is really cool. The truck handled well in the corners and surprisingly, given its travel, doesn't exhibit much body roll. It flies like a champ over the jumps. It really lofts well and is stable in the air.

Steering & Braking: B

The Mammoth is pretty nimble given its size. The steering is a little heavy feeling, and we found the servo saver to be way too weak. We hope XTM comes out with a stronger spring quickly, because it really hurts steering. The servo was up to the task of turning this big beast, and it felt really strong. The brakes were killer, and were totally predictable. The Mammoth has a cool brake setup, with two rotors up front and one in the rear. The brake is set up in tandem fashion, meaning that one brake rod controls both front and rear brakes. This made for easy tuning. Out of the box, the brakes were pretty dialed. Again, for an RTR, XTM has done a great job of setup and design. It looks almost too simple, but the whole package comes together nicely.

FINAL SCORE

Highs: It's big and bad! It's also fast; the two-speed tranny makes the Mammoth a missile. The 24.7 engine once again receives high marks in both power and reliability. The truck itself is simple in design and is easy to work on. Another great thing is that the stickers are pre-cut, which makes this one RTR that is quick to go from box to track. Overall it is well-made and well set up right out of the box. It takes no time at all to get it up and running.

Lows: It's big and heavy. Yes, size is a double-edged sword. Larger size puts more stress on the parts. However, XTM did a good job in designing this truck, because we had no casualties during our testing. Just remember than you are driving an eleven-pounds-plus truck. The steering servo spring is so weak it's not funny. This really hurt the Mammoth, and we hope they will correct this issue. Another low is the wheels, which are not of standard size. These are carry-overs from the X-Factor. It is a pain in the butt to use other wheels. As it is, you are stuck with using XTM's stock wheels. You can modify the hubs to use other wheels, but why should you? With all the room, why did XTM go with a 1/8-scale fuel tank? It would have been a killer if XTM had put a 200cc or a 250cc fuel tank on this beast.

The Verdict: For a monster truck, the Mammoth it is just what the doctor ordered. It is fun for bashing, and for club racers; just tell your buddies to move over, because you are coming through. We feel that XTM really has its finger on the pulse of the average consumer. XTM is putting out products that really help attract new blood to the R/C world, and we're glad to see a company work so hard at making RTRs which appeal to this crowd.

SPECS

Price:	$399.00 (varies with dealer)
Length:	23.4 in./595mm
Height:	10.43 in./265mm
Front Width:	17.2 in./436mm
Rear Width:	17.4 in./443mm
Wheelbase:	15.3 in./389mm—15.5 in./394mm
Ground Clearance:	3.44 in./87.3mm
Weight:	11.75 lb.
Chassis:	3mm blue anodized 6061 T-6 aluminum
Damping:	threaded aluminum shock bodies, oil filed
Bearings:	steel ball bearings
Tires:	Yes
Wheels:	Yes

SOURCES

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Round 2 — **February 15th**
Pegasus Hobbies
5515 Moreno Blvd.
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(909) 982-6507
www.pegasushobbies.com

Round 3 — **March 14th**
Revelation Raceway
4871 West State St.
Ontario, Ca. 91762
(909) 628-9909
www.revrace.com

Round 4 — **April (TBA)**
So Cal R/C Raceway
19118 Brookhurst St.
Huntington Beach, Ca. 92646
(714) 963-7484
www.socalrc.com

Round 5 — **May (TBA)**
Freedom Park R/C Raceway
500 Freedom Park Dr.
Camarillo, Ca. 93012
Email Fran McQuillan at:
mcq16@aol.com
www.venturaroadrunners.com

Round 6 — **June (TBA)**
Hot Rod Hobbies
25845 San Fernando Rd. #21
Saugus, Ca. 91350
(661) 255-2404
www.hotrodhobbies.com

INFO:

$20.00 1st entry, $10.00 2nd entry. - 2. Limit of 2 classes per driver. - 24 degree stock motors only, no brushless motors. - 19T Reedy Spec Motors to be used in the 19T class at each event and will be available at each race. - Awards for top 3 at each event. - Awards for top 10 at end of series. - Must attend 4 of 6 events to be eligible for end of series awards. - 2 qualifiers & single A mains at each event. - Best 4 races count / 2 throw outs. No pre entries/ Sign up at the track. For points, results & photos visit: www.jimmybabcock.com.

CLASSES:

SPORTMAN STOCK CAR
SPORTMAN STOCK TRUCK
EXPERT STOCK CAR
EXPERT STOCK TRUCK
19 TURN CAR (REEDY)
19 TURN TRUCK (REEDY)
MODIFIED CAR
MODIFIED TRUCK
MODIFIED 4WD

POINTS:

50 = 1st Place
49 = 2nd Place
48 = 3rd Place, etc.
1 Bonus point for TQ
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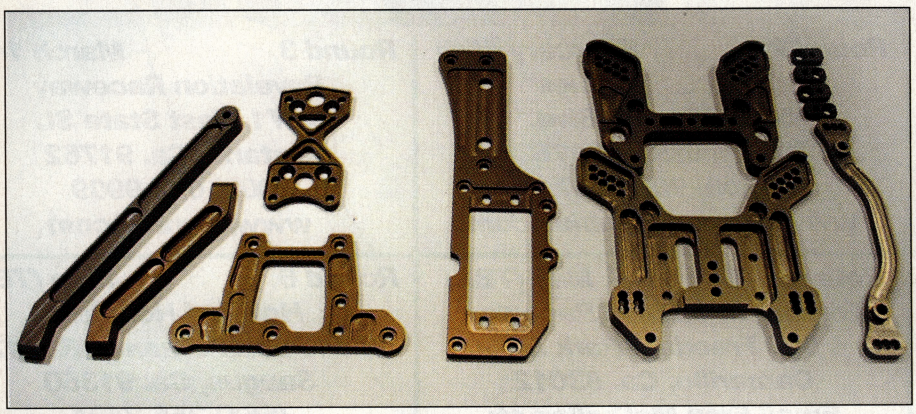
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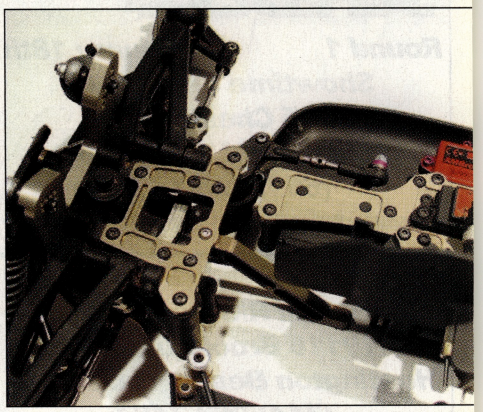
For More Info Call (661)298-2921 or Email: race@jimmybabcock.com

Racers Edge MBX-5 Hop-ups

Must-haves for your Mugen buggy

Mugen's MBX-5 is one of the hottest new nitro 1/8-scale buggies on the market. Racers Edge has recognized this, and has released a complete line of top-quality accessories. We decided to upgrade our current stock buggy with the complete line, and take it out for a weekend of racing.





FRONT/REAR SHOCK TOWERS

At three millimeters in thickness, the stock shock towers get the job done, but the Racers Edge towers are 6.5 millimeters thick and eliminate any possible flex. Also included is a second row of shock-mount locations, above the stock ones, to add setup options. Both towers have been machined down to save weight in key locations.

Part no.: RE-PRO5000 (rear); RE-PRO5001 (front)
Price: $42.99; $38.99

CENTER DIFF TOP-MOUNT

This piece replaces the stock graphite plate with a machined piece of aluminum that is 1.5 millimeters thicker than stock, and eliminates the side-to-side flex found in the stock top mount. Although there is no significant performance gain with this hop-up, we feel that adding the extra rigidity and eliminating the possibility of cracking the original one is worth the price for peace of mind.

Part no.: RE-PRO5004
Price: $24.99

STEERING ACKERMANN PLATE

We have to admit that this is the one hop-up that will give you the most performance and durability gain of all the options Racers Edge offers. Many people are adding three millimeters of washers to the stock steering plate to help eliminate the excessive bump-steer that the stock setup has. Racers Edge knew this and built it into theirs to eliminate having to add washers. They also increased the thickness of the plate to eliminate bending, which was also a problem with the stock part. Good job, Racers Edge, in addressing these two issues.

Part no.: RE-PRO5005
Price: $33.99

FRONT NOSE PLATE

This piece is purely a visual enhancement, but it looks so cool that we give it a thumbs-up. I guess if you hit a brick wall, the stock graphite plate could break, so this may save you from breaking during a long main—if you happen to hit Skinny head-on as he is drives the wrong way down the back straight.

Part no: RE-PRO5008
Price: $29.99

RADIO TRAY

Some may think that this piece is eye candy only, but Racers Edge has designed a feature in their radio plate that may help you win your next A-main. If you look closely, you will notice that the throttle servo sits lower on the Racers Edge tray than it does on the stock one. This in turn lowers the car's center of gravity. Now, this may not seem like much, but if it allows you to keep a little more corner speed over a 45-minute main, you may be able to save some valuable seconds, and we all know we need to save as many seconds as we can!

Part no.: RE-PRO5009
Price: $37.99

FRONT & REAR TORQUE RODS

We have read many debates on whether or not a buggy should have chassis flex. The MBX-5's stock setup allows for some flexing, whereas the Racers Edge rods take away most of the flex. We feel that the less chassis flex a buggy

has, the better you can set up your suspension. With that said, these braces are very beneficial in allowing the MBX-5 to reach its full potential—not to mention that there is no way for these to pop off or develop slack, as the stock ones can.

Part no.: RE-PRO5011 (rear); RE-PRO5012 (front)
Price: $29.99; $29.99

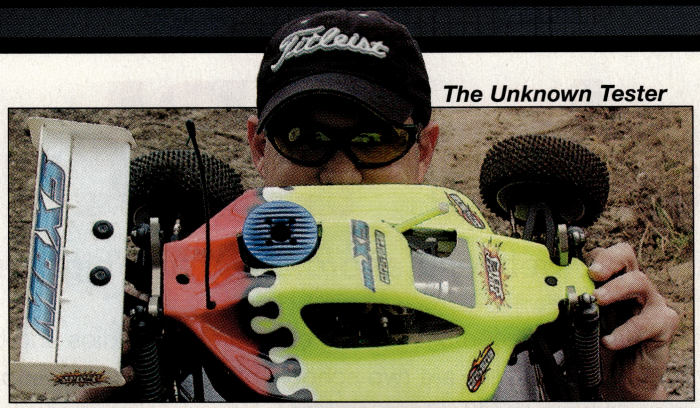
FRONT & REAR SWAY BAR MOUNTS

Bling-bling! That's the best way to describe these little guys. They make your car look cool, and as a bonus, they keep the Allen screw that holds your sway bar tight from stripping out as the plastic ones can. Though they won't make you faster, they will make your friends in the pits jealous.

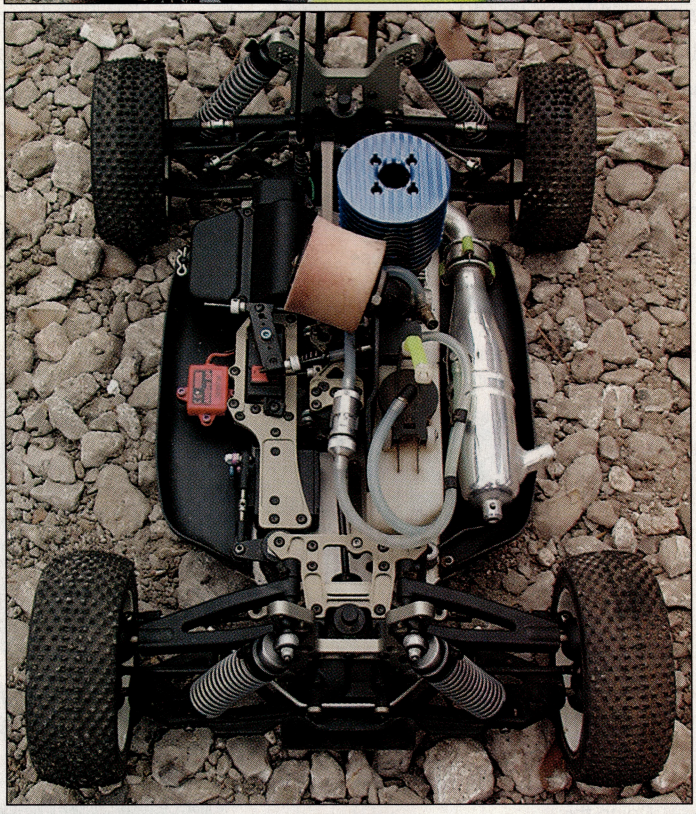
Part no.: RE-PRO5016
Price: $19.99

THE BUILDUP

After inspecting everything, I was very impressed with the quality of these pieces. The finish on each part was first class, and there were no burrs or blemishes to be found. All the pieces fit exactly as the stock ones did, and Racers Edge included screws of the appropriate sizes to accommodate the thicker towers.



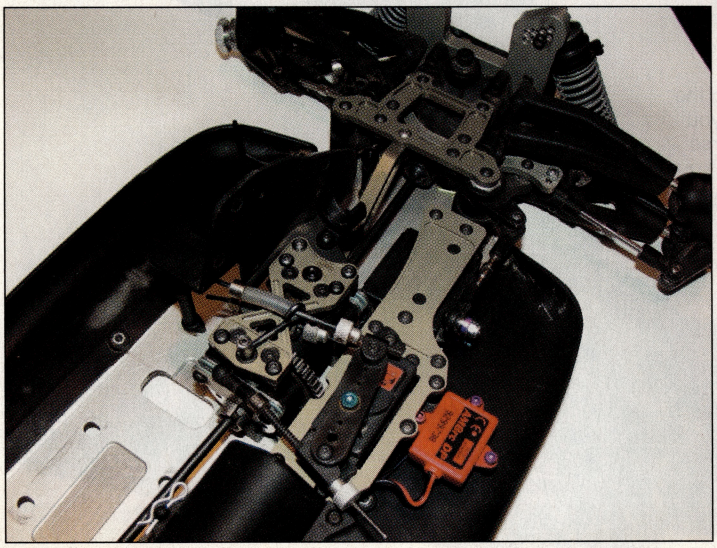
The Unknown Tester



Everything went together perfectly, and I was finished in no time (and never took my Dremel out once, which is a good thing). Thank you, Racers Edge, for paying attention to detail and fit.

ON THE TRACK

Now for the fun part. To test the new Racers Edge equipped Mugen buggy, we traveled to Houston, Texas, for the last race of the THRC series. Our first impression of the car on the track was that it looked good—real good! The Racers Edge parts definitely stiffened up the car and made it feel more responsive than the stock version. Unfortunately, Mother Nature did not cooperate with us and the track turned into a mud bath for our main. During the few laps I did get to drive, when the conditions were right, I really liked the way the car felt, and with a little more time, faster lap times will be had. I wish we could have tested our new buggy under better conditions, but that's racing. Racers Edge made a smart decision to make hop-ups for the MBX-5, and you can't go wrong with any of the parts they offer.





SOURCES

Mugen Seiki Racing Ltd., 20914 Bake Parkway, Suite 106, Lake Forest, CA 92630 • (949) 707-5607; fax (949) 707-5614
Racers Edge • (866) 855-5566

Futaba 2PL-AM

Bridging the gap between affordability and high-end features

There are some very legitimate concerns regarding computerized radios and beginning drivers—especially younger ones. There are two schools of thought on the subject: the first view is that beginners will have trouble figuring out how to use a computerized radio; that they will have an easier time with a simpler radio, one with straightforward knobs and dials. The opposing viewpoint is that if we can offer affordable computerized radios, beginners will have systems that can be used beyond their first vehicle; they will develop a better understanding of some of the more complex radio adjustments that will serve them well later on.

Both opinions are valid, however, Futaba's new 2PL just may tip the scales in favor of the computerized contingent.

The 2PL will make it hard for anyone to take of cause for non-computerized radios; the 2PL is both sophisticated and supremely user-friendly, with just one button and two digital trim levers in command of all of the functions. No crazy menu navigation or confusing nomenclature.

NAVIGATION: NO MAPS NEEDED

Moving through the 2PL's features is incredibly easy. Pressing the large "select" button (the only button on the radio!) moves through each menu screen. The two trim levers (DT1—steering, and DT2—throttle) are used to toggle and select the functions' values. There is also a steering dual-rate lever—located on the grip for easy access.

Screen one—When you turn on the 2PL, the screen first displays the model number and name (more on this later), and about two seconds later, it switches to display the model number and the battery's voltage. When a trim lever is moved (either the steering, throttle or steering dual-rate levers), the screen automatically displays the trim position for two seconds. The great thing about digital trim levers is that they can't be moved when the radio is off.

Screen two—Pressing the select button from the initial screen calls up the Model Selection screen. Here, you use the DT1 lever to choose a model from the radio's memory. The 2PL allows you to create and store settings for as many as ten separate models, rivaling the capabilities of many of today's most expensive racing radios. In this screen you can also erase the selected model's settings by moving the DT2 lever. Doing this returns the model's settings to the factory default settings.

Screen three—Pressing the select button again brings you to the Steering Servo Reverse menu. Using the DT1 lever, you can set the steering servo's movement to "normal" or "reverse" modes, depending upon the requirements of your vehicle.

Screen four—Next is the Throttle Servo Reverse screen, which, like the previous menu, allows you to change the direction of the throttle servo. Again, the DT1 lever is used to toggle





FUTABA MC230CR ELECTRONIC SPEEDO

Our 2PL came equipped not only with an S3003 servo, but also with Futaba's MC230CR ESC. The MC230CR is a micro-sized "plug and play" speedo for use with motors of 20 turns or above. The MC230CR has reverse, but it can also be disabled should you wish to try your hand at racing (most tracks don't allow the use of reverse). We liked not only the small size of this ESC, but also its digital setup button (which tunes the ESC to the radio) and its cool, translucent red case. Of course, Futaba's reputation for excellence is an added bonus feature.

between normal and reverse directions.

Screen five—Once again pressing the select button, you'll enter the Steering EPA (end point adjustment) screen. This lets you adjust the travel of the steering servo, independently, from left to right. EPA is extremely useful, as it allows you to set the steering for maximum travel without straining the servo. To limit overall travel in both directions, use the steering dual-rate lever.

Screen six—The Throttle EPA feature is vital for nitro vehicles. Throttle EPA lets you independently set the travel for the throttle and brake. Moving the throttle trigger to the "forward" side of its travel, you use the DT1 lever to set the amount of forward travel of the servo. Usually, you'll adjust this so that the carburetor opens fully. Moving the trigger to the brake side allows you to do likewise to the brake travel.

Screen seven—ABS function. Yup, the 2PL offer anti-lock brakes! When ABS is selected, the 2PL automatically "pumps" the brakes to prevent lockup. You have four choices in this menu. You can select from three cycle speeds (fast, middle or slow), or, you can disable the ABS function altogether. The DT1 lever is used to make the selection.

Screen eight—The final screen is for the assignment of the model name. The 2PL allows you to name each of its ten models using up to three characters. Using the DT1 lever scrolls through the available characters (0 through 9, letters A through Z and an asterisk, plus and minus signs, and a slash.

WHAT WE LIKE

Besides supreme user-friendliness, we like the 2PL for a number of reasons. First, the transmitter itself exudes a quality appearance and feel that's not often seen at this price; the low-gloss black plastic makes the 2PL look more expensive than it is. There's also a large, foam-rubber steering wheel that looks identical to that of Futaba's top-of-the-line 3PK transmitter. The handgrip is comfortable and the overall ergonomics and balance of the 2PL is superb.

WHAT WE DON'T LIKE

The throttle trigger lacks any type of adjustment, so it may not be ideal for those with smaller fingers.

WHAT WE REALLY THINK

Futaba invented the high-end radio with its first Magnum and PCM models. Now it looks like it's doing the same for the "high end" AM radio market. In the new generation of computerized AM radios, the 2PL is a hallmark of simplicity. Combined with several features rare in this category, e.g., ten-model memory and ABS, the low price of the 2PL make it nearly irresistible for those in the market for a solid radio that can accompany them through their journey from beginner to racer.

Price: $84.99 (2PL with 1 S3003 servo); $89.99 (2PL with 2 S3003 servos); $119.99 (2PL with 1 S3003 servo and MC230CR ESC)

SOURCES

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

TEAM LOSI TECH-TALK

Tech Tips #19

Mini-T Tech.....

Unless you have been out of touch for a while you know one of the hottest releases in R/C this year is the incredible Mini-T 1/18 scale RTR based on the XXX-T. Hobbyists and racers alike have flipped over this fun little racer that allows you to play at the track or around the house either indoors or out. For those of you who have been lucky enough to get your hands on one of these killer little trucks you already know that although there are or will be a lot of aftermarket parts available, they really perform awesome right out of the box. In fact, you couldn't get the smiles off of Matt Francis' and Adam Drake's faces during a recent trade show where they ran Mini-T's for four days. But racers will be racers and we expect to see some wild and crazy things done. With this in mind the most important tech tip we can offer is to let the slipper do its job. Just like 1/10 scale racers, the slipper is there for a very important reason. Do not adjust it so it doesn't slip upon impacts especially if you use a 6-cell battery pack or hotter motor. Since the Mini-T is so new and has become so popular we will try to answer a bunch of questions that are constantly asked.

1. It uses four AA dry cells or can also use 4,5, or 6 cell Ni-Cad or NiMH packs.
2. The transmission has full ball bearings.
3. All parts are available separately and very reasonably priced.
4. It uses a 280 motor but Trinity, Peak, and Orion motors will or can be made to fit.
5. There will be a full selection of aftermarket parts available. Look for oil filled shocks, springs, tires, and bodies real soon.
6. It comes equipped with a gear diff that works very well on all types of surfaces.
7. A ball type diff will be available for serious racers.
8. An adjustable slipper is standard and works well.
9. Clear bodies are available as well as the painted ones (7 colors).
10. The first performance part you should consider is the bearing set for the wheels.
11. There are three pinions available in the replacement parts bag.
12. There will be tires specifically designed for carpet use.
13. Speed is between 10 and about 20 mph (guessing) depending on battery pack used. So there is a speed for every level of driving ability.
14. The radio has changeable Xtals, steering rate, reversing, etc. with good range.
15. The receiver, servo electronics, and electronic speed control are in a common case.
16. Most of the aftermarket mini electronics will fit size-wise but will have to be adapted and must be used as a complete set (receiver-servo-speed control). Trust me, you will miss reverse though!

Next month we will look at the new VLA suspension system used on the BK2.

ADVERTISEMENT



HPI NITRO RS4 3 EVO

HPI entered the ready-to-run fray armed with some pretty impressive hardware. The Savage 21, Nitro Rush truck and Nitro RS4 3 were all high-quality RTRs with large doses of high performance. Not content with the status quo, HPI has thoroughly re-vamped this trio. Beginning with its flagship Savage monster truck, HPI boosted power and handling with a larger engine, improved suspension and the useful Roto Start system. The Nitro Rush was next on the list, and it also received a new engine, revised suspension, chassis and the Roto Start. We've already reviewed these two vehicles (January '04 and February '04, respectively), and now it's time for us to check out the newest HPI RTR, the road-going Nitro RS4 3. From the specs, it appears as though HPI has not only addressed a couple of the original car's shortcomings, but has also thrown in a bunch of cool goodies that should make this one of the most attractive RTR nitro sedans available.



HPI adds more power, a two-speed



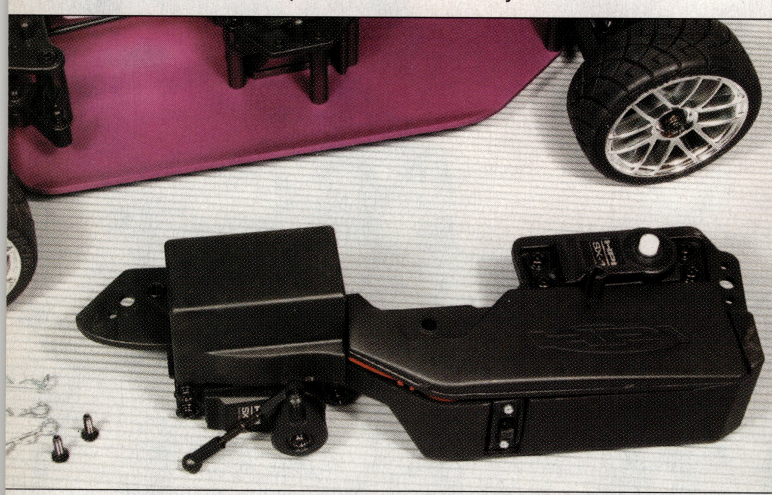
and electric starting!

OUTSTANDING FEATURES

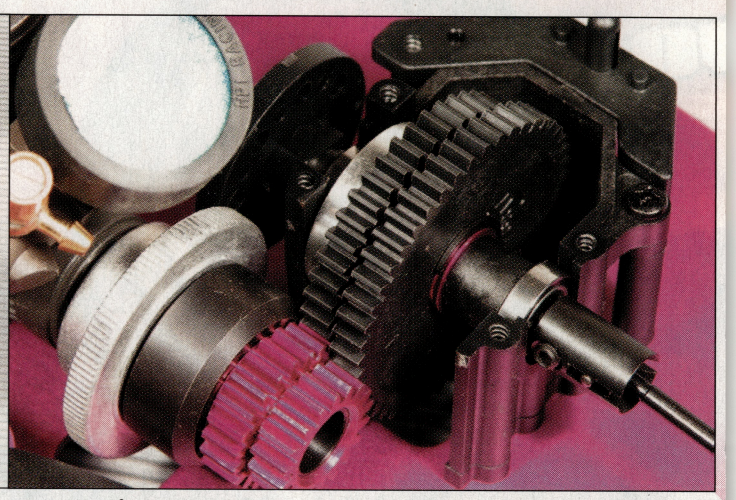
OUTSTANDING FEATURES

Speed is of paramount importance for the average RTR customer, and HPI is keenly aware of this—especially as the original Nitro RS4 3 RTR had been criticized (we admit it) for being a bit slow compared to some of its competition. Well, we're pleased to report that HPI has addressed this issue in several ways.

The old car's Nitro Star 15FE engine was the workhorse of HPI's original line-up of nitro kits and RTRs, but by the time the Nitro RS4 3 was introduced, it was beginning to show its age. The engine was as reliable as a Swiss watch, but it didn't make all that much power, and its single-needle carburetor hampered its bottom-end punch. The new T-15—which is found both in the Nitro 3 Evo and the Rush Evo—is a significant leap forward in all areas. With 1.2 horsepower on tap, the T-15 features long-lasting ABC cylinder construction, a very serious-looking black case, a taller heatsink for better



Easy cleaning: The RS4 3 Evo's tidy radio tray removes with just one screw and three body clips. The box also keeps the receiver safe from dirt and spilled fuel.



One of the most significant changes HPI made to the RTR 3 Evo is the inclusion of this two-speed transmission. Improved acceleration and top speed are the results.

HPI RS4 3 EVO





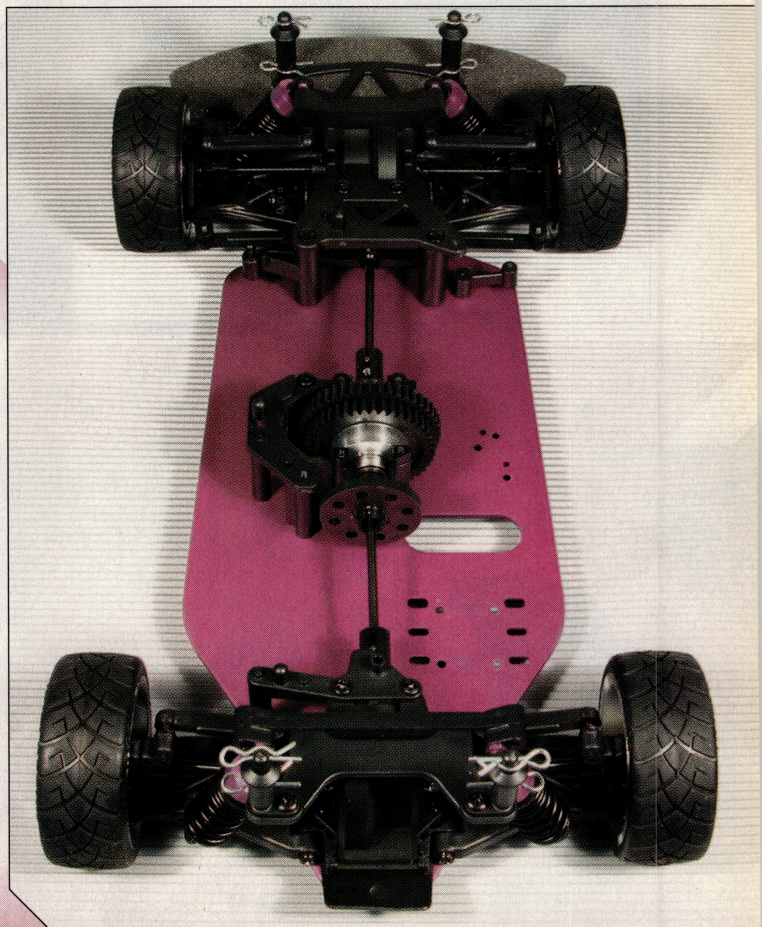
What ya get: The Nitro RS4 RTR 3 Evo comes with everything needed to get running in a hurry. The TX-2 radio is excellent, and the now-included Roto Start system works great.

cooling and a (hooray!) dual-needle carb.

A full gaggle of accouterments make the most of the T-15's improved output. First—and probably most important—is the addition of an automatically shifting two-speed transmission in place of the original car's single-speed gearing. Imagine driving your full-sized car with only its lowest or highest gear; you'll either suffer from terrible acceleration or dismal top-end. The Nitro 3 Evo's two-speed lets you have great snap off the line, yet when it shifts into second, the car will have superior top speed. The new engine also receives the benefit of a new, tubular-aluminum exhaust header in place of the original car's rectangular, more restrictive cast-aluminum header. Freer breathing is always better.

HPI didn't stop there. Where the old car's 15FE came equipped with a recoil pull-starter, the new T-15 comes mated to HPI's Roto Start electric starting system. With this, you crank the engine using a battery-powered hand held starter unit via a hexagonal shaft (you will have to furnish a six-cell battery pack and a glow-plug igniter).

The Evo comes with the same excellent D compound X-Pattern treaded tires, but this time HPI has done the gluing for you, and this high-grip rubber is now mounted to a set of chrome-plated Split 6 wheels, whereas the old wheels were simply gray plastic. Lastly, the Evo comes with a pre-painted, pre-trimmed and pre-stickered body. This is huge news, as there's nothing worse than having a RTR



The RS4 3 Evo's drivetrain is the same reliable shaft-driven 4WD setup from the original RTR 3. It's smooth and efficient, thanks in part to a full set of ball bearings.

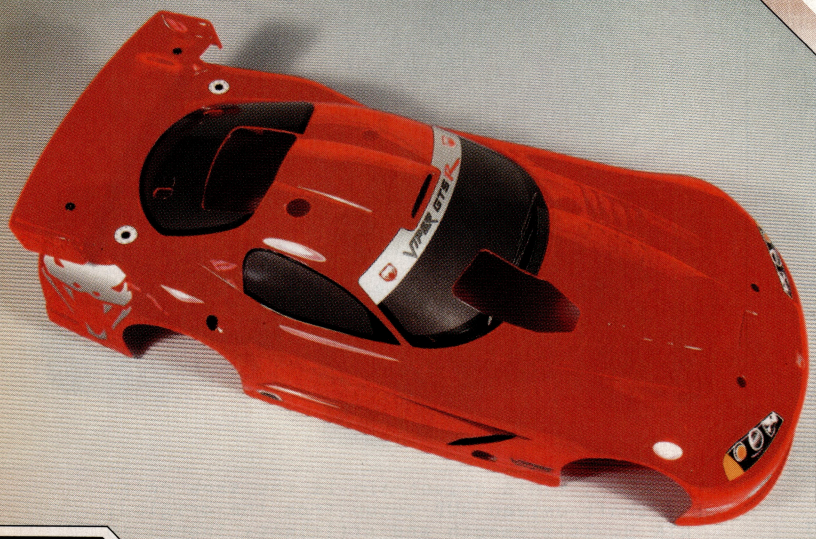
A new, tubular exhaust manifold allows the new T-15 engine to breath better and make more power. The old RTR 3 used a more restrictive, cast-aluminum header.





More power is always better. The RTR 3 Evo is the second HPI RTR to receive the new T-15 engine. With ABC cylinder construction, a two-needle carburetor and an improved heat-sink head, the T-15 is heads-and-shoulders above the old 15FE it replaces.

Another change is the inclusion of a painted, trimmed and stickered body. HPI even trims the fuel-tank area and engine area for you.



that's all ready to go, but having to spend a day painting and detailing the clear body! Currently, you can get the Evo with either a BMW M3 or Dodge Viper GTS (shown here).

The suspension is a carry-over from the original car, with durable nylon-composite lower A-arms and smooth, composite-bodied oil-filled shocks at all corners. HPI supplies the Nitro 3 Evo with one-piece molded upper camber-links, which prevent the adjustment of one of the most critical settings in on-road—camber. The idea is that the fixed-length links provide perfect camber at each wheel—and this is true—but as the Nitro 3 is pre-built, they could have installed adjustable links at the factory.

The chassis and drivetrain also remain virtually unchanged. With the exception of the new two-speed, the drivetrain is the same rugged shaft-driven AWD system that gave the original car its excellent reliability record. Of course, the new car comes with full ball bearings for reduced friction and longer drivetrain life.

HPI RS4 3 EVO



REPORT CARD

Test location: Hot Rod Hobbies, Santa Clarita, CA
Test conditions: medium-sized paved roadcourse

Getting ready: A

Along with the significant improvements done to make the RTR 3 faster, HPI has also made the car more ready to run than ever. You no longer have to glue the tires or paint and detail the body before you can go out and play. HPI gets extra points for not only trimming out the body, but for attaching the wing and applying the stickers. To get running, you'll only need to supply twelve AA batteries for the radio, fuel, a fuel bottle, a six-cell pack (for the Roto Start) and a glow-plug igniter.

Speed and acceleration: B

The new T-15 engine is a significant improvement over the old Nitro Star 15FE it replaces. Overall throttle response is crisper, in part due to the new carb's low-end needle. The engine and gearing are well matched, and the two-speed required only a slight adjustment for wear after the fourth tank of fuel. The Evo accelerates briskly from a dead stop, but its real strength is how well it accelerates from slower corners, where it exhibits virtually no lag. Top speed is also vastly improved over that of the previous model.

Cornering: B

When it comes to traction on dirty pavement, few tires can rival the traction of HPI's D-compound X-Patterns. On the Evo, they provided fantastic straight-line adhesion and very good bit during cornering. There's a slight amount of push on corner entrance, and the non-adjustable front/rear braking bias doesn't help matters. When you grab a lot of brake, the front end tends to slide to outside of the turn. On-power steering is excellent, with just enough rear traction to compensate for less-than-judicious throttle usage.

Braking: A

The four-wheel braking on the Evo is superb. Again, the car tends to push when trail braking into turns, but the braking force itself is plentiful. The car stops on a dime and doesn't pull to either side.

Durability: A

The suspension pieces on the Evo are built to take punishment. The plastic HPI uses has just the right amount of "give" to it, yet is rigid enough to maintain proper suspension geometry. The shaft-drive 4WD system is just about bulletproof; it's impervious to the standard parking lot fare—sand and small pebbles—that would shred most belt-drive systems.

FINAL SCORE

Highs: HPI updated the RTR 3 significantly without a significant rise in price. The Evo kit addresses virtually every shortcoming of the old car. It's faster (by a lot) and accelerates better (again, by a lot). It's also easier to start thanks to the included electric Roto Start system. It's also easier to get running, thanks to such nice touches as pre-glued tires and a pre-painted/trimmed body shell.

Lows: The steering tie-rods and upper camber links aren't adjustable. We recommend purchasing HPI's optional turnbuckle linkage set as soon as possible.

The verdict: The original RTR 3 was a very solid car for the money—and a great RTR for the beginning on-roader. The Evo model propels the humble RTR 3 into the performance limelight, and it doesn't shy away from the competition. The gains in speed and overall performance, plus the addition of the electric start system, make the Evo a viable purchase for not just the beginner, but the more advanced driver as well.

SPECS

Price:	$349.99 (varies with dealer)
Length:	16in/406mm
Width:	7.75in/197mm
Wheelbase:	10.12in/257mm
Front/rear track:	6.7in/170mm
Weight:	3.2 lb.
Chassis:	2.5mm purple-anodized aluminum
Drivetrain:	shaft driven, full-time AWD
Bearings:	full ball bearings
Driveshafts:	steel dogbones
Shocks:	composite oil-filled
Suspension:	four-wheel independent; fixed upper links
Diff:	bevel gear
Tires:	HPI D-compound X-Pattern radial
Wheels:	chrome-plated Split 6

SOURCES

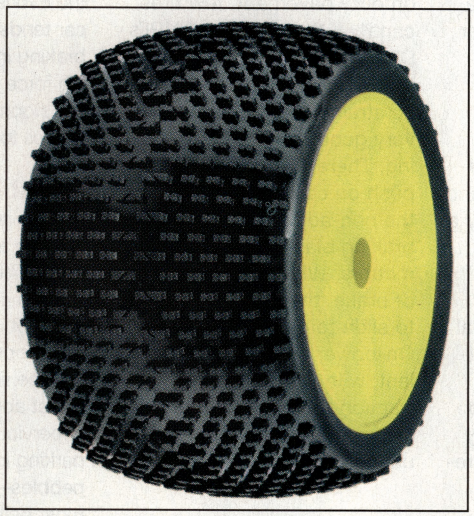
HPI Racing, 70 Icon Street, Foothill Ranch, CA 92610 • phone (949) 753-1099; fax (949) 753-1098.
SideWinder Performance Racing Fuel, produced by Morgan Fuels, P.O. Box 311201, Enterprise, AL 36331; • phone (334)347-3535.

MY FAVORITE PRODUCT:

PRO-LINE RACING

Scott Hughes should work for the Pentagon

When you think of Pro-Line, you think of tires, right? Over the past decade in particular, Pro-Line has been a driving force in the creation of better tires for both racing and for play. Ever evolving as a company, Pro-Line has expanded its horizons, branching out from being "just" a tire company by acquiring ProtoForm bodies, and of course by introducing its own line of truck and buggy bodies, all of which have become bestsellers. We asked Pro-Line's own Secret Squirrel, Scott Hughes, for a little inside information on what's going on at Pro-Line.

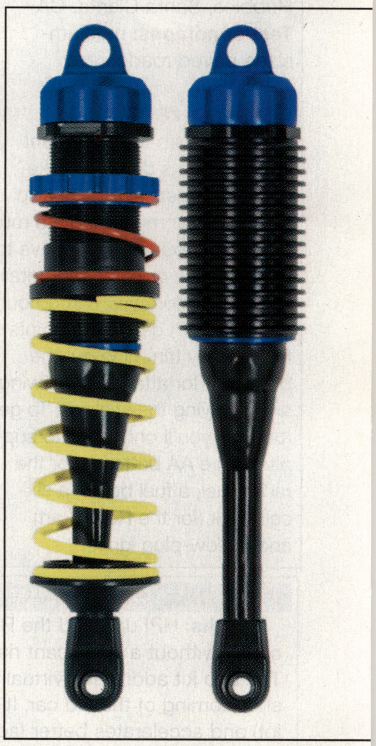


BESTSELLING PRODUCT

"As the saying goes, "A magician never gives out his secrets." Let's just say that there is never a dull moment in the R&D department at Pro-Line, and that we are always trying to better each of our existing products." *[Editor's note: Since Scott was enigmatic on this topic, I'll try to fill in the blank. If I had to guess at which Pro-Line product sells the best, I would say it would be their Bow-Tie tires for both stadium trucks and monster trucks—but I could be wrong.]*

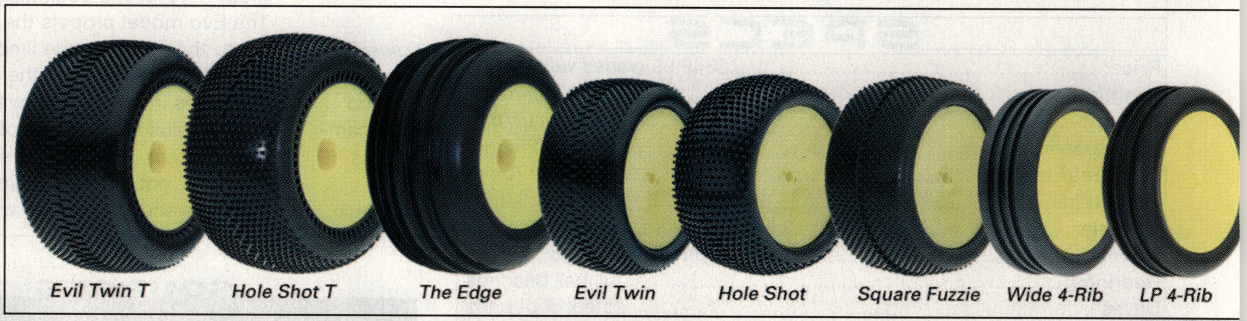
MOST UNIQUE PRODUCT

"Our most unique product has to be the new PowerStroke Shocks for MAXX owners. These are totally innovative and unique to the R/C industry. There are two separate assemblies per corner of the MAXX truck that work in unison to achieve the ultimate suspension setup. One is a bypass system typically seen on real Baja off-road style trucks, and the other utilizes a dual spring system and a threaded shock body."



TOP VALUE

"Our top value product has to be all of our tires. Our ultra-traction compounds, combined with unique tread surfaces, take your R/C car, truck, or monster truck to the next level. As with just about any form of motorsport, changing tires is the single most important upgrade you can do to achieve desired performance. Really, no other modification can give you the edge like having the hot tires for your particular track—and what's more valuable than that?"



SOURCES

Pro-Line, P.O. Box 456, Beaumont, CA 92223 • (909) 849-9781

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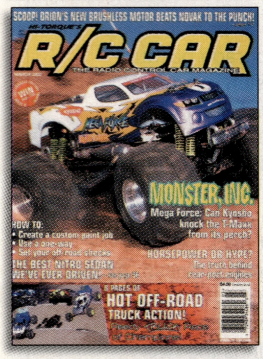
❑ **JANUARY '02**
Test Drives: HPI Micro RS4, Tamiya TXT-1, Team Losi Matt Francis Edition Triple XT, Kyosho MP7.5 Sports Features: Pro-File: Gil Losi Junior, Tamiya 414M: The "Secret" Tamiya Sedan, Just Like Driving A Car Super-Tuner Special Kawahara/Mugen MTX-2, Hardcore Racing/Team Associated TC-3, Integy/TopCAD Kyosho Mini-Z Product Tests: Novak Millennium Pro, Trinity Brush Warehouse



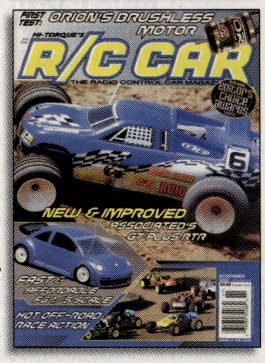
❑ **OCTOBER '02**
Test Drives: Hardcore Mutant Maxx, Yokomo GT4-Pro, Kyosho Mad Force, Cross Fire Force, Tamiya TA04-SS MR-S Features: Reedy Invitational Race, Solving Handling Woes, Quest For Traction, Project Traxxas Nitro Rustler, Budget Modified Motors Buyer's Guide, ROAR Off-Road Nationals, Garage Business Gone Big, N.O.R.R.C.A On-Road Nationals Product Test Ride Shock Air Remover, Takara Digi Q, Eagle Racing Tire Warmer 2s



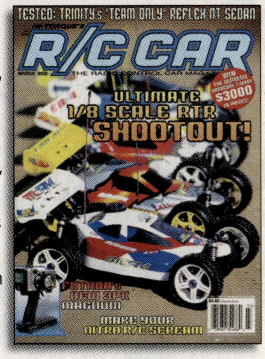
❑ **FEBRUARY '03**
Test Drives HPE Savage 21, Tamiya AMG Mercedes CLK DTM, Tamiya XB Mugen Integra Features First Test: Associated BFT!, Rock Crawling Part 3, Kyosho Gunwalker, Inside The World's Fastes R/C Car, Reedy Truck Race Of Champions, Inside The Reedy Truck Race Winners, All-American Truck Race, Racing With Rick Hohwart, Second Opinion: Tamiya 414MII, ROAR 1/5-Scale Nationals, Movie Maxx



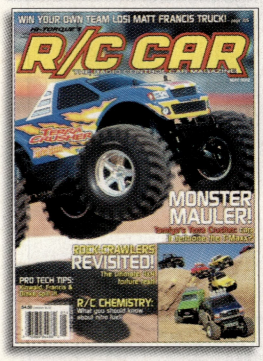
❑ **MARCH '02**
Test Drives: Kyosho Mega Force, BoLink Little Red Wagon, Kyosho FW-04 Loctite Mugen NSX, Tamiya Dyna Storm, Kyosho Baja Beetle QRC Features: Maxxed Out!, Rear Port Myths, Pro Paint Tricks, Reedy Truck Race Of Champions, Project Outlaw V-One R Pro Tips Section: Scott Hughes On Shocks, Jack Johnson On Servo Tape, Mark Pavidis On One-Ways, Brian Dunbar On Jumping Product Tests Dynamite Vision Peak Plus And Mega



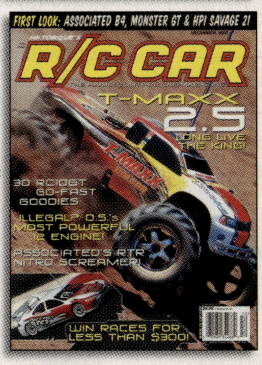
❑ **NOVEMBER '02**
Test Drives: Associated RTR GT Plus, GS Racing Vision Pro, Xray T1 Evolution, FG1/5 Scale Sport Beetie Features: Editor's Choice Awards—We Pick The Best Of The Best, Quest For Traction, Brushless E-Maxx, 5th Annual Hot Rod Hobbies & R/C Car Shootout, Penguin Micro RS4 Chassis Product Test LRP Pulsar Competition Charger, Team Orion Micro Chassis, Venom Battery Charger, Associated Starter Box, Trinity Matt Francis Edition P94



❑ **MARCH '03**
Test Drives: Losi XXX-S Graphite Plus, Team Losi XXX-S Sport, Tamiya Raybrig NSX 2002, Trinity Reflex NT "Team Only", CEN ATX Features: Big Buggy Bash, Monster Mash—Shock basics for the truck set, Second Opinion: HPI Nitro RS4 3 Type SS, Off-Road Tuning Basics, Bump-Start Maxx, 10 Ways To Make Your Nitro Faster, Is Brushless Technology Worth The Wait?, Home-built Hardcore Mini RS4, HPI Challenge



❑ **MAY '02**
Test Drives: Tamiya Terra Crusher, Mugen MSX-3, Team Losi XXX-NT Sport, HPI Dash Features: How A Clutch Works, Rock Climbing Revisited, R/C Chemistry, Inside Kinwald's Team Losi XXX-S, Project Wolf Pro Tips: World-Champion Electronic Tips, How To Gear Your Off-Roader, Tackling Technical Tracks Product Tests: L. Collari 12RT5, Team Orion Big Block Micro Motor, Team Sorex Sedan Tires, Reedy Quasar AC/DC Charger



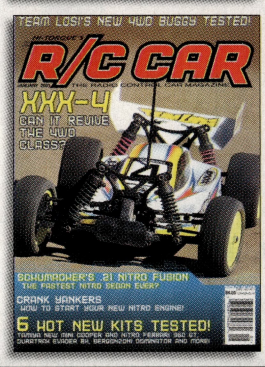
❑ **DECMEBER '02**
Test Drives: Traxxas T-Maxx 2.5, Tamiya Beams Honda Integra, Team Associated Nitro TC3 RTR, CEN Fun Factor ST 2 Features: Trinity Gold Peak 3300 Cells, Sneak Peek: Losi XXX-4, Inside Putnam Pro-Pulsion, First Look: HPI Savage 21, RC10GT Hop-Up Buyer's Guide, Hitec Parking Lot Challenge Product Test: Warp Speed Mission Chassis, O.S. Engine 12TR (T), Airtronics MX-3, Walburn 10L3 Hubs, Xtreme Racing E-Maxx Chassis



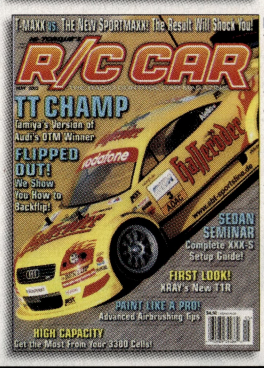
❑ **APRIL '03**
Test Drives: Mugen Seiki MST-1, Kyosho Mad Armor, tamiya Ferrari Enzo, Team Losi XXX-T Sport, Kyosho Xanavi Nismo GT-R Features: Losi XXX-T Tuning Guide, 2nd Opinion: Associated NTC3, Driving 101, Swag: New Mini-Z Stuff, How To: Make Your RTR More Efficient, Future Shock, Crazy Nut Micro, First Look: JR Racing XS3, Rally Planet Part II, Freestyle Losi NT, Living Room Whirlybird, Endurance Champs



❑ **JULY '02**
Test Drives: Kyosho F1 Mini-Z, Atlas YM34T, Losi Triple-X NT Drake Edition, Lauterbacher L3SS, Thunder Tiger FM 1e, Buratrax Overdrive ST, Tamiya Porsche, Tamiya Ferrari F-2001 Features: Project Sledge Hammer, Project Losi Triple-X S, Getting The Most Out Of Your HPI Micro RS4, Starter Box Buyer's Guide, Project Yokomo RTR GT-4, 10 Ways To Prepare For Race Day, Touring Car Tire Tips, Radio Daze, Home Built TC3 "0"



❑ **JANUARY '03**
Test Drives: Team Losi XXX-4, Tamiya Nwe Mini Cooper, Schumacher Nitro Fusion, Bergonzoni Dominator, Tamiya Ferrari 360GT "Daytona Version," Dura-Trax Evader BX Feautures: Tamiya TCS North American Finals, Swag Report: New Mini-Z Goodies, Second Opinion: Tamiya F201, HPI Challenge, Swag Report: New From Tamiya, How To Start Troublesome New Engines, Max Trax Promotional Racing, Rally Planet, Project Two-Wheel



❑ **MAY '03**
Test Drives: Tamiya TB Evolution III, Traxxas SportMaxx, XTM X-Factor, Traxxas Nitro Rustler 2.5, Tamiya ABT Audi TT-R DTM, MRC/Academy RT-4 Features: First Look: Fantom FR12.03R Engine, Track Treasures, SportMaxx vs. T-Maxx, How To Backflip, 4th Annual Dirt Nitro Challenge, What's Up with ROAR?, Girl Power, Pro Tip: Get The Most From Your 3300 Cells, All About One-Way Bearings, Advanced Air Brushing Techniques

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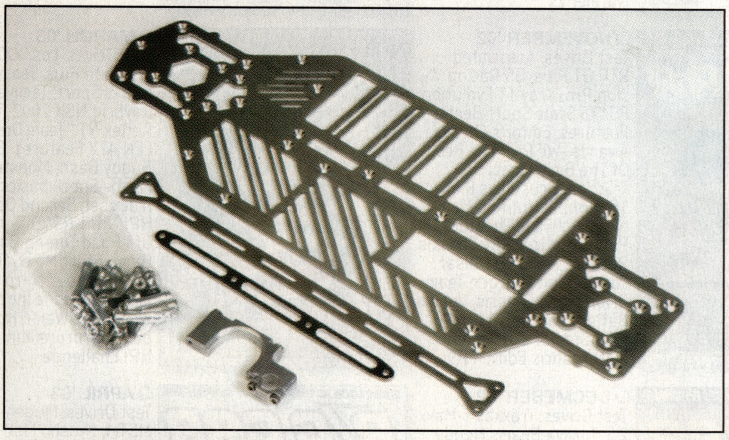
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MY FAVORITE PRODUCT:

HARDCORE RACING PRODUCTS

HCR's Alki Haze tells us what sells

Hardcore Racing Products is the company that started the entire T-Maxx aftermarket craze. They were the first to come out with CNC, billet-aluminum arms and chassis braces (which have been copied extensively, but never exactly duplicated), and remain the only company to offer high-end titanium replacement parts for many of today's most popular machines. We asked inside-sales representative Alki Haze to describe highlights among HCR's extensive catalogue.

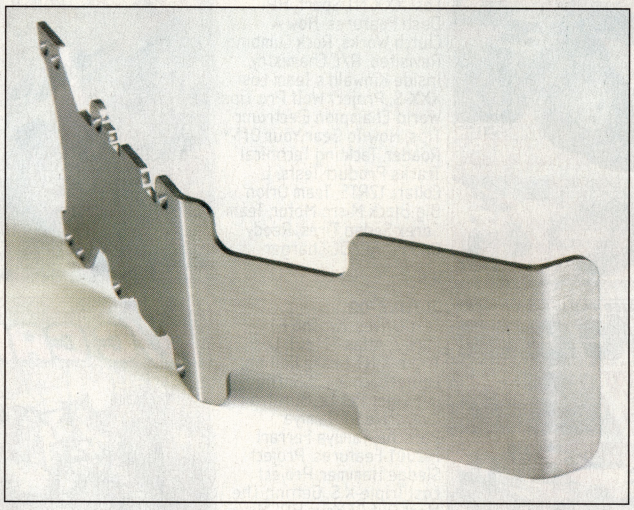


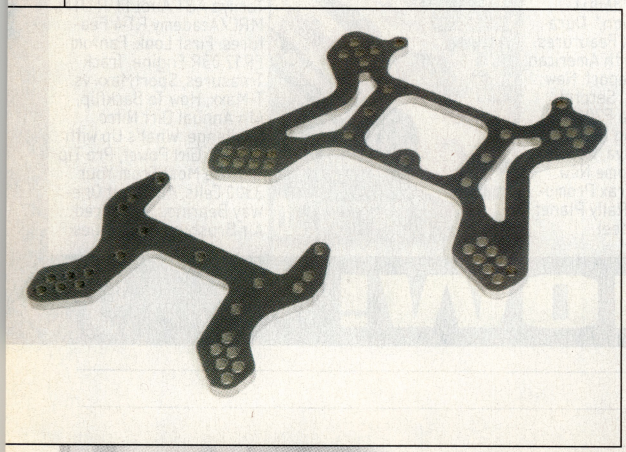
MOST UNIQUE

Our most unique product would have to be our ETC3 Hybrid Pro Chassis. It's a great upgrade because it takes the awesome Nitro TC3 suspension geometry and the efficient drivetrain of the Electric TC3, splicing them together to give you one awesome ride. With the super-lightweight titanium lower chassis, and two ultra lightweight upper titanium deck components, this cat has minimal chassis flex. It provides the driver with a more consistent vehicle. The uppermost deck ties into the differential housings, which adds lateral stiffness. Then the adaptation of having the NTC3's suspension gives the driver unlimited setup tuning options. Competition; yeah, right! This vehicle brings the two Team Associated platforms together for a reliable and very competitive offering for the track.

BEST SELLING

For our best selling, it would have to be Hardcore Racing's titanium skid plates for the T-Maxx (HCR-0308 and HCR-0309). Our skid plates are hands-down the best upgrade for the awesome Traxxas T-Maxx truck. No Maxx should be without them. Hardcore Ti skid plates are direct replacements, adding structural strength and integrity to the front and rear ends of the truck. They provide excellent crash resistance for those "Let's jump my mom's SUV!" attempts. Our aircraft-quality 6AL4V titanium is the best out on the market. Being a spring metal, titanium absorbs, but reduces, the load transfer to other components, i.e., bulkheads and arms. They don't bend and flex like the aluminum skid plates that are out on the market. They maintain their shape and form, to keep you burnin' the nitro to your heart's content.





BEST VALUE

Our best value really lies with any of our products made from titanium. Hardcore Racing pioneered titanium cutting for the hobby industry. To pull a specific item out, it would have to be our front and rear shock towers for the GS Storm (HCR-0901 and HCR-0902), best value being that they're titanium and they're affordable. Compared with other aluminum aftermarket shock towers, Hardcore's Ti shock towers are a great value, and the added strength of the titanium makes them extremely strong. I run them in my buggy and have yet to tweak them when attempting to jump my buddy's SUV!

SOURCES

Hardcore Racing, 24895 Avenue Rockefeller, Valencia, CA 91355 • phone (661) 294-5032; fax (661)

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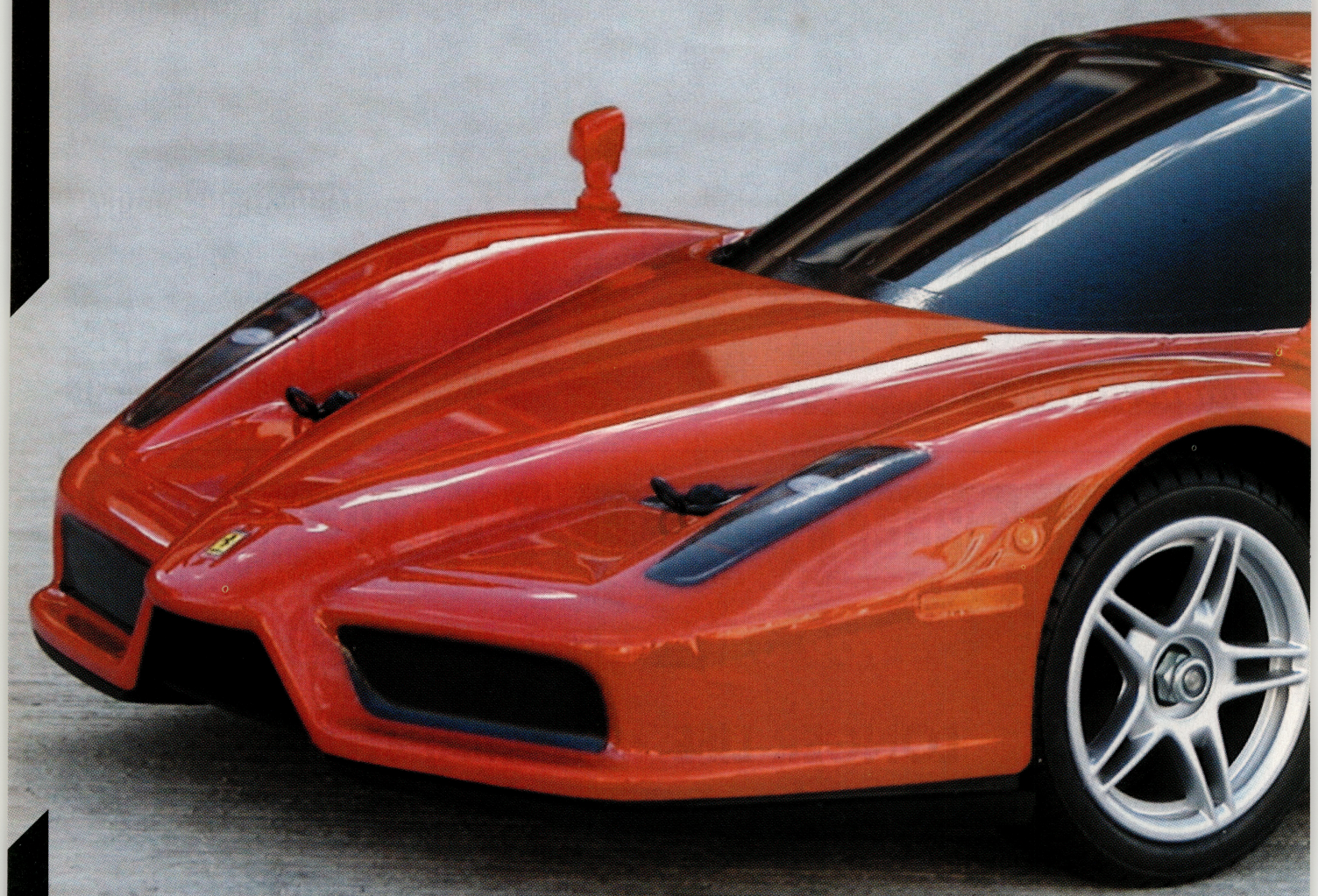


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MINIATURE BEARINGS FOR HOBBY & INDUSTRY



CARISMA M14



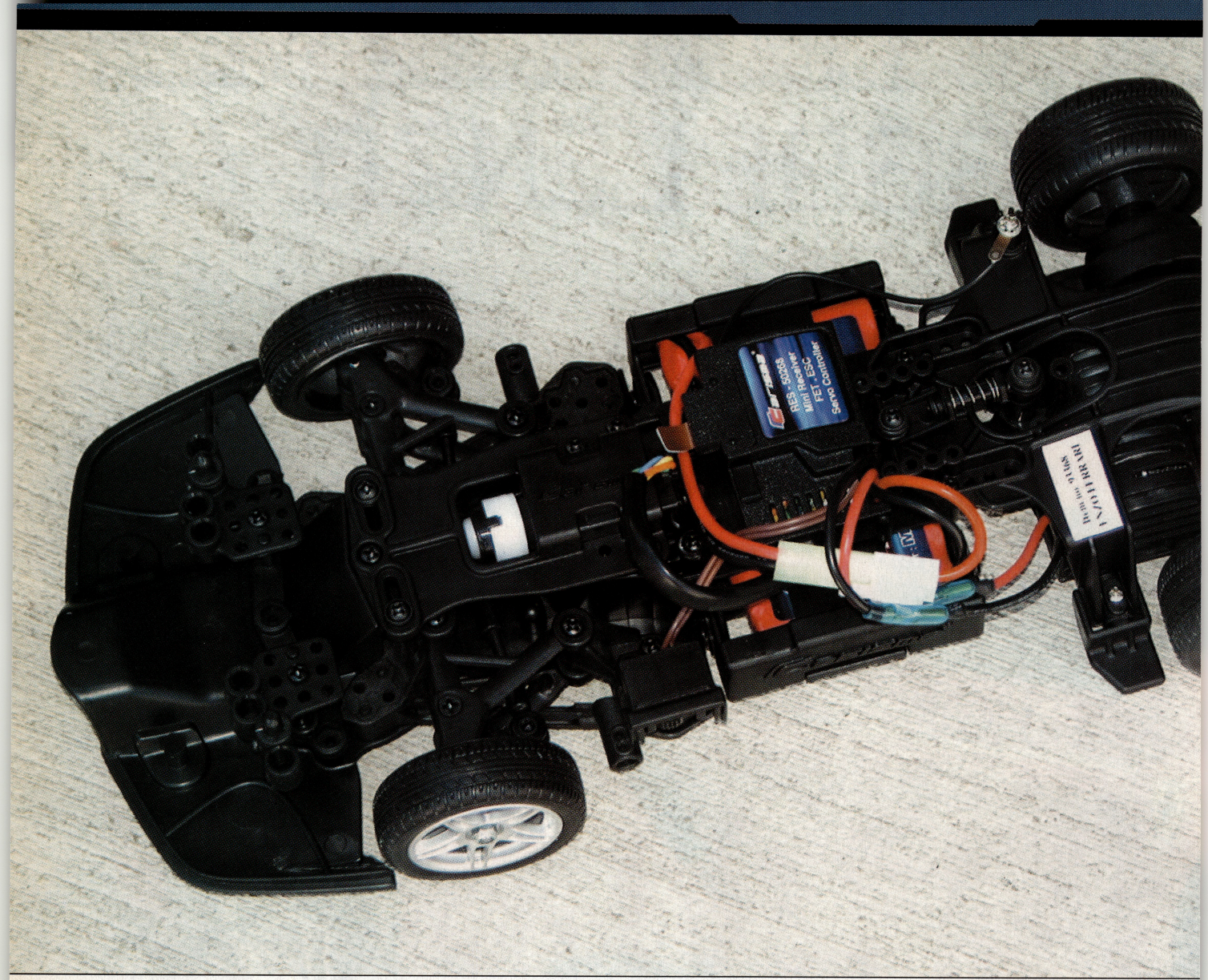
Scale beauty & scorching performance

FERRARI ENZO





If you like fast Italians (and who doesn't?), you will love Carisma's new line of officially licensed, 1/14-scale Ferraris. How big is 1/14-scale? Think of it as being in between the size of a HPI Micro RS4 and a 1/12-scale on-road racer. Carisma has four models of Ferraris from which to choose: a F40, a 360 Modena, a F2002 F1 and the Enzo shown here. Of the four, the sedan-style models (F40, Enzo and 360) share a common chassis (the M14), while that of the F1 is unique (it's called the F14). Each of the Ferraris is a complete kit, requiring nothing extra to run; these are truly ready to play!



OUTSTANDING FEATURES

OUTSTANDING FEATURES

The Carisma Ferraris are ARTR (Almost Ready To Run) models, and require just a bit of assembly before running. The kits come packaged in beautifully illustrated carrying boxes, and inside each one is a two-stage Styrofoam container. In one stage you'll find the body, transmitter, battery pack and AA batteries for the transmitter. The second stage contains the chassis assembly, rear transmission/motor assembly, wall charger and miscellaneous chassis parts and hardware. Again, only minimal assembly is needed, and we like the idea of having to put a little work into a kit such as this—especially as we plan to hop-up our car with some of Carisma's optional parts! A graphite chassis, ball diff, NiMH battery pack and ball bearings are all being offered as hop-ups.

The M14 comes in several main parts. The main chassis is an intricately molded assembly consisting of a lower plate that holds the front suspension assemblies and a middle battery compartment. To the battery compartment is attached the rear deck of the chassis, which extends rearward to also serve as mounting point for the body.

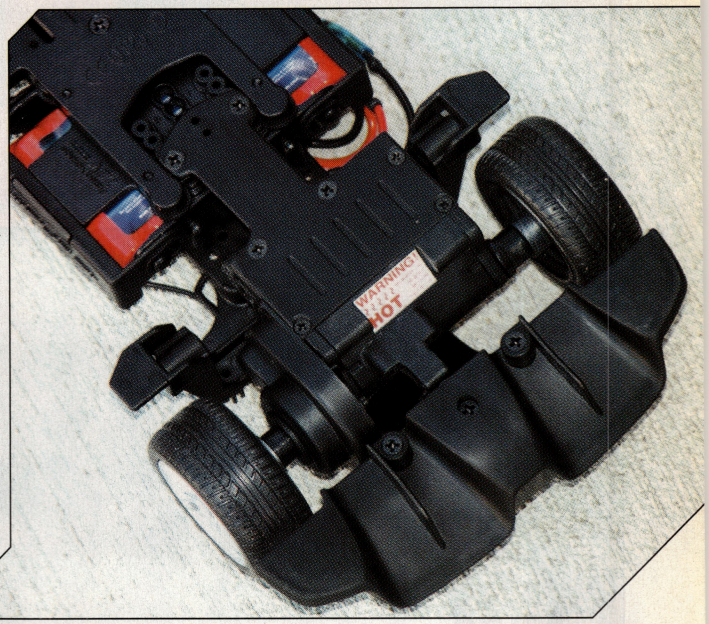
The front suspension appears to be a double-wishbone design, but in actuality, it is a simple sliding-kingpin setup similar to what you'd see on a pan car. What's really cool about the M14 is that it is incredibly versatile—its wheelbase and width can be changed to suit a variety of body styles. So if you bought the Enzo, but really wished you had gotten the F40 instead, you can purchase the F40 body and wheel kit and install it to your existing chassis.

The other major component of the M14 chassis is the rear motor pod, which has been preassembled at the factory. The motor and solid rear-axle assembly is suspended to the chassis by a flexible T-bar (again, this is a design similar to that of most pan-car suspensions). The car comes with a 380-size electric motor, which is actually pretty darned huge for this car, considering that the original Tamiya 1/10-scale off-road Grasshopper buggy used to come with a 380! What we really like is that the motor, axle and bevel gear diff are well sealed inside a molded enclosure, so whether you run your M14 outside on smooth pavement or indoors on short-pile carpeting, it'll be well protected from small debris and carpet fibers.

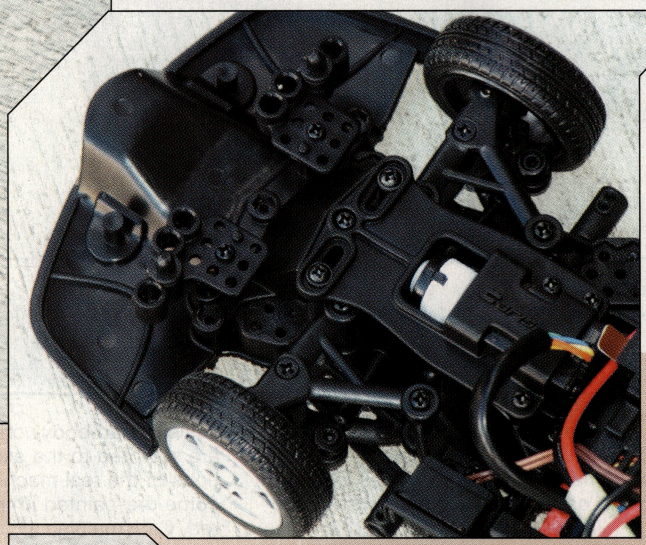
One of the best things about the M14 is that it goes together much like a typical hobby-grade R/C kit. The chassis can be easily repaired, and

CARISMA M14 FERRARI

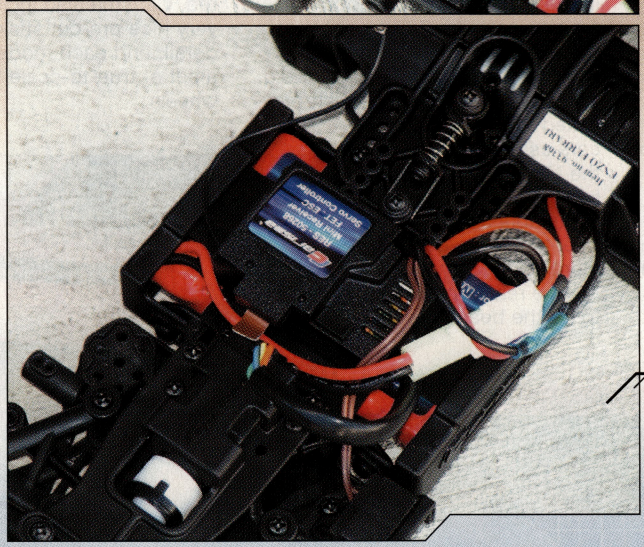




The rear motor pod is suspended by a flexible plastic T-bar, just like that of a typical pan-car. Note the adjustable wheelbase options.



The scale-looking "wishbone" suspension hides a conventional sliding kingpin suspension system. The large molded front bumper mates perfectly with the body.



An excellent electronics package includes this receiver/ESC all-in-one combo. A 7.2-volt rechargeable battery is also included.



Some assembly required: Carisma requires you to perform a little manual labor. It's not too bad; you'll have your Ferrari ready to roll in about two hours or less.

the electronics are separate components. This is not a "break it and toss it" toy; the Carisma chassis is designed for years of fun. The electronics package consists of a high-speed steering servo (which you install by using three screws) and a really nice combination mini-receiver/electronic speed control unit. Another great feature is that you can change radio crystals to one of any of the six available 27-band channels—you and five of your pals can race together!

Control comes from a very nice two-channel pistol-style transmitter that was partially developed by Team Losi. Yup, you read it right. The company that makes the Carisma is also the company that manufactures the Mini-T for Team Losi Sport (Carisma is distributed in the U.S. by Horizon Hobby, which also owns Team Losi). Losi worked closely with the manufacturer to develop the Mini-T's radio, and Carisma liked it so much they asked to use it for their cars as well. Of course, the Carisma version lacks the Mini-T's adjustable steering rate, but it is otherwise identical.

The real appeal has to be the beautiful scale Ferrari bodywork. The bodies are sculpted to the exact proportions of the real machines, and come pre-painted in true Ferrari red. Carisma also includes a set of very nice pre-cut stickers for added detail, and each model comes with a set of true-to-scale Ferrari "alloy" wheels.



The front and rear bumpers form the car's "underbelly," mating perfectly with the upper body shell to give the car its scale perfection.

CARISMA M14 FERRARI



REPORT CARD

Test location: Frank's driveway, Frank's street, Frank's living room
Test conditions: textured concrete, common asphalt, and low-pile carpet

Assembly and finish: A

We scoffed at the "two hour" build time mentioned in the Carisma's instructions. Heck, we can build a whole Tamiya kit in that time, we thought. Well, it's very easy to finish the minimal construction needed to complete the chassis, install the electronics and decal the body. Somewhere along the way, however, we lost track of about 90 minutes! Cut this figure in half if you defer stickering the body.

Parts quality: A

The company that makes the Carisma is really on the gas. We're amazed at the quality of this kit—especially considering that you can pick up this entire RTR kit for less than $100. The engineering and quality of the parts is first-rate, and the bodies—what can we say about them except, look at the pictures! Even the wheels are works of art.

Speed and acceleration: B+

This is one RTR that goes as good as it looks. The 380-sized electric motor and the included 7.2-volt six-cell pack provide impressive yank. You can light up the rear tires by grabbing a handful of throttle and cutting the wheel. Top speed is sufficient to allow you to enjoy running outside on the street or in a parking lot. On a side note: the radio's range is also excellent.

Cornering: B

The car is a little loose on asphalt (especially if there's some dust—which there always is), and it has a tendency to oversteer a little when exiting tight turns while on power. On carpet, the car is of course locked-in, and actually the reverse occurs—it has mild understeer (push).

Durability: A

Several factors contribute to the Carisma's excellent durability: a nice large bumper, good engineering and the fact that the cars are so pretty that you will find yourself avoiding crashes at all costs! Like a real Ferrari, you'll park your Carisma Ferrari at the most remote section of the lot!

FINAL SCORE

Highs: The detailed Ferrari shells on these cars may actually surpass the quality and appearance of Tamiya's 1/10-scale Enzo body shell—they're that good! Each car also includes sculpted front and rear bumpers which mate perfectly to the body. Excellent speed and performance should you choose to actually drive one of these beauties. Superb value: for about $100, you get everything—and we mean everything!

Lows: Pulling up with the 1/4-scale Carisma Ferrari probably won't get you into any exclusive clubs or restaurants.

The verdict: Micro-sized R/C isn't new, but the Carisma's size and features make it unique. These are both exacting scale replicas of some of the world's finest cars as well as fully functioning R/C racing machines—complete with adjustable chassis and an excellent radio system (complete with proportional throttle control).

SPECS

Price:	$99.99 (varies with dealer)
Length:	13.14in/334mm
Width:	5.74in/146mm
Wheelbase:	7.48in/190mm
Track:	4.7in/120mm (front); 4.6in/117mm (rear
Weight:	2.13lbs
Chassis:	molded plate
Bearings:	bushings
Suspension:	ft. sliding kingpin; rr. T-bar
Tires:	rubber radial tread
Wheels:	five-spoke silver plastic

SOURCES

Carisma, distributed by Horizon Hobby Distributors, Inc., 4105 Fieldstone Rd., Champaign, IL 61821 • phone (217) 355-9511

Hitec HIS-03MK Programmable Receiver

Built-in failsafe and voltage meter— this replacement receiver does it all!

If you own a nitro vehicle (or, for that matter, an electric vehicle), and are in the market for a new receiver, you need to check out Hitec's new HIS-03MK. Not only is the HIS-03MK an economical, high-performance three-channel FM receiver, but it also breaks new ground by offering both a built-in failsafe as well as an integrated voltage meter for the radio battery.



WHAT IT HAS

The HIS-03MK uses Hitec's IPD (Intelligent Pulse Decoding) technology to provide a clear signal to the servos (and ESC) with excellent noise rejection and great protection against interference from adjacent signals.

Failsafe: As mentioned, the HIS-03MK has a built-in failsafe function, which is especially useful for preventing runaway nitro vehicles. There are two modes of failsafe: throttle preset, or "hold" mode. You can program the HIS-03MK to move the throttle servo to any position you desire in the event of a signal loss (which would otherwise cause the vehicle to run wild). Most drivers prefer to set the failsafe to engage the vehicle's brakes in the event of a signal loss; however, you can also set it to move the throttle servo to neutral. In the hold mode, the HIS-03MK will hold the throttle and steering servos in their last position (prior to loss of signal) should there be a loss of control signal. Hold mode is most useful in the event of minor glitching, as it will prevent the servos from moving too far from where you want them.

Battery monitor: For nitro vehicles, the HIS-03MK automatically monitors the voltage of the receiver battery. It also automatically recognizes the type of battery used, i.e. a four or five-cell pack. When the pack is of acceptable voltage, the receiver's LED will glow a solid green. Should the pack's voltage drop to below a safe level (4.2 volts for a four-cell pack, 5.2 volts for a five cell pack), the LED will blink green. This tells you it's time to charge the pack, and that it's not safe to run your vehicle. The LED also tells you when the failsafe or hold modes are activated (by blinking yellow and green).

WHAT WE DIDN'T LIKE

There's not much to gripe about with the HIS-03MK. You will have to buy Hitec's single-conversion crystal (for the receiver only) for the 75MHz version. According to Hitec, the forthcoming 27MHz and 40MHz (foreign market) receivers can use standard crystals.

WHAT WE LIKE

Despite its additional features, the HIS-03MK is still a mini-receiver (verging on being a "micro"). The failsafe function worked flawlessly. We installed the HIS-03MK in an OFNA Hyper 7 1/8-scale buggy, drove it about 100 yards away and switched off the radio. Guess what? No runaway! The throttle servo moved to full brake—as we had programmed it—and the car stopped in its tracks. The voltmeter function is also very handy, although if your receiver is installed within a radio box (as was ours), you'll find yourself not using it, as it's often too much of a hassle to open the box to view the LED. Perhaps a small clear "window" could be made in the box, which would provide a clear view of the LED.

WHAT WE REALLY THINK

We can't get over how Hitec was able to cram so much into such a small package. We've always praised Hitec's receivers for their excellent signal processing and glitch-free operation, but when you add in a failsafe and voltmeter—for such a good price—the HIS-03MK is a tough act to beat!

Part no.: 24927 (27MHz); 24975 (75MHz)

Price: $65.99. (varies with dealer)



SINGLE VERSUS DUAL CONVERSION

You may wonder why Hitec makes a point of mentioning that the HIS-03MK is a single conversion receiver. This was done to ensure that HIS-03MK owners know which Hitec crystals to buy. You see, Hitec is the only company that offers a dual-conversion receiver (the DCX) for surface use. Dual conversion is essentially "borrowed" technology from the model airplane market, and what the dual-conversion receiver does is generate its own internal frequency via a second crystal in order to better filter out adjacent signals. As a result, the dual-conversion receiver is much better at rejecting other signals and noise which could cause glitching. However, a well-tuned, modern single-conversion receiver should do nearly as well as its dual-conversion counterpart, and the single conversion receiver is less complicated and is generally more durable.

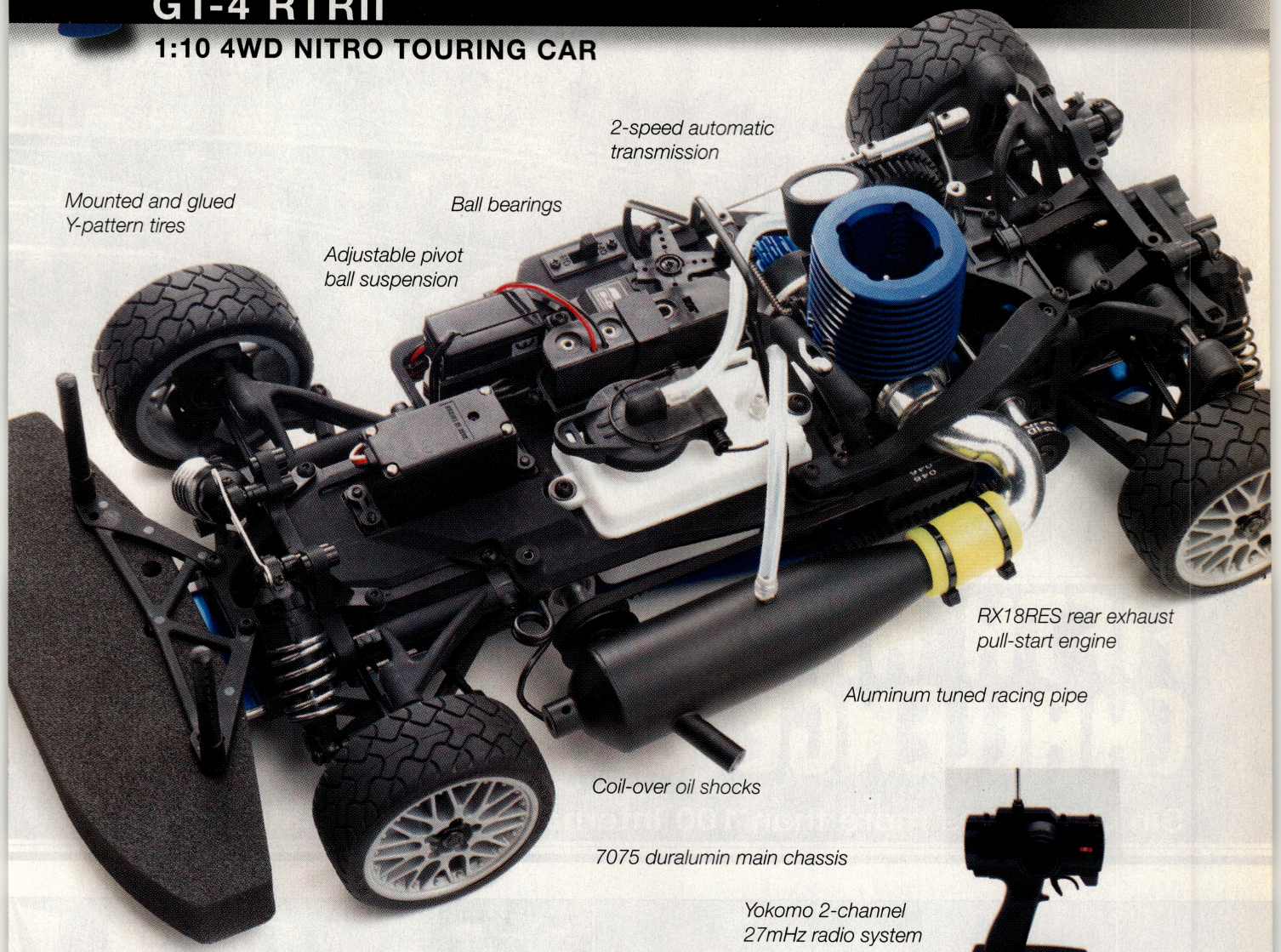
SOURCES

Hitec, 12115 Paine St., Poway, CA 92064 • phone (858) 748-6948; fax (858) 748-1767.

YOKOMO

GT-4 RTRII

1:10 4WD NITRO TOURING CAR



Everyone loved the GT-4 RTR, with its competition pedigree and in your face performance. Our new GT-4 RTRII picks up where the RTR left off, adding our new .18 Yokomo rear exhaust engine breathing through an all new alloy tuned pipe. To handle the extra power of the new mill, there are mounted and glued Y-pattern belted radials. And to get you running even faster, we factory pre-painted your choice of an officially licensed Porsche GT2 or HS-GT body.

Finishing off the GT-4RTRII package is our new Yokomo 2 channel 27mHz system with dual rate steering control. Just add batteries, fuel and glow plug igniter, pull the starter and you are good to go.... with the only nitro-powered RTR touring car to win two consecutive ROAR National Championships.





CLASS: OUTLAW 1:10 4WD NITRO TOURING CAR • LENGTH: 300mm• WIDTH: 198mm • WHEELBASE: 258mm • WEIGHT: 1780g (est.) • $680.00

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FIFTH ANNUAL HPI CHALLENGE WORLD FINALS

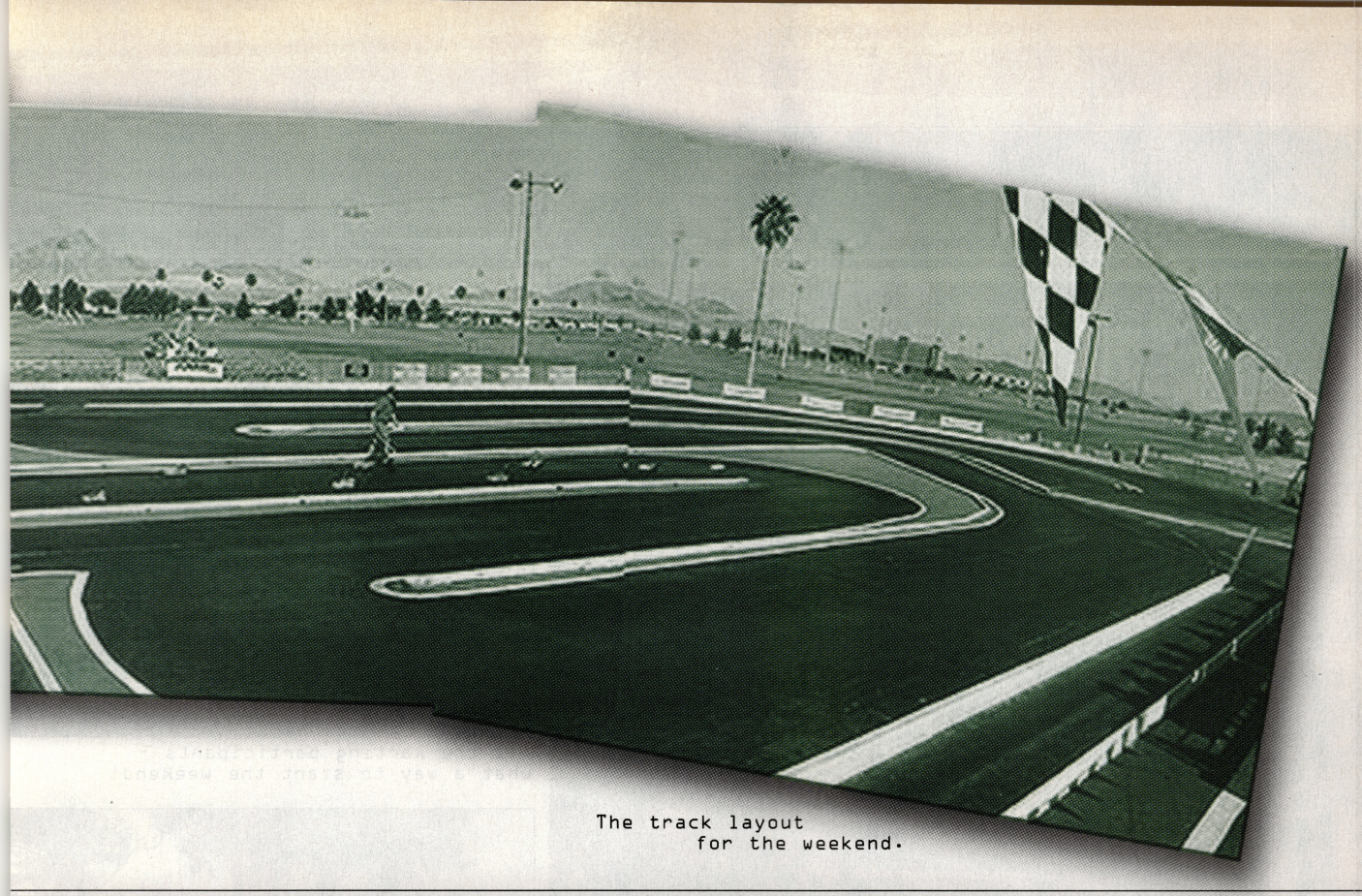
Sin City hosts more than 100 International HPI fanatics!



The driver stand was very sturdy and...interesting-looking.



Endurance Challenge racers get ready to start their 1.5hr race.



The track layout for the weekend.

HPI's fifth HPI Challenge World Finals took place in Las Vegas over the weekend of October 10-12, 2003. This race meeting brought together racers from all over the United States as well as groups of racers from Japan and across Europe! In all, there were over 110 entries in standard HPI Challenge classes, with stock and modified electric, nitro and Super Nitro classes, plus a Micro Exhibition class and even an Endurance Challenge race with several teams of three to four racers.



All the HPI Challenge World Final racers with their cars.



The Arc de Triomphe...sort of!



All the karting participants - what a way to start the weekend!



The VIP tour group - racers from Germany, Austria, Britain, Switzerland, Hungary and Japan all joined the tour.



The Japanese racers pose with Electric Pro winner Werner Spannbruckner and his car.

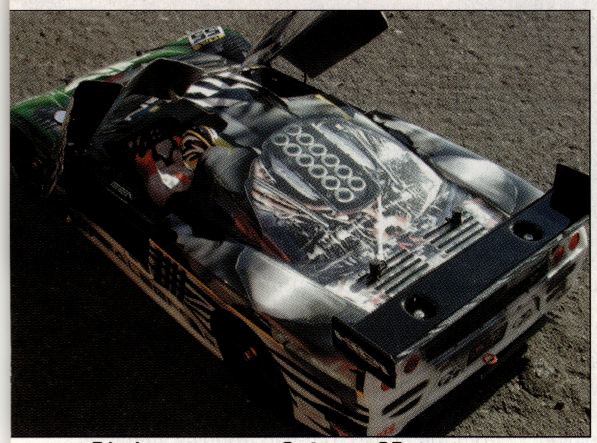
Overall, the event was highly organized, with world-class race announcer Scotty Ernst flown in from S&N's Trackside Hobbies. Scotty ran the races all weekend, kept all the racers pumped and the competition clean and fair. The 4 Aces Racing Association prepared the Silverbowl 1/8-scale race track in east Las Vegas, and with their help the racers had a well-maintained and professionally supplied facility all weekend long.

Friday was the day set aside for official practice. A half-day of uncontrolled practice, then two rounds of controlled practice made sure everyone got started on the right foot. After the controlled practice rounds, the teams in the Endurance

HPI CHALLENGE WORLD FINALS



Concours winner Tim Pennington with his trophy and winning car.



Tim's awesome Saleen S7 body - could you top that?

Challenge race had an opportunity to practice, then raced for one and a half hours. Team Japan B laid the smack down with their Advan R40 race car, with TC Racing from Switzerland not too far behind and Team USA a few laps behind them. In the end it was Team Japan B in first place with 188 laps, TC Racing with 179 laps and Team USA with 165 laps. Every member of the top three teams received prizes from Yokohama Tire, plus the winning team took home brand new RTR Nitro RS4 3 cars, courtesy of HPI Racing!

Saturday promised three rounds of qualifying heats for all racers, with a final round on Sunday morning. Austrians grabbed the pole positions for both Electric Sport and Electric Pro classes—Werner Puchas for Sport and Werner Spannbruckner for Pro. Wijaya Lim from Southern California dominated Micro racing all weekend and easily set TQ in his class. Hungarian Balint Rajki narrowly TQ'd over Werner Puchas in Nitro Stock, while Setsuya Kobayashi put down the fastest laps in qualifying for both Nitro Modified and Super Nitro Modified.

Each electric class got a triple A Main, while the Nitro classes were treated to long A Main races: 20 minutes for Nitro Stock and 30 minutes for Nitro Modified and Super Nitro Modified!

Between the last round of qualifying and the start of the main events, HPI's Frank McKinney called out raffle prizes for the racers. Generous donations from Yokohama Tire, RC Magazine in Japan and HPI Racing provided a way for racers to go home with something very cool, even if they were having a weekend full of bad luck. HPI provided items like their new Savage Hauler Bags, RC Magazine donated very cool pit towels, and Yokohama handed out Hot Wheels cars, die cast models, T-shirts, hats, a couple of racing jackets and even a whole set of performance street tires! Even if someone didn't get a raffle prize, every racer still walked away with a free HPI body and hat! It's always



Rich Taylor of the 4 Aces club starts a Nitro main event.

HPI CHALLENGE WORLD FINALS



Fast Lap - indoor gas karts in Vegas!



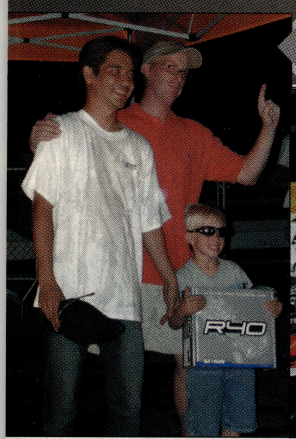
Even handout fuel was used - HPI Power Fuel 20%.

good to go to an HPI Challenge race!

In the electric touring classes, the Austrians really showed how to run—both Werners won the first two A Main races easily and secured their wins. Werner Spannbruckner almost got second place in Electric Sport as well, but tenacious driving from UK youngster Joe Cook snagged that spot away from Werner in the final A Main race—it took three scoring tiebreakers to decide second place! Wijaya Lim took the first two races in Micro Exhibition, as expected, plus Japanese racer Atsushi Hasegawa nailed down second, so in the final A Main only third place was up for grabs.

In Nitro Stock, Balint Rajki used his TQ spot to the best possible advantage, leading from flag to flag. Second qualifier Werner Puchas had engine troubles and had to pull out halfway through. Nitro Modified TQ Setsuya Kobayashi from Japan also used his TQ spot to run away from the crowd, but had troubles with fuel consumption, which allowed some of the racers to make up a few laps—he still finished a lap ahead of second place Wayne Beebe, though! Setsuya's TQ in Super Nitro Modified was in jeopardy as his pit man had trouble getting the car

How's that for improving international relations: Nitro Mod winner Setsuya Kobayashi gives his R40 prize for first place to 6-year old Ivan Wooley, the youngest racer at the event. Ivan's dad Timm is equally happy and jealous!



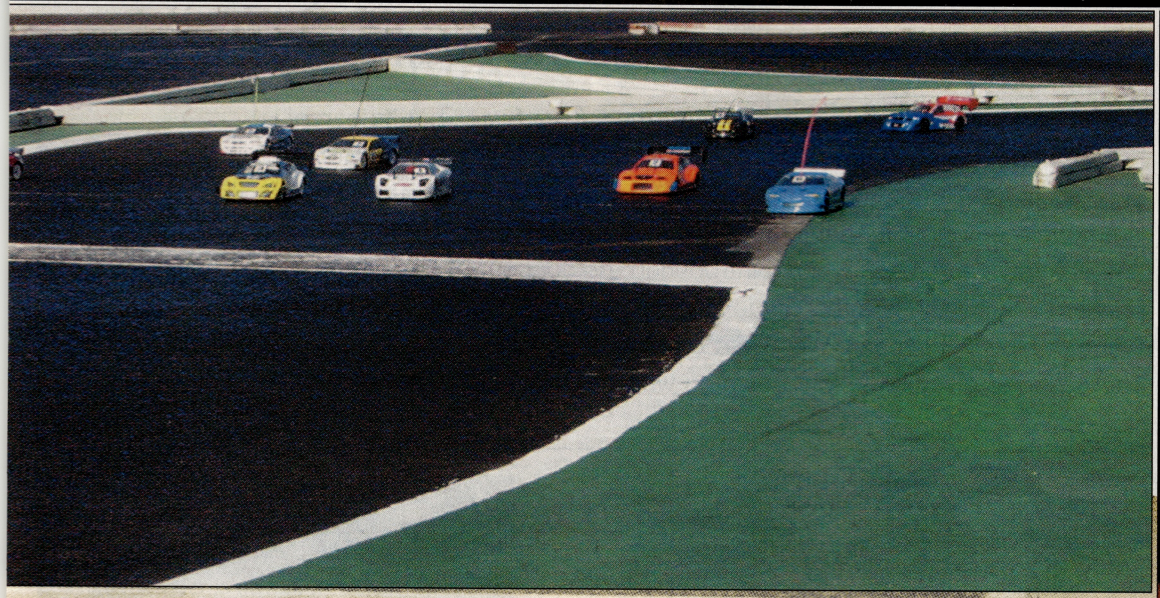


The winners! Team Japan B and their prizes for winning the Endurance Challenge.





Micro Exhibition top 3. Electric Sport top 3.



IFMAR qualifying was the order of the day.



HPI stayed across the street from the Hard Rock Casino - very swank!

started at the beginning of the race—a jump start forced him to start from the back of the grid and several bobbles and a couple of problems moved him back in the pack. Meanwhile, U.S. racer Mike Collins took over the lead and never looked back! Mike would finish four laps ahead of Swiss racer Loic Zimmerman and eight laps ahead of Setsuya to claim the trophy cup.

CONCLUSION

The winners of each class took home a huge HPI Challenge trophy cup, brand new Nitro R40 kit, HPI Challenge T-shirt, and Sundog sunglasses. Second place went home with a new RTR Sprint kit and third place got an RTR Micro kit. Several of the racers got splashed with icy cold water also, but apparently those weren't part of the official handouts.

Dedicated racers like regular HPI Challenge folks helped make the 2003 HPI Challenge World Finals a success. We're happy to see a one-make series like this be such a success and hope that other manufacturers follow suit, or at least take a lesson to see how to keep loyal fans.



Nitro Stock top 3.



Nitro Modified top 3.



Super RS4 top 3.



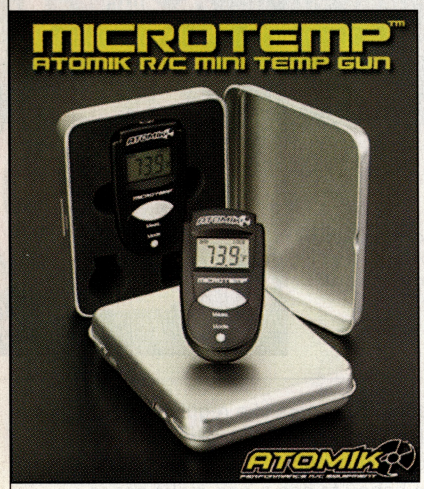
Electric Pro top 3.

MY FAVORITE PRODUCT:

ATOMIK RC

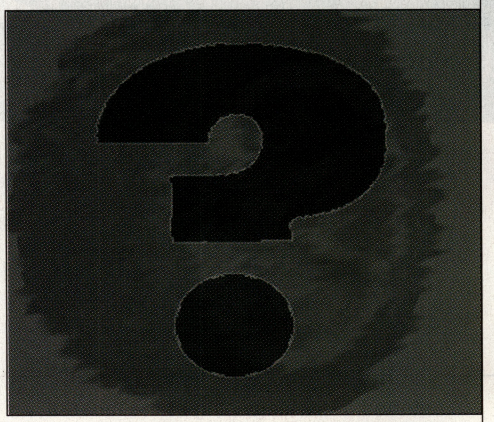
Spencer Thompson spills the beans

Atomik RC may be a newcomer to the R/C industry, but its parent company, Knucklebone, has been around the bicycle and BMX biz for a long time. In fact, Knucklebone's lineup of BMX helmets is among the hottest in that industry. Atomik made a splash in the R/C hobby a few years back when it introduced the concept of the screen-printed body (which is a technique actually developed for the manufacturing of bicycle helmets). We asked company president Spencer Thompson to give us the low-down on what's happening at Atomik RC.



BEST SELLING

That's an easy one. In terms of units sold, it's our new MicroTemp temperature gun. It has received a great response. It's small in size, but offers accuracy you can trust. With a suggested retail of under $40, it's a great deal. The "spit test" can only get you so far, so having a temperature reading you can count on makes engine tuning a lot easier. I think the aluminum case comes in handy as well; I can throw it in my toolbox and not worry about it getting hurt.



WHAT'S AROUND THE BEND

It's too early to talk about just yet, but I know it is going to be a hit. Just a hint—it's not a body! I'm exited about the new products that we're working on. Designing new products is what makes this industry fun for me. I'm also exited about the future of R/C. So many new enthusiasts have come into the sport in the past couple of years, it's been really cool to see so many new people enjoy the hobby and all of the cool products that have become available as a result!

MOST UNIQUE



My favorite of our current lineup is a close tie between the Silver/Blue Flame F-350 and the new Black/Yellow Flame Chevy Suburban bodies for monster trucks. The F-350 is just a great looking truck; to me it looks the way the full-size F-350 *should* look! The flame graphics on this body really set it off. It looks best with the clear lens decals and the stock grill. It's cool to have the option of the custom billet grill and stock lenses. The new Suburban is very cool. We have changed things up on this body, offering a tinted window decal set with the option of cutting the windows out, instead of the clear window dome. Of course that will all change as soon as our new Chevy Silverado Baja edition is available....

SOURCES

Atomik R/C, 2363 Teller, Ste 104, Newbury Park, CA 91320 • (805) 499-7003; fax (805) 499-7192

2004 TCS RACE SCHEDULE

HobbyTown USA
February 1
Newark, CA
510-796-2744

RC Outfitter
March 21
Hanover, PA
717-633-9490

Hobby Works
July 25
Laurel, MD
301-725-0383

TrackSide Hobbies
February 22
Brookfield, Wisconsin
262-783-4699

Tamiya America HQ
June 27
Aliso Viejo, CA
800-826-4922

Burien Toyota
August 8
Seattle, WA
206-243-0700

Toys For Boys
March 6
Kennasaw, GA
678-797-0406

HobbyTown USA
July 11
Memphis, TN
901-213-2682

North American Finals*
Tamiya America HQ
August 28 & 29
800-826-4922

*Must make top 10 in any class to compete in the 2004 TCS North American Finals.

Visit www.tamiyausa.com for:
updated rules and classes, registration, and results.

RESULTS

Formula-1

First Place	Steve Williams
Second Place	Neil Rabara
Third Place	Mike Steele
Best of Show	Dave Galbreath
Top Qualifier	Neil Rabara

Touring GT1

First Place	Rod Canare
Second Place	E.J. Evans
Third Place	Mark Dawson
Best of Show	Chris Lim
Top Qualifier	Rod Canare

Touring GT2

First Place	Michael Rydwell
Second Place	Rudy Rodriguez
Third Place	John Christensen
Best of Show	Gary Katzer
Top Qualifier	Michael Rydwell

Mini

First Place	David Weir
Second Place	Craig Richter
Third Place	Troy Crabtree
Best of Show	Ray Paley
Top Qualifier	David Weir





LEFT: Headed for Japan to compete in the Tamiya World Championships are Rod Canare in GT-1, Michael Rydwell in GT-2, and Steve Williams in F201.

ABOVE: 137 racers competed in this year's TCS North American Finals making this the biggest and best North American Finals ever!

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1/10 SCALE TOURING CAR

YOKOMO GT-4

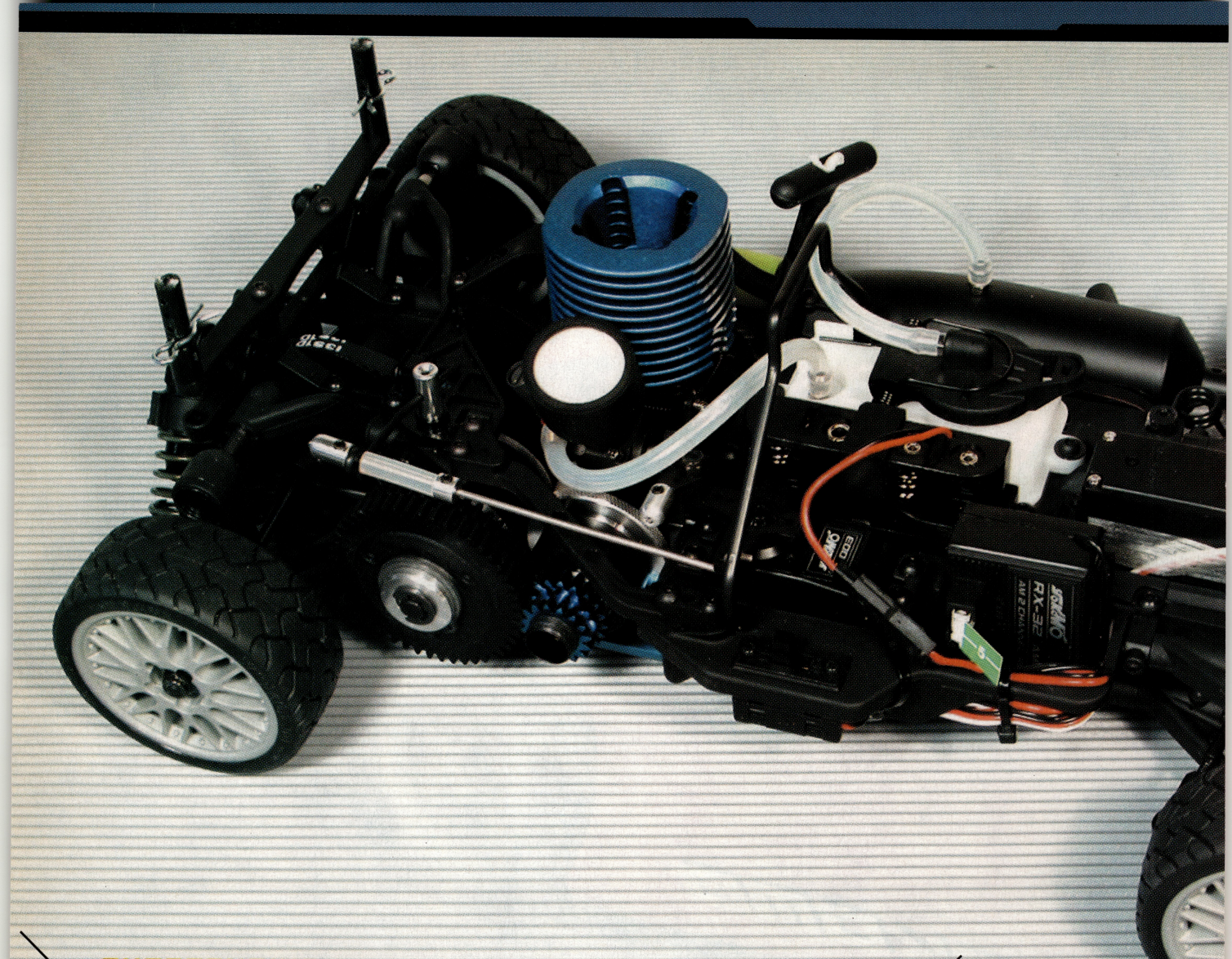


An old favorite gets a shot in the arm

RTR II



Yokomo is a company of firsts. It was the first to develop a belt-driven touring sedan; it was one of the first to introduce a competition-level nitro sedan; it was one of the first companies to offer a RTR nitro sedan. Unfortunately, being first comes with a price when you're facing stiff competition from newer designs. Such was the case with Yokomo's GT-4 RTR, which has been soldiering on unchanged for years. Now, Yokomo has given its venerable nitro sedan a shot in the arm, massaging its equipment list and endowing it with an all-new powerplant that's sure to maintain the car's status as horsepower king. We recently received a brand-new GT-4 RTR II for review.



OUTSTANDING FEATURES

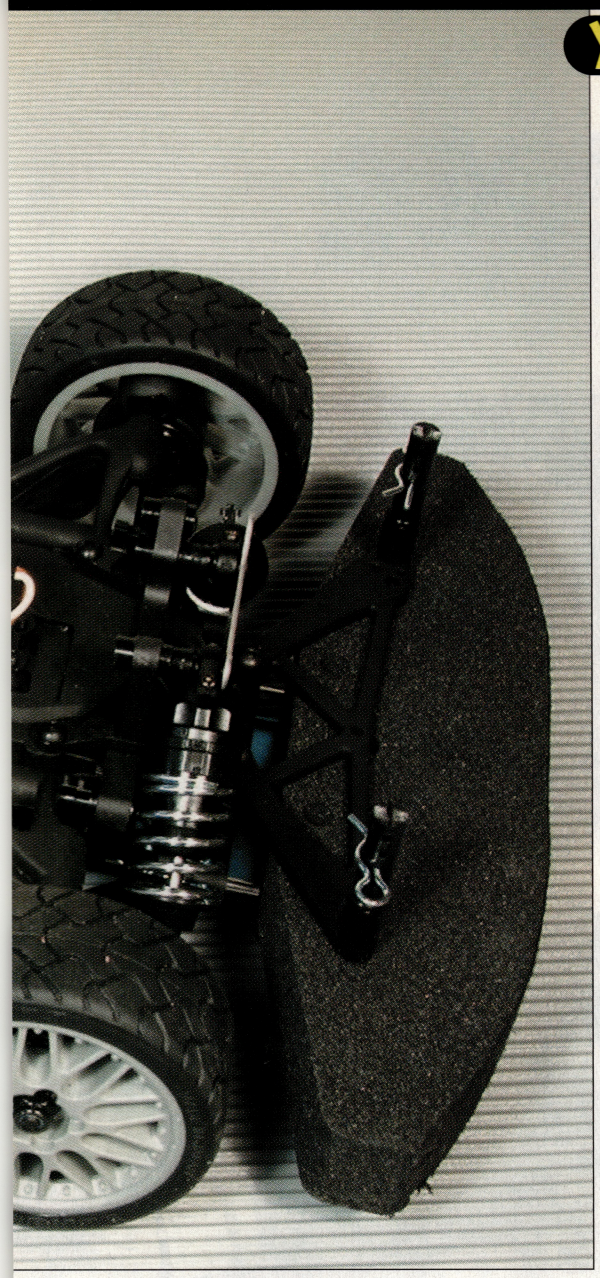
Few RTRs can boast the racing pedigree of the GT-4. It is nearly identical to Yokomo's kit versions of the GT-4; most other RTRs are manufactured of slightly different materials than their racing counterparts. The GT-4 is one of the oldest nitro touring car designs on the market, but its long career has been illustrious and has led to a system of continued refinement that has also made its way to the RTR II.

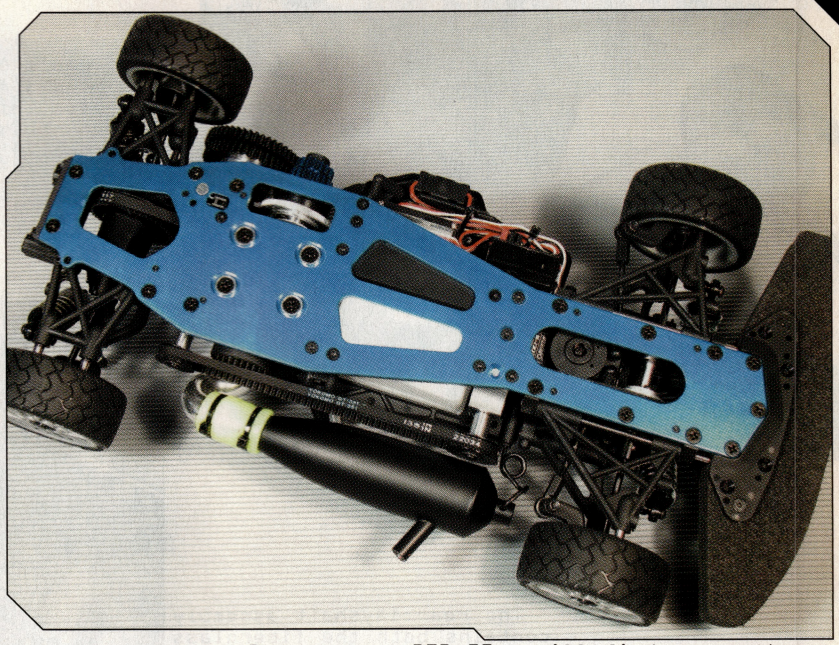
A blue-anodized, 3mm-thick duraluminum chassis provides the GT-4 II with an adequate, if not entirely flex-free, foundation. A molded-composite plastic upper chassis deck spans the front two-thirds of the car, and holds the radio gear and the fuel tank. A pair of molded braces span from the top deck back to the rear suspension bulkheads, but their ability to stiffen the rear third of the car is limited. Overall, the structure is sound and the flexing is not intrusive on all but the highest-grip surfaces.

The GT-4 is one of the very first nitro sedans to adapt the pivot-ball-style of suspension, which was previously only seen on the larger 1/8-scale road racers. The GT-4's suspension still ranks among the best in the business, and for the RTR II, Yokomo has added some subtle refinements. Up front, the molded shock tower receives an aluminum brace, which does a surprisingly good job at reducing flex in the tower—a major source of woe with the original car. New, stiffer springs adorn the molded-composite oil-filled shocks. In back are the YS-1755 GT-4 Pro Springs (gray), while YS-1760 GT-4 Pro Springs (polished silver) are used up front. These springs are much stiffer, and greatly reduce chassis roll during cornering, and generally speed up the car's response. For lower-grip conditions, you'll probably be better off using slightly softer springs.

The biggest change rests in the RTR II's engine bay. Yokomo has designed an all-new .18 rear-port engine—the biggest in the 1/10-scale RTR nitro sedan category. If you want speed, few cars will surpass the RTR II. The old RTR's .18 engine was certainly no slouch, but with the better breathing afforded by the new rear-port design, expect the RTR II to be even faster. Adding to the improved respiration is a new, tubular-aluminum exhaust header and a new, one-piece aluminum tuned pipe (in place of the old car's composite muffler). The note of the engine, and its response, exhibit marked improvement thanks to these changes.

Tried-and-true best describes the GT-4's drivetrain, although, in the RTR II, several changes to the drivetrain's setup have been made to create an easy driving experience. Yokomo replaced the front differential with a locked-up diff "spool," which essentially tames the car's steering response—especially at higher speeds. The spool reduces initial turn-in when entering a corner, and when you get back on the gas, the spool causes the front wheels to "pull" the rear end of the car to reduce over-





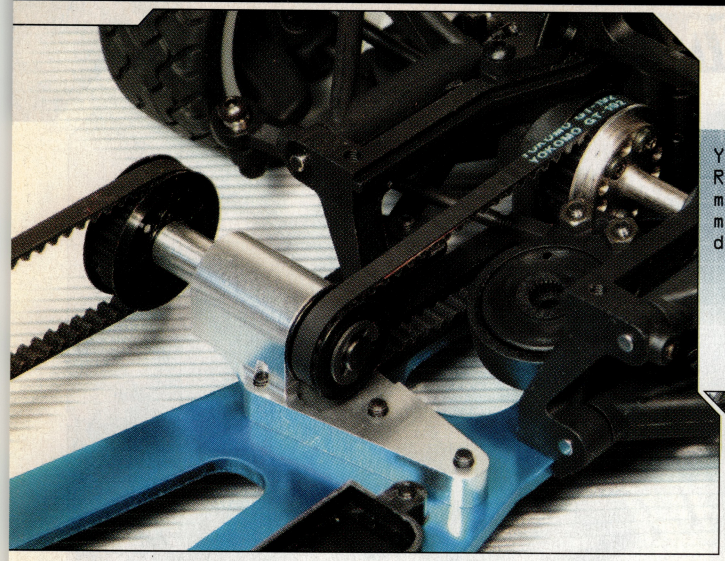
Beneath the RTR II you'll find a smooth, countersunk aluminum chassis that's been blue-anodized for a trick appearance.

steer. A free-spinning planetary gear diff is used in the rear. It's essentially an open diff, which, while providing the most grip, is also more prone to unloading under acceleration. Since the diff isn't O-ring sealed, your best option for tuning is to pack the diff with some heavy grease, such as Yokomo's CS-DGM medium grease. Yokomo now includes a machined-aluminum front layshaft support in place of the old car's molded-composite support. This shores up a very critical high-stress area of the drivetrain, and ensures smooth and reliable power delivery.

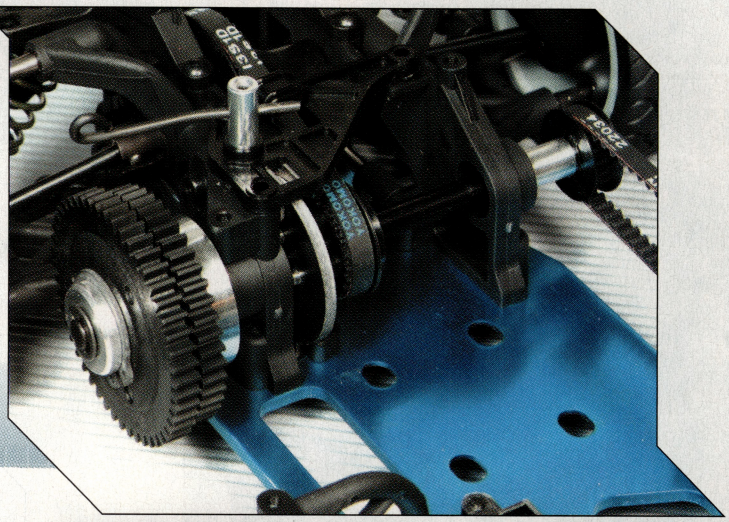
Yokomo has also made some pleasant changes to the RTR II which make it more user-friendly. No one likes to paint bodies, and in the RTR game, if you don't offer a pre-painted shell, your potential customers may go elsewhere. The RTR II is offered with two body choices: the HS-GT shown here, and a Porsche 911 GT body. Although neither body comes pre-trimmed, they do have clear window areas—not window stickers like so many other RTR bodies. Yokomo also includes a full set of its Quick-Grip Y-pattern pre-glued radial tires, which are a very good choice for most paved surfaces.



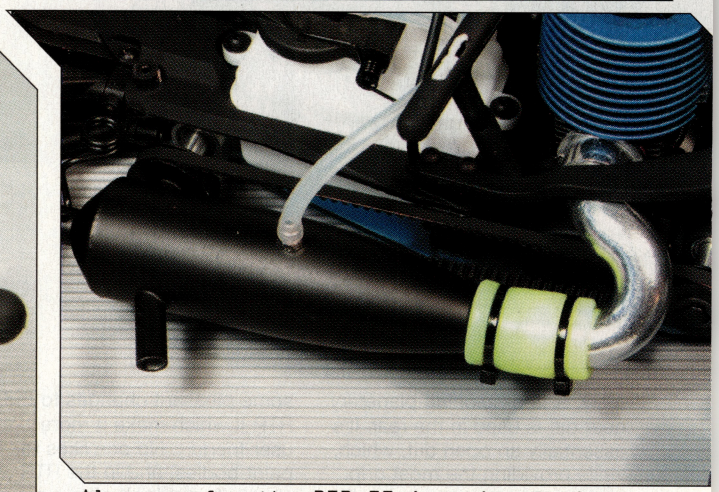
A basic two-channel AM pistol-style radio comes with the RTR II. It has all the standard features, plus a welcome steering dual-rate function.



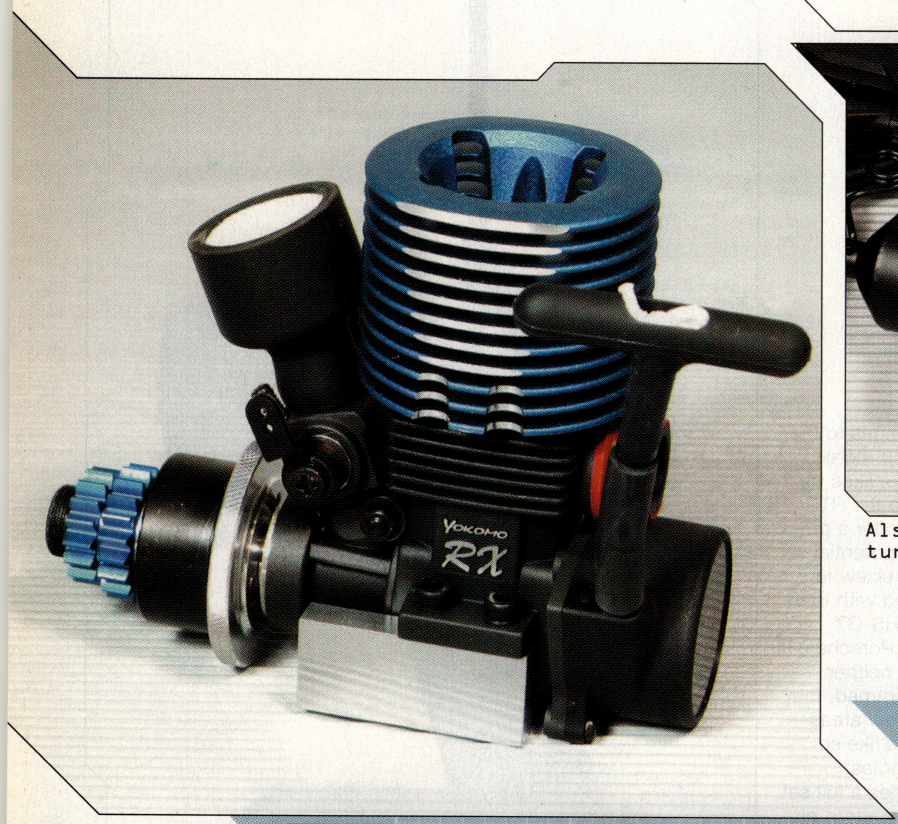
Yokomo replaced the original RTR's molded front layshaft mount with this machined aluminum mount. Note the front diff "spool."



The rear layshaft assembly contains both the fiberglass disc brake setup as well as the standard "finger" style two-speed transmission.



Also new for the RTR II is this aluminum tuned pipe (the old car's pipe was plastic) and a tubular aluminum exhaust header. Better breathing results.



Biggie smalls: Yokomo's RTR already had the largest engine in its class. Now, the RTR II gets a revised rear-exhaust version of Yokomo's RX .18 mill.

YOKOMO GT-4 RTR II



REPORT CARD

Test location: KZ Speedway, Sun Valley, CA
Test conditions: Large, permanent asphalt roadcourse, dusty and low-grip

Engine: A+

The GT-4 RTR II is like a big-block Chevelle; it's overpowered and its engine scarcely breaks a sweat. The new rear-port .18 is a great mill. It starts extremely easily and it's very easy to tune. The dual-needle rotary carb maintains its settings with pinpoint accuracy.

Speed and acceleration: A

You want speed? This is your RTR! The Yokomo accelerates smoothly and surefooted, thanks to its efficient belt-driven 4WD system and locked front spool. When the two-speed shifts into second, look out: the car eats up even the longest straightaways without much notice. Our radar gun pegged the GT-4 RTR II at just a shade below 56 mph while traveling down KZ's 250-feet-plus back straight. The car felt tapped, however it's possible that, with a bit more runway, it could have reached its advertised top speed of 60 mph.

Braking: B

The RTR II's brakes are very powerful, however we found that the front diff spool tended to cause the front end to shimmy under hard braking, and that it was more difficult to modulate the brakes without benefit of a front diff.

Low speed cornering: B-

The locked front diff makes the car easier to drive, but it also tends to take away some off-power steering. As a result, the Yokomo can't really be driven too hard into tight corners. As it's difficult to break the rear tires loose to help initiate a turn, you pretty much have to slow enough so that the mechanical grip of the front tires takes over. The car is good through the middle and exit of most tight turns.

High speed cornering: B+

Where the RTR II's handling shines is through fast, sweeping corners. The car will hug the inside line through a sweeper like no one's business, and, once at the apex, you can bury the throttle without fear of oversteering.

Durability: A

The Yoke is a proven design, and it's as bulletproof as any nitro sedan you'll find. The front suspension in particular is highly resistant to crash damage—trust us! The drivetrain, although exposed to the elements, has been designed to shed most debris before it can become lodged between the belts and pulleys.

FINAL SCORE

Highs: The GT-4 RTR II is one of the most powerful RTR sedans on the market today. It's also one of very few to share nearly every one of its components with a national champion sibling. The preassembly, which is done here in the U.S., is some of the best work we've seen. The radio system also performed flawlessly during our test, and the servos were very good.

Lows: Expensive compared with some RTR nitro sedans (however, the Yokomo is the only RTR nitro sedan that is made of the same parts as its kit cousins). The body doesn't come pre-trimmed.

The verdict: The GT-4 is one of the oldest designs still on the market, however this isn't a bad thing. It has more power than you'll know what to do with, and it has a well-balanced, composed chassis that is expertly pre-built for you. Add in Yokomo's excellent customer support and huge catalogue of cool hop-up accessories, and the RTR II is a winner.

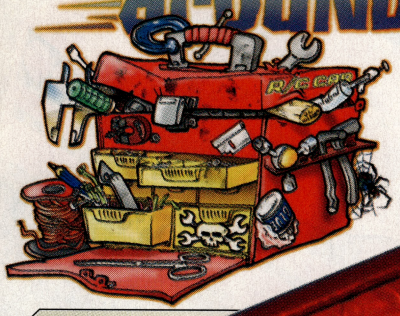
SPECS

Price:	$439.99 (varies with dealer)
Length:	15.3in/390mm
Width:	7.9in/200mm
Wheelbase:	10.1in/258mm
Track (f/r):	6.4in/162mm
Weight:	3.84 lbs (RTR)
Chassis:	2.5mm blue-anodized aluminum
Drivetrain:	belt-driven full-time 4WD
Bearings:	steel ball bearings
Driveshafts:	steel dogbones
Suspension:	upper/lower ind. wishbone
Shocks:	composite oil-filled shocks
Tires:	Yokomo Y-Pattern
Wheels:	silver mesh

SOURCES

Yokomo USA, 17951 Skypark Circle, Ste. K, Irvine, CA 92614 • phone (949) 252-8663; fax (949) 252-8657

TOOLiN' around



TURNBUCKLES NO LONGER PAINFUL

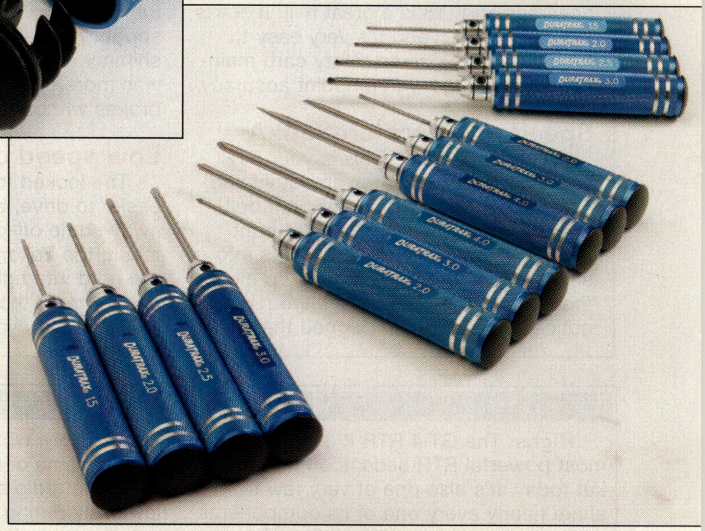
We are always trying to find ways to help speed up building and maintaining our fleet of test cars. Turnbuckles have always been a pain in the you-know-what! Thanks to our friends at Racers Edge, we found a handy little tool that will make building our next set a breeze. Each end has a different size capture area that fits nearly every size of ball-cup. The knurled center allows you to spin the ball cup onto the turnbuckle with ease. Plus, your tool box will weigh five pounds less when you ditch the Channel Locks. And here's a little factory tip from the boys at Team Losi: if you ever pop a ball cup, replace it, as it will always pop off again!





PERFECT HOLES, EVERY TIME

Also from DuraTrax is the new Ultimate Body reamer—the "state-of-the-art" in body cutting, as they say. Designed to create and enlarge holes in almost any hobby material, the extra-sharp point starts holes quickly and precisely. The handle is made of knurled, anodized aluminum for a secure, comfortable grip, and a cap protects the reamer tool when not in use. The cap fits onto the handle's base during cutting, and for added peace of mind, O-rings on both ends of the handle hold the cap firmly in place. Can't be too careful, you know! The suggested retail price is $20.



IT'S ALL IN THE WRIST

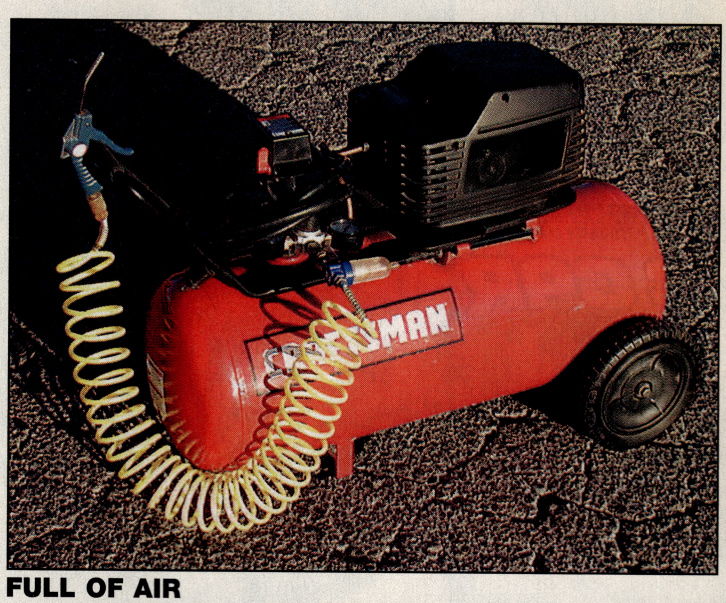
New from DuraTrax are these sweet Allen drivers. The handles are made of machined aluminum for durability, with the tip size engraved for easy identification. The handles' surface is also knurled to provide a more secure grip, which is great for torqueing down those engine-mount screws. There is a cap on the end that allows for storage inside the hollow handle, and as with all good Allen drivers, the shafts are hardened tool steel with precision-ground tips. The tips are locked with a setscrew for easy removal, and you can also purchase replacement tips. A great addition to any toolbox! Each Allen driver retails for $14.95.



LETTIN' OUT THE OLD BELT

A leather punch? What in the world would you want a leather punch for? Truth be told, it's a great tool for punching out ventilation holes in your tires and wheels. It's also great for making holes in your bodies for fastening things like your wing, or into plastic parts for bolt holes. We normally use it for punching out our tires so the dirt will escape and the tire will breathe easier, but it is good for all sorts of things.

We found this one at a True Value hardware store for just $4.95, but you can find them at any hardware store.



FULL OF AIR

The air compressor is a car's best friend. Whether you are into off-road or on-road, your car is going to get dirty, and you will need to clean it! Having an air compressor is the hot ticket for blowing off all the junk that gets on your car. Believe us, cleaning a car can be a hassle, but having an air compressor makes the job a lot easier. One of the more popular air compressors you see in the pits or in peoples' garages is the Craftsman 100 gallon unit; it is a good all-around size for the garage and not too bad for loading into the truck for your next big race. The price is reasonable, too. Another nice thing about this compressor is that you can use it for other tasks around the house, like powering air wrenches, inflating car tires, even house painting! You can find these at any Sears or OSH stores, and they are regularly at garage sales or on eBay for a good price. Expect to pay around $200 new and $75-$100 used. We got ours from a garage sale for eighty bucks—and it was practically new!

MY FAVORITE TOOL

Pro racer: Greg Degani

Age: 27

Occupation: 1/8 scale specialist; current IFMAR World Champion

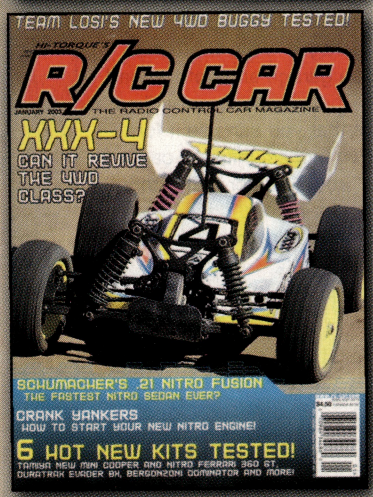
Sponsors: Kyosho, Sidewinder, Racers Edge

Favorite pastime: Being head of the R/C Racers Union (don't ask?); playing pranks on his buddies at the track

Favorite tool: Greg loves his twenty-dollar Black & Decker screw gun. As he puts it, "I don't have to do as much work with it as I do with regular wrenches, I have a large selection of Allens and other bits that fit it, and when I have to tear down my buggy, my Black & Decker screw gun cuts down the work time. Plus it keeps my hand and wrist from getting sore—I don't want my trigger hand being tired for those long 45-minute A-main battles, you know!"


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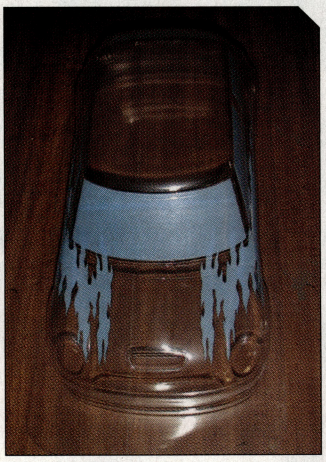
PAINTING WITH CHROME & HARD METAL

Over the years it seems as if I have sprayed just about every color available to the R/C community. I have even mixed a bunch of colors on my own to create something unique—and I have achieved some pretty awesome results. But mixing paints has its limits. There must be a better way to create some new and exciting colors. Fortunately, I have not been the only one anxious to see the current number of R/C paints expanded. Thanks to the good people over at Spaztix and HRP, there has been a sudden explosion of new and exotic colors and types of paint. This month I will review the Spaztix Hard Metal and chrome paints and demonstrate how to do a basic "tear" paint scheme.



HELPFUL REMINDER

I cannot overemphasize how important it is to properly prepare a body for painting. Before I mask or paint anything, I always wash each body thoroughly with mild dish soap and hot water. This removes any oil from the molding process and will allow the masking and paint to adhere better. Once this has been done, I dry the body with a lint free cloth (unless, of course, you like water droplets in your paint).

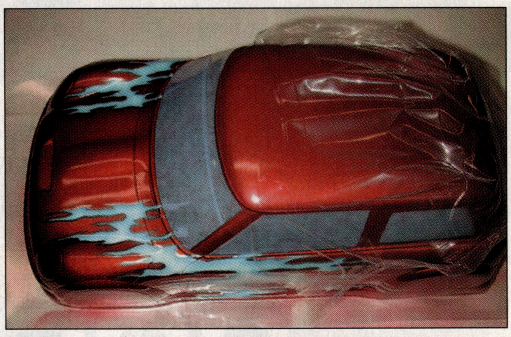


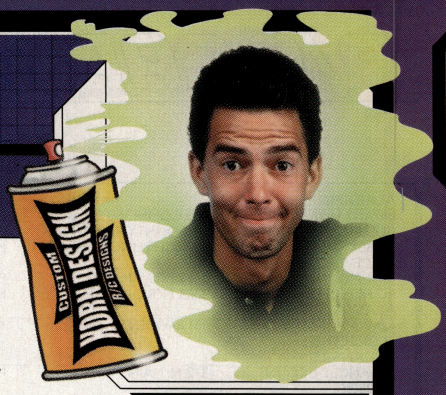
STEP ONE: BODY PREP

After washing out the body and applying the window masks, I can start to lay out the graphics. For this paint job, I chose to do a tear-type of design. I tape over the entire area of the body where I wanted the design to be. To prevent paint bleeds, I overlap each layer of tape about on quarter of an inch over the previous layer.

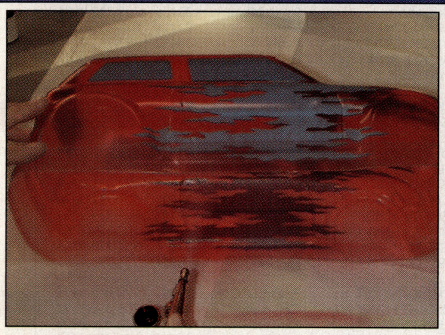
STEP TWO: SKETCHING THE DESIGN

When all of the tape had been applied, I then began to draw the design on the outside of the body with a sharpie. I only recommend using this technique if the body came with a protective film. Using a sharpie on the bare lexan would require the use of a harsh cleaner (to remove the ink) that could damage the body. If a body does not have a protective film, I draw the design on the tape itself using a pencil. I never use a sharpie or any other type of ink on the tape, because the paint will cause the ink to bleed into the paint. Either way, I end up with a sketched-out design that I can follow and cut out with a sharp X-Acto knife. I then peel out the excess tape.





BY MARTY KORN



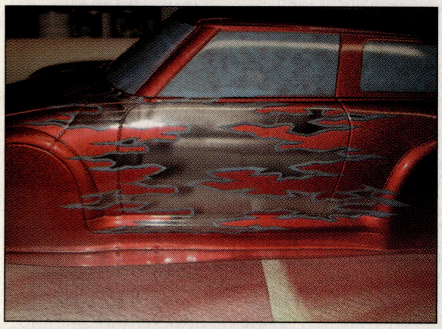
STEP THREE: LAYING DOWN THE BASE COLOR

For this body, the first part that I sprayed was the main body color, which was candy apple red (remember: try to spray dark colors first whenever possible). All of the Spaztix airbrush paints come in a ready-to-spray consistency. With a number 5 airbrush tip, I laid down two to three coats at 30 psi. To achieve the desired metallic look, I backed the candy apple red with a coat of Pactra's Indy Silver—straight out of the can. I have found it to be easier to use cans for backing colors instead of using my airbrush.



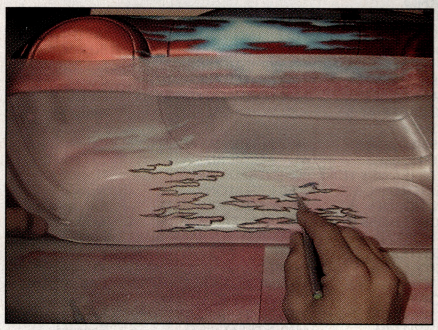
STEP FOUR: CUTTING THE PINSTRIPE BORDER

Once the paint had dried, I hand cut a thin pinstripe along the entire design, and then remove all of the tape—with the exception of the bordering pinstripe. It is very important to make sure the remaining pinstripe has not been peeled up in any way, or else the paint may bleed and ruin the crisp line that's desired.



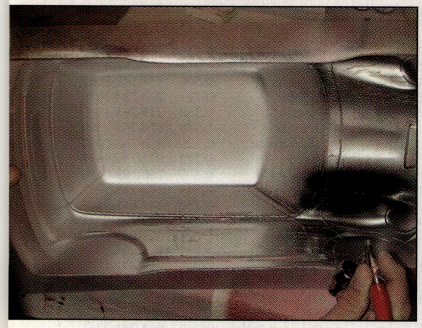
STEP FIVE: ADDING DEPTH TO THE TEAR

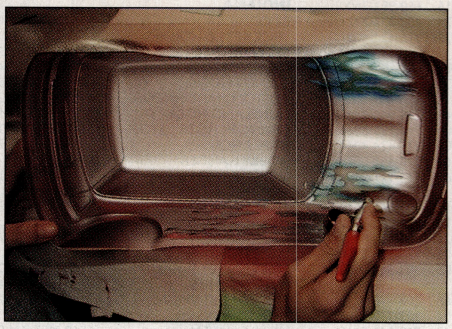
Next, using a number one airbrush tip, I fade Spaztix Anodized Blue (part of their Hard Metal series) at 20 psi. To create the desired shading, I only fade along the bottom edges of the tears. Doing this gives the design a more three-dimensional appearance. After the Anodized Blue is dry, I back it with two coats of Pactra Sprint White.



STEP SIX: PEELING OUT THE STRIPE

Before the final step can be completed, it's necessary to peel out the entire pinstripe. I use my X-Acto knife and carefully remove all the remaining tape. This leaves me with a clear pinstripe around the entire design.





STEP SEVEN: THE FINISHING CHROME TOUCH

To finish up, I spray one light coat of Spaztix Chrome. I spray one coat at a time until I achieve a reflective chrome effect. This usually takes about three even coats. The one and only catch to using chrome paint is that it must be backed with water-based black. This is due to the fact that any lacquer-based paint has a negative effect on the chrome's appearance. Water based black is also adversely affected by the lacquer, and this is why chrome is the last step of this paint job.



CONCLUSION

In my opinion, Spaztix is really on to something with this new paint line. The Spaztix line includes quite a bit more colors and types of paint than I was able to cover in this article, so you can look forward to many more interesting products from Spaztix in future installments.

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THE RADIO CONTROL CAR MAGAZINE

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CULLMAN RC HOBBIES	14 COUNTY RD. 1471 # B	Cullman	35055	256-775-2491
HOBBYTOWN USA RACEWAY	450 SCHILLINGER RD S.	Mobile	36608	334-633-8446
OAK MOUNTAIN HOBBIES	2659 PELHAM PARKWAY	Pelham	35124	205-685-8980
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ALASKA HOBBIES & COLLECTIBLES	303 BAWDEN ST. #B	Ketchikan	99901	907-225-4022
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HOBBYTOWN USA	1415-A HWY. 71st.	Fort Smith	72901	479-649-9229
MARKS HOBBY SHOP	2516-G CANTRELL RD.	Little Rock	72202	501-296-9956
RC HOBBIES	2810 E HIGHLAND DR.	Jonesboro	72401	870-933-0479
LAKE AREA ELECTRONICS RADIO SHACK	1001 HWY 25 B NORTH	Heber Springs	72543	501-362-5050
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COMPETITION HOBBIES	3930 W. COSTCO DR.	Tucson	85741	520-297-8162
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HOBBY DEPOT	216 WEST SOUTHERN AVE.	Tempe	85282	480-968-1800
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HOBBYTOWN USA	4825 E. WARNER RD. #19	Phoenix	85044	480-598-5282
HOBBYTOWN USA	3700 E. SPEEDWAY	Tucson	85716	520-882-8888
HOBBYTOWN USA	485 E. WETMORE RD. #109	Tucson	85705	520-888-9777
SCOTTSDALE R/C RACEWAY	3023 N. SCOTTSDALE RD.	Scottsdale	85251	480-945-2186
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BETTY'S TOY BOX & HOBBIES	716 E. MAIN ST.	Grass Valley	95945	530-274-7229
BOSS ROBOT HOBBY	2953 COLLEGE AVE.	Berkeley	94705	510-841-1680
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DELTA R/C RACEWAY & HOBBY SHOP	1201 W 10th ST.	Antioch	94509	925-778-2965
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DOC'S R/C HOBBIES	6348 ABODE RD. #A	29 Palms	92277	760-361-2200
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FOOTHILL HOBBIES	973 W. FOOTHILL BLVD.	San Luis Obispo	93405	805-544-8697
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JAX HOBBIES	17421 BROOKHURST #107	Fountain Valley	92708	714-378-8924
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R/C TECH	1618 SULLIVAN ST. #105	Daly City	94015	650-992-7600
RC UNLIMITED	14918 CAMDEN AVE.	San Jose	95124	408-377-3771
SACRAMENTO R/C RACING & HOBBIES	6201 27th ST. #C	Sacramento	95822	916-424-4001
SAVAGE MOTORSPORTS	948 MAIN STREET	Ramona	92065	760-788-7733
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SO CAL R/C RACEWAY	19118 BROOKHURST ST.	Huntington Beach	92646	714-963-7484
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COLONIAL PHOTO & HOBBY	634 N. MILLS AVE.	Orlando	32803	407-841-1485
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FELIX HOBBY	13394 W. DIXIE HWY.	North Miami	33161	305-895-5362
HARCO HOBBIES	11532 TAMIAMI TRAIL E.	Naples	34113	239-417-1099
G & C HOBBIES	1228 HYPOLUXO RD.	Lantana	33462	561-547-3812
HOBBY NUT INC.	12679 DIXIE HWY	South Miami	33156	305-235-9584
HOBBYTOWN USA	2464 W. BRANDON BLVD.	Brandon	33511	813-655-6366
JACKS HOBBIES	1759 N.E. JACKSONVILLE RD.	Ocala	34470	352-351-2224
LEMON BAY HOBBIES	2670 S. McCALL RD. #3	Englewood	34224	941-475-0083
MORRIS KOHL'S RACEWAY & HOBBY	1202 W. WATERS	Tampa	33604	813-931-1626
PHIL'S HOBBY SHOP	6050 PARK BLVD.	Pinellas Park	33781	727-545-1251
QUALITY AIRCRAFT R/C HOBBIES	6839 S US HIGHWAY 1	Port Saint Lucie	34952	772-460-2844
R.C. HOBBIES	6800 N. UNIVERSITY DR.	Tamarac	33321	954-721-5720
RACING HOBBIES	10722 WILES RD.	Coral Springs	33076	954-346-2226
SCOTT'S HOBBIES	26690 61ST RD.	Branford	32008	904-935-0758
SPACE COAST HOBBIES	2135 PALM BAY RD. NE #1	Palm Bay	32905	321-722-3696
SUPERIOR HOBBIES	1478 E. SEMORAN BLVD.	Casselberry	32707	407-834-9299
TAVERNIER BIKE & HOBBIES	91910 OVERSEAS HWY	Tavernier	33070	305-852-2859
WARRICK CUSTOM HOBBIES	7676 PETERS RD.	Plantation	33324	954-370-0708
EXTREME R/C HOBBIES	3491 NORTH HIATUS RD.	Sunrise	33351	954-748-7053
GEORGIA				
HOBBY MART	6889 PEACHTREE INDUST. # H	Peachtree Corners	30092	770-840-8495
HOBBYTOWN USA	6770 VETERANS PKWY # 1	Columbus	31909	706-660-1793
HOBBYTOWN USA	800 E. BARRETT PKWY	Kennesaw	30144	770-426-8800
HOBBYTOWN USA	3360 SATELLITE BLVD. #14	Duluth	30096	770-418-0850
SUGAR BOWL SPEEDWAY	5272 NELSON BROGDON WY	Sugar Hill	30518	770-945-6709
R/C TOYS FOR BOYS	2220 COBB PARKWAY N.	Kennesaw	30152	678-797-0406
BIG BOY TOYS HOBBY SHOP	5035 MT. ZION PARKWAY	Stockbridge	30281	770-507-6288
HAWAII				
ACE RADIO CONTROL	1005 LEHUA AVE.	Pearl City	96782	808-456-1279
THE HOBBY COMPANY	98-1005 MOANALUA RD.	Aiea	96701	808-487-2473
IOWA				
AMERICAN HOBBY & SUPPLY	2186 E. KIMBERLY RD.	Davenport	52807	563-441-9996
FAGAN'S	2327 CENTRAL AVE.	Dubuque	52001	563-588-0846
HOBBY CHEST	209 E. MAIN	Ottumwa	52501	641-683-4436
HOBBY HAVEN	2575 86th STREET	Urbandale	50322	515-276-8785
HOBBY SHOP	1672 SYCAMORE STREET	Iowa City	52240	319-338-1788
HOBBYTOWN USA	901 E. KIMBERLY RD.	Davenport	52807	563-355-2071
HOBBYTOWN USA	2737 16TH AVE S.W.	Cedar Rapids	52404	319-364-3289
HOBBYTOWN USA	620 LINCOLN WAY #6	Ames	50010	515-232-9060
OUTBACK HOBBIES	2014 S. ST. AUBIN ST.	Sioux City	51106	712-276-7079
WILD BILLS R/C HOBBIES	901 W. JONES	Knoxville	50138	641-842-5973
IDAHO				
DAPCO HOBBIES	2211 GARRETT WAY	Pocatello	83201	208-233-8163
HOBBYTOWN USA	1870 W. PULLMAN RD.	Moscow	83843	208-882-9369
HOBBYTOWN USA	3317 N. COLE RD.	Boise	83704	208-376-1942
MONSTER HOBBIES	267 W. HAYDEN AVE.	Hayden Lake	83835	208-772-0422
THE TOY SHOP	837 POLELINE RD.	Twin Falls	83301	208-734-2725
ILLINOIS				
ALLEN'S R/C CARS	3115 LEACH RD.	Rochester	62563	217-498-7345
AL'S HOBBY SHOP INC.	121 ADDISON, BOX 449	Elmhurst	60126	630-832-4908
CORNER HOBBY	308 NORTH VIRGINIA AVE.	Swansea	62220	618-277-6030
DEPOT HOBBY SHOP	180 SOUTH SEMINARY ST.	Galesburg	61401	309-342-9323
HIS N HERS HOBBIES	1206 TOWANDA PLAZA #2	Bloomington	61701	309-827-0204
HOBBYLAND	616 N. MAIN	Bloomington	61701	309-828-1442
HOBBYTOWN USA	1000 LAKE STREET	Oak Park	60301	708-445-8056
HOBBYTOWN USA	3627 EAST MAIN STREET	St. Charles	60174	630-587-1256
HOBBYTOWN USA	8750 N. SECOND STREET	Machesney Park	61115	815-282-0727
HOBBYTOWN USA, Oak Mill Mall	7900 N. MILWAUKEE AVE.	Niles	60714	847-470-9577
JIMS HOBBIES	814 FRONT ST. #B	McHenry	60050	815-363-0333
LEISURE HOURS HOBBIES	2712 N. PLAINFIELD RD.	Joliet	60436	815-439-1477
OUTLAW RC HOBBY	1614 BROADWAY AVE.	Mattoon	61938	217-234-6229
PAT'S HOBBIES & CRAFTS INC.	5730 W. 95th ST	Oak Lawn	60453	708-424-6131
RSJ RACEWAYS INC.	19091 W. CASEY RD.	Libertyville	60048	847-549-6963
SPRINGIELD HAMMERS HOBBIES	2448 S 10th ST.	Springfield	62703	217-523-0265
STANTON HOBBY SHOP	4718 N. MILWAUKEE AVE.	Chicago	60630	773-283-6446
VENTURE HOBBIES	23 HUNTINGTON LANE	Wheeling	60090	847-537-8669
INDIANA				
BE COMICS & KARDS & ROCKETS & HOBBIES	130 W. VAN BUREN ST.	Columbia City	46725	260-248-8020
BIG BOY HOBBIES	8893 PENDLETON PIKE	Indianapolis	46226	317-898-6284
B & R HOBBIES	9014 CRAWFORDSVILLE RD.	Indianapolis	46234	317-297-4257
BREMEN HOBBIES	308 N. BOWEN AVE.	Bremen	46506	574-546-3807
CUSTOM MADE HOBBIES	1600 MORNINGSTAR LN.	Decatur	46733	260-724-3040
DUNELAND HOBBIES	2556 PORTAGE MALL	Portage	46368	219-763-1610
GRANGER HOBBY STOP	12131 STATE RD. 23 UNIT L	Granger	46530	574-243-2390
HAPPY HOBBIES	1398 EASTERN BLVD.	Jeffersonville	47129	812-282-0060
HOBBY HANGER	189 PERRY ST.	Vernon	47282	812-346-6497
HOBBY LAND	416 W. COLISEUM BLVD.	Fort Wayne	46805	260-483-8186
HOBBYLAND INC.	2564 MIRACLE LANE	Mishawaka	46545	574-255-1722
HOBBYTOWN USA	6336 E. 82ND STREET	Indianapolis	46250	317-845-4106
HOBBYTOWN USA	1858 E. 80TH PLAZA	Merrillville	46410	219-736-0255
P & T HOBBIES AND RWY	2412 N. POORFARM RD.	Bedford	47421	812-849-6666
PHILS HOBBY SHOP	1722 LAKE AVE.	Ft. Wayne	46805	260-424-0065
PHIL'S HOBBY SHOP	3112 N. CLINTON	Ft. Wayne	46805	219-471-1340
R & D HOBBIES	4217 FRANKLIN ST.	Michigan City	46360	219-879-7563
RIDER'S FORT WAYNE	4724 COLDWATER RD.	Ft. Wayne	46825	219-496-8811
KANSAS				
HOBBY HAVEN	10560 METCALF	Overland Park	66212	913-381-3111
HOBBYTOWN USA	8229 EAST KELLOGG	Wichita	67207	316-683-7222
HOBBYTOWN USA	9270 METCALF	Overland Park	66212	913-649-7979
KENTUCKY				
BLUEGRASS HOBBIES	274 LAMPTON LN.	Columbia	42728	270-384-9131
HOBBYTOWN USA	12615 SHELBYVILLE RD.	Louisville	40243	502-254-5755
RADIO CONTROL WHEELS OR WATER	1308 W. SHELBY ST. #2	Falmouth	41040	859-654-1700
LOUISIANA				
HARES ART & HOBBY	4529 LEE STREET	Alexandria	71302	318-443-2755
HOBBY HUT	5029 VETERANS BLVD.	Metairie	70006	504-885-0804
MAINE				
HOBBY FEVER	130 MIDDLESEX RD.	Tyngsboro	01879	978-649-2221
R/C SPEEDWAY & HOBBIES	87 MAIN ST.	Fairfield	04937	207-453-4588
MAXIMUS HOBBY SHOP	647 US ROUTE 1 YORK MEADOWBROOK PLAZA	York	03909	207-351-1520
OUT OF CONTROL RACING	859 W. BOYLSTON ST.	Worcester	01606	508-853-3363
MARYLAND				

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GPA HOBBIES	2431 CROFTON LANE # 6	Crofton	21114	301-858-0004
HOBBY CITY	15751 COLUMBIA PIKE	Burtonsville	20866	301-421-5977
HOBBYTOWN USA	1305 W. 7TH AVE #28	Frederick	21702	301-694-7395
HOBBYTOWN USA	6714-D GOVERNOR RITC	Glen Burnie	21061	410-590-4950
HUNT VALLEY HOBBIES	10824 YORK RD.	Cockeysville	21030	410-666-1098
STONELEIGH HOBBY INC.	6717 YORK RD.	Baltimore	21212	410-377-4447
S&J HOBBIES	10476 CAMPUS WAY S.	Largo	20774	301-324-6680
THE TRACK	16806 OAKMONT AVE.	Gaithersburg	20877	301-417-9630
MASSACHUSETTS				
BARN SPEED HOBBIES	109 CENTER STREET	Lee	01238	413-243-2651
BIG BOYS TOYS	2 GALLERIA MALL DR.	Taunton	02780	508-677-9400
BIG BOYS TOYS	33 FATHER DE VALLES BLVD.	Fall River	02721	508-677-0060
BIG BOYS TOYS	999 S. WASHINGTON ST.	N. Attleboro	02760	508-699-6609
DAVE'S HOBBIES	281 CABOT STREET	Beverly	01915	978-921-1559
FLYING YANKEE HOBBY SHOP	1416 CENTER STREET	Roslindale	02131	617-323-9702
HENRY'S HOBBY HOUSE INC.	67 W. BOYLSTON STREET	West Boylston	01583	508-835-6165
HOBBY WORLD	171 GROVE ST.	Adams	01220	413-743-7223
HOG HEAVEN HOBBIES	494 MAIN STREET	Fiskdale	01518	508-347-9350
LAND SEA & AIR HOBBIES	1282 PARKER STREET	Springfield	01129	413-782-2115
MASTER HOBBIES	565 MAIN STREET	Cherry Valley	01611	508-892-1440
R/C EXCITEMENT INC.	36 HARLOW STREET	Worcester	01605	508-753-8676
MICHIGAN				
ACTION HOBBIES	211 EAST MAIN	Niles	49120	616-687-8550
ANYTHING GOES	5108 ROCHESTER RD.	Troy	48085	248-740-2277
DIRT BURNER RACING	3295 HAGGERTY RD.	Commerce	48390	248-926-1140
EAST BAY HOBBIES	364 W. HOUGHTON LAKE DR.	Prudenville	48651	989-366-5306
HOBBIES & TOYS	106 WEST MAIN STREET	Gaylord	49735	989-732-3963
HOBBYTOWN USA	2222 S. MAIN ST.	Ann Arbor	48103	734-996-2446
HOBBYTOWN USA	12821 S. SAGINAW	Grand Blanc	48439	810-695-9088
JOE'S HOBBY CENTER	35151 GRAND RIVER RD.	Farmington	48335	248-477-6266
KECK HARDWARE & HOBBY	2132 WEST RD.	Trenton	48183	734-676-2282
LARRY'S PERFORMANCE R/C'S	42246 MOUND RD.	Sterling Heights	48314	586-997-4840
NANKIN HDWRE & HOBBY	35101 FORD RD.	Westland	48185	734-722-5700
P & D HOBBY SHOP	31280 GROESBECK HWY	Fraser	48026	586-296-6116
PASTIME HOBBIES	2700 PINE GROVE RD. #16	Port Huron	48060	810-982-2874
PROP SHOP HOBBIES, INC.	23326 VAN DYKE	Warren	48089	586-757-7160
R & L HOBBIES & RACING	9782 PORTAGE RD.	Portage	49002	616-323-3686
RIDER'S HOBBY	32115 JOHN "R" RD.	Madison Heights	48071	248-589-8111
RIDER'S HOBBY	42011 FORD RD.	Canton	48187	734-981-8700
RIDER'S HOBBY SHOP	22789 NORTHLINE RD.	Taylor	48180	734-287-7405
RIDER'S HOBBIES	2061 S. LINDEN RD.	Flint	48532	810-720-2500
RIDER'S HOBBY	4417 S. WESTNEDGE AVE.	Kalamazoo	49008	616-349-2666
RIDER'S HOBBY SHOP	2055 28TH ST S.E. UNIT 12	Grand Rapids	49508	616-247-9933
RIDER'S HOBBY SHOP	4035 CARPENTER RD.	Ypsilanti	48197	313-971-6116
RIDER'S HOBBY SHOP	6250 S. CEDAR ST #7	Lansing	48911	517-393-1500
RIDER'S HOBBY SHOP	30991 FIVE MILE RD.	Livonia	48154	734-425-9720
THE HOBBY HUB	526 FRANDOR AVE.	Lansing	48912	517-351-5843
TUCKEY MOTORSPORTS	706 E. CHICAGO RD.	Coldwater	49036	517-278-9689
MINNESOTA				
HOBBY TOWN USA	7916 BROOKLYN BLVD.	Minneapolis	55445	612-424-6052
HOBBY WAREHOUSE	7120 CHICAGO AVE S.	Richfield	55423	612-861-5587
HUB HOBBY CENTER	82 MINNESOTA AVE.	Saint Paul	55117	651-490-1675
HUB HOBBY CENTER	6410 PENN AVE. S	Richfield	55423	612-866-9575
R.C. CAR KINGS	1307 EAST HWY 13	Burnsville	55337	952-895-9643
TWIN CITIES HOBBY & RWY	7577 BROOKLYN BLVD.	Brooklyn Park	55443	763-569-5069
MISSOURI				
CHECKERED FLAG HOBBIES	4491 LeMAY FERRY RD.	St. Louis	63129	314-892-5353
HOBBYTOWN USA	524 N.W. ENGLEWOOD RD.	Kansas City	64118	816-459-9590
JOPLIN R/C HOBBIES	1900 S. RANGELINE #5	Joplin	64804	417-623-0011
MARK TWAIN HOBBY CTR	2793 WEST CLAY ST.	Saint Charles	63301	636-946-2816
MOVIE MANIA R/C HOBBIES	204 SOUTHWEST DR.	Kennett	63857	573-888-9223
REAL R/C	12019 EAST 47th	Raytown	64133	816-358-0238
SLEETH HOBBIES	1912 E. SUNSHINE ST.	Springfield	65804	417-883-1118
MISSISSIPPI				
MONTANA				
EXTREME HOBBIES	928 BROADWATER AVE.	Billings	59101	406-259-8505
NORTHLAND HOBBIES INC.	1325 HWY 2 WEST	Kalispell	59901	406-257-1808
PRAIRIE UNIQUE	114 S. LOGAN ST.	Terry	59349	406-635-5598
THE TREASURE CHEST	1612 BENTON AVE.	Missoula	59801	406-549-7992
NORTH CAROLINA				
ACTION HOBBIES	8500 PINEVILLE MATHEWS RD.	Charlotte	28226	704-540-0311
HOBBY TOWN USA	8332 PINEVILLE MATHEWS RD.	Charlotte	28226	704-544-2303
HOBBYTOWN USA	3346 ROBINHOOD RD.	Winston Salem	27106	336-774-2324
INSIDE LINE PERFORMANCE	5678 US HWY 70 EAST	Goldsboro	27534	919-759-0095
K/C HOBBY INC	10948-G NORTH MAIN ST.	Archdale	27263	336-434-3482
KING R/C	614 S. MAIN ST.	King	27021	336-983-3969
Z N Z HOBBIES	972 TALBERT BLVD.	Lexington	27292	336-249-6127
NORTH DAKOTA				
HOBBYTOWN USA	4501 15th AVE. S.W.	Fargo	58103	701-746-0708
NEBRASKA				
FUN TIME HOBBY	2020 CENTRAL AVE.	Kearney	68847	308-234-1806
HOBBYTOWN UNLIMITED	220 NORTH 66th ST.	Lincoln	68505	402-434-5056
HOBBYTOWN USA	13110 BIRCH DR.	Omaha	68164	402-498-8888
HOBBYTOWN USA	3537 WEST 13th ST. #104	Grand Island	68803	308-382-3451
NEW HAMPSHIRE				
HOBBY ETC. INC.	90 WEST PEARL ST.	Nashua	03060	603-883-4919
LEISURE TIME HOBBIES	56-B MARLBORO ST.	Keene	03431	603-357-9975
NEW JERSEY				
106 RACE PARK	743 CLOUGH MILL RD.	Pembroke	03275	603-224-7223
ALLIED HOBBIES	264 BURLINGTON CENTER	Burlington	08016	609-386-5044
CRUIZIN WITH RC'S INC.	53 EAST MAIN ST.	Ramsey	07446	201-825-4884
FISHKIN BROS.	285 MADISON AVE.	Perth Amboy	08861	732-826-0048
G&S HOBBIES	44 ANCHOR BLVD.	Old Bridge	08857	732-727-7871
HOBBY WORKSHOPS	510 WEST KINGS HWY	Mount Ephraim	08059	856-931-2400
JACKSON HOBBY SHOP	2275 W. COUNTY LINE RD.	Jackson	08527	732-364-3334
THE HOBBY SHOP	1077-C STATE HWY 34	Aberdeen	07747	732-583-4189
WIDE WORLD OF HOBBIES	974 TEANECK RD.	Teaneck	07766	201-862-9393
ZEPPELIN HOBBIES & RACEWAY	92 RT. 23 RIVERDALE SQUARE MALL	Riverdale	07457	973-831-7717
NEW MEXICO				
ALBUQUERQUE HOBBY CO	2252 D WYOMING N.E.	Albuquerque	87112	505-275-1882
BIG BOYS TOYS	1735 JUAN TABO N.E.	Albuquerque	87112	505-298-1023
HOBBIE'S & STUFF	2801 EUBANK N.E. #P	Albuquerque	87112	505-293-1217
NEVADA				
DANSEY'S INDOOR R/C HOBBIES	741 N. NELLIS BLVD.	Las Vegas	89110	702-453-7223
HOBBYTOWN USA	5085 W. SAHARA AVE. #134	Las Vegas	89146	702-889-9554
NEW YORK				
ACTION HOBBIES	1070 MIDDLE COUNTRY RD.	Selden	11784	631-736-1574
BRUCKNER HOBBIES	3587 E. TREMONT AVE.	Bronx	10465	800-288-8185
BROWNIES PRO & SPORT HOBBIES	124 BENNETT ST.	Staten Island	10302	718-727-2194
COMPETITION HOBBY SUP	1006 LOUDON RD.	Cohoes	12047	518-786-3622
CRAFT WORLD & ACTION HOBBIES	509 W 3rd ST.	Jamestown	14701	718-484-1780
EAST COAST HOBBIES	2515 65TH ST.	Brooklyn	11204	718-627-3814
ELMSFORD HOBBIES	129 E MAIN ST.	Elmsford	10523	914-592-0600
FANTASIA HOBBIES	17169 46TH AVE.	Flushing	11358	718-460-5671
FORDHAM HOBBIES	2446 CRESTON AVE.	Bronx	10468	718-562-1906
GJ'S HOBBIES	38-40 WASHINGTON AVE.	Endicott	13760	607-754-3003
HOBBIES UNLIMITED	158-38 CROSS BAY BLVD.	Howard Beach	11414	718-845-4545
THE HOBBY HOUSE	2378 LYELL AVE.	Rochester	14606	585-429-6280
HOBBY WORLD	485 B BROADWAY	Monticello	12701	845-794-8770
HURRICANE HOBBIES	2425 MIDDLE COUNTRY RD.	Centereach	11720	631-737-3157
NAGENGAST HDWR & HOBBY	68-02 FRESH POND RD.	Flushing	11385	718-821-0958
PERFORMANCE HOBBIES	15 WEST MAIN ST.	Webster	14580	716-872-4990
RACING CITY HOBBIES	110 MAIN STREET	South Glens Falls	12803	518-792-7272
RAMPAGE R/C & HOBBIES	1164 RT 9G	Hyde Park	12538	845-229-1379
RMC HOBBIES	2485 ROCHESTER RD. BLDG. 1	Canandaigua	14424	585-394-1210
TONY'S HOBBY SHOP	220 HARRISON AVE.	Harrison	10528	914-835-4765
TRANS BORDER CUSTOMS	1320 RT 9	Champlain	12919	514-687-6214
UNIVERSAL ENTERTAINMENT	1611 PINE AVE.	Niagara Falls	14301	716-282-4840
WALT'S HOBBY	2 DWIGHT PARK DR.	Syracuse	13209	315-453-2291
WILLIS HOBBIES	300 WILLIS AVE.	Mineola	11501	516-746-3944
OHIO				
CAPSTONE HOBBIES	562 W. SCHROCK RD.	Westerville	43081	614-899-6313
DIVE IN SCUBA CENTER	3182 WARREN SHARON RD.	Vienna	44473	330-856-6275
GRANDVIEW HOBBIES	1460 W. FIFTH AVE.	Columbus	43212	614-486-3532
HOBBY STOP WEST	4550 MONROE ST.	Toledo	43613	419-471-1108
HOBBYFORCE	1183 PARK AVENUE W	Mansfield	44906	419-884-0001
HOBBYTOWN USA	8000 PLAZA BLVD.STE 9	Mentor	44060	440-946-5588
HOBBYTOWN USA	14785 PEARL RD.	Strongsville	44136	440-846-1770
PHIL'S HOBBY SHOP	422 CLINTON ST.	DeFiance	43512	419-782-8020
RIDER'S HOBBY SHOP	5333 MONROE ST.	Toledo	43623	419-843-2931
STRONGSVILLE HOBBY SHOP	13325 PROSPECT RD.	Strongsville	44149	440-572-0430
THE DUSTY ATTIC	118 S. UNION	Bethel	45106	513-734-2255
THE HOBBY SHOP	153 N SPRINGBORO PIKE	Miamisburg	45449	937-436-6161
VICTORY CIRCLE R/C PRO.	4340 HEGNER AVE.	Cincinnati	45236	513-794-1963
WINGS WHEELS & WAVES	14 LINCOLN WAY E.	Massillon	44646	330-830-7755
OKLAHOMA				
ACTION HOBBIES	4955 S. MEMORIAL DR.	Tulsa	74145	918-663-8998
OREGON				
AERO SPORT & HOBBY	17941 N.E. GLISAN	Portland	97230	503-669-7665
EUGENE TOY & HOBBY	32 E. 11th AVE.	Eugene	97401	541-344-2117
LEISURE HOBBIES	982 LANCASTER DR. N.E.	Salem	97301	503-588-9884
R C ADDICTION	830 S. FRONT ST.	Central Point	97502	541-665-2700
R/C PLUS HOBBIES	1685 25th ST.	Salem	97302	503-364-9188
TAMMIES HOBBIES	12024 S.W. CANYON RD.	Beaverton	97005	503-644-4535
ULTIMATE HOBBIES	1210 JANTZEN BEACH CTR	Portland	97217	503-247-8194
PENNSYLVANIA				
ACTION HOBBY	8616 NEW FALLS RD.	Levittown	19054	215-949-9750
ADAM & EVES PET & HOBBY	313 LATROBE 30 PLAZA	Latrobe	15650	412-539-7130
ALLIED HOBBIES	114 EXTON SQUARE MALL	Exton	19341	610-363-6988
CRANBERRY HOBBY DEPOT	20555 ROUTE 19 CRAN-MAR Plaza	Cranberry Twnshp	16066	724-776-3640
HOBBY EXPRESS INC.	1713 ROUTE 228 #L 1	Cranberry Twnshp	16066	724-779-2000
J.C. R/C HOBBIES	13 YORK RD.	Warminster	18974	215-672-5200
J&K HOBBIES	1240 ALLEGHENY ST.	Jersey Shore	17740	570-398-8171
LITTLE PLUM R/C HOBBIES	333 LITTLE PLUM RUN RD.	Lock Haven	17745	570-769-1984
LOCO LOUIES MODEL TRAINS	2365 MAC DADE BLVD.	Holmes	19043	610-583-7711
MARSHALL'S HILLTOP HOBBIES	RR 4 BOX 4265 PA ROUTE 652	Honesdale	18431	570-729-7458
MODELLBAHN HOBBIES	1145 PHILADELPHIA AVE.	Gilbertsville	19525	610-367-5925
RC OUTFITTERS	519 BROADWAY	Hanover	17331	717-633-9490
THE R C CONNECTION INC.	1005 WEST FOURTH AVE.	Derry	15627	724-694-9170
RHODE ISLAND				
INSANE TOYS	141 PARK AVE.	Cranston	02907	401-467-8878
SOUTH CAROLINA				
BANDITS HOBBIES & MODELS	2037 S MAIN ST.	Darlington	29532	843-393-3333
D & S HOBBIES	1314 S. FOURTH ST.	Hartsville	29550	843-383-0017
ED'S HOBBY SHOP	702 MAIN STREET	Myrtle Beach	29577	843-448-8685
HOBBY CONNECTION	4148 CALHOUN MEMORIAL HWY.	Easley	29640	864-295-1209
HOBBY STOP	939 S. ANDERSON RD.	Rock Hill	29730	803-327-4121
HOBBY TOWN USA	1812 SAM RITTENBERG BLVD.	Charleston	29407	843-769-5808
HOBBYTOWN USA	101 VERDAE BLVD. #340	Greenville	29607	864-627-9633
HOBBYTOWN USA	134 STATION DR.	Anderson	29621	864-261-8479
THE GREAT ESCAPE	1426 LAURENS RD.	Greenville	29607	864-235-8320
SOUTH DAKOTA				
HOBBYTOWN USA	1007 W. 41st ST.	Sioux Falls	57105	605-339-6613
TENNESSEE				
AAA MODEL SUPPLY	5237 HWY 126	Blountville	37617	423-323-1513
ARF HOBBIES	305 SPARTA ST.	McMinnville	37110	931-474-7223
COOKEVILLE RACEWAY & HOBBIES	148 S. WILLOW AVE.	Cookeville	38501	931-520-6017
GADGET HOBBIES	204 TRENTON ST.	Harriman	37748	865-882-7528
HOBBYTOWN USA	206 B COOL SPRINGS BLVD. #205	Franklin	37067	615-771-7441
HOBBYTOWN USA	2884 WOLFCREEK PARKWAY	Memphis	38133	901-213-2682
HOBBYTOWN USA	634 NORTHGATE MALL	Chattanooga	37415	423-877-9885
HOBBYTOWN USA	8901 TOWN & COUNTRY CR.	Knoxville	37923	865-690-1099
HOBBYTOWN USA	1741 S. RUTHERFORD BLVD.	Murfreesboro	37130	615-890-6777
TEXAS				
ABC RADIO CONTROL HOBBIES LAREDO	1600 WATER ST. # D-18	Laredo	78040	956-722-2845
ACTION HOBBIES	2005 9TH ST.	Wichita Falls	76301	940-766-2667
AERO HOBBIES	2305 S HWY. 121 # 110	Lewisville	75067	972-315-1854
AL'S HOBBIES	7121 HWY. 90 W. # 150	San Antonio	78227	210-645-1050
BIG MIKE'S HOBBIES & TOYS	2157 GILMER RD.	Longview	75604	903-297-7814
DRYCREEK HOBBIES	2518 130 WEST	Greenville	75402	903-527-5381
FASTRAK R/C INC.	13318 WALLISVILLE RD.	Houston	77049	713-330-9500
GUADALUPE HOBBY CENTER	200 SIDNEY BAKER S.STE 5	Kerrville	78028	830-895-5654
HOBBY CENTER	18177 GULF FREEWAY	Webster	77598	281-488-8697
HOBBY TIME	201 WESTGATE PKWY. UNIT H	Amarillo	79121	806-352-9660
HOBBYTOWN USA	3033 W. PARKER RD. #120	Plano	75023	972-758-7875
HOBBYTOWN USA	4638 S. COOPER #190	Arlington	76017	817-557-2225
HOBBYTOWN USA	1201 AUSTIN HWY #102	San Antonio	78209	210-829-8697

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M & M HOBBY CENTER	6703 CHIMNEY ROCK	Bellaire	77401	713-661-7137
MIKE'S HOBBY SHOP	1605 CRESCENT CIRCLE #300	Carrollton	75006	972-242-4930
ONEALL SPECIALTY HOBBIES	3321 W. EXPRESSWAY 83	McAllen	78503	956-686-6521
ROY'S HOBBY SHOP	1309 N. NORWOOD DR.	Hurst	76053	817-268-0210
SARATOGA HOBBIES	2030-A SARATOGA BLVD.	Corpus Christi	78417	361-851-5061
T & T R/C CARS	3420 AVE K	Plano	75074	972-633-2470
THE RC HOBBY SHOP	13835 S.W. FREEWAY	Sugar Land	77478	281-265-4844
WINGS & THINGS	5307 50th ST. #B	Lubbock	79414	806-793-7777
VICTORIA HOBBY SHOP	5211 JOHN STOCKBAUER DR.	Victoria	77904	361-575-4194
UTAH				
HT'S RC'S	166 S. FORT LANE	Layton	84041	801-546-6959
VIRGINIA				
AWESOME RC & HOBBIES	261-106 GARRISONVILLE RD.	Stafford	22554	540-657-1314
BROWN BROTHERS HOBBIES	14300 SMOKETOWN RD.	Woodbridge	22192	703-492-7788
CROSSWORD HOBBIES	1104 W. MAIN ST.	Salem	24153	540-387-3414
DRCW RACEWAY	2200 COMMERCE PARKWAY	Virginia Beach	23454	757-340-6681
GRIFFINS HOBBY SHOP	1051 ISLAND RD.	Bristol	24201	276-466-0998
HOBBYTOWN USA	4000 VIRGINIA BEACH BLVD. #196	Virginia Beach	23452	757-464-4140
LINVILLE HOBBIES	7065 WENGERS MILL RD.	Linville	22834	540-833-2222
OLDE TOWNE HOBBY SHOP	9105 CENTER ST.	Manassa	20110	703-369-1197
RT MODEL & HOBBY SHOP	401 N MAIN ST.	Danville	24540	434-799-8536
STAMPY'S COOL STUFF	3550 SEMINOLE TRAIL	Charlottesville	22911	434-974-7920
STREAM HOBBY SHOP	10015 JEFFERSON AVE.	Newport News	23605	757-591-0720
TSG HOBBIES	251 W. LEE HWY #691	Warrenton	20186	540-347-6590
WASHINGTON				
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BURIEN TOYOTA	15025 1ST AVE. SOUTH	Seattle	98148	206-243-0700
FANTASY WORLD HOBBIES	7901 S. HOSMER A-6	Tacoma	98408	253-473-6223
FOUR SEASONS R/C RACING	2941 SLEATER KINNEY RD N.E	Olympia	98506	360-491-2430
GALAXY HOBBY	19332 60th AVENUE W.	Lynnwood	98036	425-670-0454
HOBBYTOWN USA	18500 33rd AVE. WEST	Lynnwood	98037	425-774-0819
MITCHELL RC HOBBIES	N. 4715 CRESTLINE #B	Spokane	99207	509-482-6188
PERFORMANCE R/C	320 E. FAIRHAVEN AVE.	Burlington	98233	360-755-9464
RAIN CITY RACEWAY	2006 196th STREET S.W. #119	Lynnwood	98036	425-776-8241
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BRISTOL R/C HOBBIES	8671 198th AVE.	Bristol	53104	262-857-3400
DIRT HEAVEN HOBBY & RACEWAY	6028 COUNTY RD. K	New Franken	54229	920-866-9096
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FOCUS INC.	75 S. MAIN ST.	Fond Du Lac	54935	920-922-5999
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HOBBY DEPOT	1524 E. SUMNER ST.	Hartford	53027	262-670-6242
HOBBY JUNCTION	1729 STEPHENSON ST.	Marinette	54143	715-732-6333
HOBBY TOWN USA	17115 BLUEMOUND RD. # C	Brookfield	53005	262-652-1561
HOBBY TOWN USA	2730 HERTIAGE DR.	Delafield	53018	262-646-5755
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HOBBYTOWN USA	2767 S. ONEIDA ST.	Green Bay	54303	920-490-9996
JOHN'S HOBBIES	54 N. MAIN ST.	Hartford	53027	262-673-7454
KDM HOBBY	803 BUSINESS HWY. 29 EAST	Abbotsford	54405	715-223-4414
NORTHERN HOBBIES	14440 VELP AVE.	Suamico	54173	920-662-1530
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S&N'S TRACKSIDE HOBBIES	3635 N 124th ST.	Brookfield	53005	262-783-4699
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FULTON'S HOBBY SHOP INC.	3301 CHAPLINE ST.	Wheeling	26003	304-233-5355
HOBBYTOWN USA	67 NITROMARKET PK.	Charleston	25313	304-776-7259
WEST VIRGINIA HOBBY & CRAFT	PUTNAM VILLAGE SHOP CTR.	Teays	25569	304-757-6474
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XTREME HOBBIES & RACEWAY	1300 BUTCHER	Gillette	82718	307-682-6077
PUERTO RICO				
ED's HOBBY SHOP	PINO ST #H-36	Caguas	00726	787-460-2677
HI SPEED C. RACEWAY	422 SAN CALUDIO AVE.	San Juan	00926	787-283-0198
ISLAND HOBBIES	DELFIN-OLMO 166	Arecibo	00612	787-871-1129
LA SORPRESA	1759 AVE. MILITAR #1	Isabela	00662	787-872-2396
RACER'S HOBBY	873 SAN PATRICIO AVE.	San Juan	00921	787-783-5910
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Bryan's Hobby Shop, 900 Commons Dr. Suite 105, Dothan AL 36302 (334) 793-2439

Cullman RC Hobbies, 14 Country Rd. 1471 #B, Cullman AL 35055 (256) 775-2491

Dirt Road Rage, 208 3rd Ave. S.E. Cullman, AL 35055 877-435-9866 www.pyramidhobbies.com

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

ALASKA

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

ARIZONA

Hobby Action R/C Raceway & Hobby Store 606 W. Southern Ave #1 Tempe, AZ 85282, (480)829-1226

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

Kingman off-road track, 5737 Hwy. 66 Mpost 63 Kingman, AZ 86401

Scottdale R/C Speedway, 3023 N. Scottsdale Rd., Scottsdale, AZ 85251 (480) 945-2186

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

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

Arkansas R/C Racing, 900 Arch St., Little Rock AR 72202 (501) 454-0342, www.arkansasrc.com

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

Lake Area R/C Raceway, 3109 HWY 25 B North Heber Springs AR 72543 (501) 362-5050

R/C Hobbie Indoor Racing 6140 S. West Dr. Jonesboro, AR 72404, (870) 933-0479

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

CALIFORNIA

Crystal Park Raceway, 123 Artesia, Compton, CA 90202, James Reese, 310 631-0307

The Dirt Race Park, 164 S. Santa Fe Ave. Hemet, CA 92543 (909) 925-7592

Hobby Central, 13461 Community Rd., Poway, CA 92064 (858) 513-0373 www.hobby101.com

Hobbytown Raceway, 3069 W. Bullard Ave., Fresno, CA 93711 (559) 435-3342

Hot Rod Hobbies 25845 San Fernando Rd. #21 Saugus, CA 91350, (661) 255-2404

Delta RC Raceway & Hobby Shop, 1201 W 10th St. Antioch, CA 94509 (925) 778-2965

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

KZ Speedway, 8295 Tunjunga, Sun Valley, CA 91352 (818) 771-1003

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

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

Pegasus Hobbies, 5515 Moreano Blvd. Montclair, CA 91763 www.pegasushobbies.com (909) 982-6507

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

Racers Haven Hobbies 7401 White Ln. # 12 Bakersfield, Ca. 93309,(661) 835-0441

The Ragged Edge R/C Raceway, 520 S. Richmond Rd. Ridgecrest 93555 (760) 384-4556 rsread@ridgenet.net

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

Ryan & Amanda's R/C Park, 9494 Sunset Blvd. West Pleasant Grove, CA 95668, (916) 655-3590 www.RyanAndAmandasFishingHole.com

Sacramento R/C Racing, 6201 27th St. # C, Sacramento, CA 95822, (916) 424-4001

Showtime R/C Speedway, 3805 Chester Ave. Bakersfield, CA 93301 (661) 328-1481

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

Sun Valley Micro Raceway, 8295 Tujunga Ave., Sun Valley CA 94352, www.svmracing.com, (866) 793-6513 Toll Free,

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

Ventura Road Runners, Freedom Park Camarillo, CA 93010 (805) 564-4144, www.venturaroadrunners.com

DELAWARE

Hobby Stop Speedway, 22762 Sussex Hwy., Seaford, DE 19973, (302) 629-3944

COLORADO

Rat Raceway, 3600 Blake St. Denver, CO 80205 (720) 327-5483

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

CONNECTICUT

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

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

FLORIDA

Boggy Creek R/C Raceway, 6948 Beth Rd., Orlando FL (407) 948-7197

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

Kissimmee R/C Racing, Osceola Square Mall, 3831 West Vine St., Ste/ 60, Kissimmee, FL 34741, (407) 944-4913

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

Ocala R/C Club, 2612 N.E. 24th St., Ocala, FL 34478 (352) 369-1895, www.orccc.org

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

Pro Hobbies Speedway, 715 N. Lake Pleasant Rd., Apopka, FL 33712, (407) 886-4615

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

The Swamp Florida Sports Park, RT 951 Naples, FL 34113 (239) 417-1099; racetheswamp.com

Triple Nickle R/C Raceway, 1/3 Mile South of HWY 60, on CO rd 555 Bartow, Fl 33820; (863) 533-0539 (no info on amenities)

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

Big Boy Toys Hobby Shop, 5035 MT. Zion Parkway, Stockbridge, GA 30281 (770) 507-6288 www.bigboytoyshobbyshop.com

Hobbytown Raceway, 2301 Airport Thruway, Columbus, GA 31904, (706) 660-1763

McConnell Hobbies & Race World, 232 Brewer Rd. Kingston, GA 30145, (706) 290-0345

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

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AJ's, 10211 Keslinger Rd., DeKalb, IL 60115, (815) 756-2772 www.ajsraceway.com
CIRCR/Precisoin RC Hobbies, 1917 2nd St. Pekin, IL 61554 (309) 347-0975
Depot Hobby Raceway, 180 S. Seminary St., Galesburg, IL 61401, (309) 342-9323
Hobbytown Niles Drag & Raceway, Oak Mill Mall, 7900 N. Milwaukee Ave. Niles, Il 60714; 847-470-577 WWW.HTUNILES@AOL.COM
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
Mid America R/C Club, S. Maple-Schnieder Park Brighton, Il 62012
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
RSJ Raceways Inc., 19091 W. Casey Rd. Libertyville, Il 60048, (847) 549-6963
SIRCAR Raceway, 1200 N. Marion, Carbondale, IL 62901, (618) 549-5885
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, (574) 546-3807
Finish Line Pets & Hobbies, 1209 East St., Rd 2 LaPorte, IN 46350 (219) 326-0921
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 www.pnthobby@bigfoot.com, www.pnthobby@safeshopper.com
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
Custom Made Raceway, 1600 Morningstar Ln. Decatur 46733 www.custommadehobbies.com 260-724-3040 Toll Free: 866-875-8840

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Hobby Haven, 2575 86th St. Urbandale, IA 50322, (515) 276-8785
HobbyTown USA, 2737 16th Ave. SW, Cedar Rapids, IA 52404, (319) 364-3289
Outback Hobbies, 2014 South Saint Aubin St. Sioux City, IA 51106, (712) 276-7079 or (712) 253-0087
Radio Control Raceway Park, 2100 First Ave. N., Ft. Dodge, IA 50501, (515) 576-3780
Riverfront Speedway, adjacent to Sunkist Meadows Golf Course, FT. Dodge, IA (515) 576-3780
Wild Bill's Raceway, 901 W. Jones, Knoxville, IA 50138, (641) 842-5973

KANSAS

RC Hobbies, Franum Creek, Milford Lake, KS (785) 238-1877
Route 66 R/C Raceway, Galena, KS 66739; (620) 783-5751

KENTUCKY

Somerset Raceway, 188 Sycamore Dr., Bronston, KY 42518, (606) 561-4522 Halcomb@hyperaction.net
Coyete Hobbies, 218 N. Martin Luther King Blvd. Lexington, KY 40507,Danny Puchalsk: (859) 253-9330 www.coyetehobbies.com
Radio Control Wheels or Water, 1308 W. Shelby St. Suite 2 Falmouth KY 41040 www.rcwow.com (859) 654-1700
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

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 04937, (207) 453-4588

MARYLAND

Countryside Raceway, 406 Pamela Rd., APt. C, Glen Burnie, MD 21061, (410) 761-6196
The Track, 16806 Oakmont Ave., Gaithersburg, MD 20877, (301) 417-9630

MASSACHUSETTS

Hobbytown/RPM Raceway, 201 N. Quincy St.,Abington, MA, (781) 857-2300
Megadrome Raceway, Rt. 8 Curran Hwy. North Adams, MA 01247, (413) 743-7223
R/C Excitement Inc. Hobbies & Raceway, 36 Harlow St., Worcester, MA 01605 Mike Gordan (508) 753-8676 www.rcexcitement.com

MICHIGAN

Beyond Extreme Racing, 36159 Plymouth Rd., Livonia, MI 48150 (734) 513-7641 www.beyondextremeracing.com
Down River Radio Controlled Racers (D.R. R/C), 22789 Nortline Rd, Taylor, MI 48180 (734) 287-7405 (Bobby or Fred) www.downriverracing.8k.com
Dirt Burner Racing, 3295 Haggerty Rd. Commerce, MI 48390 (248) 926-1140
Hobbytown USA, 2252 S. Main St., Ann Arbor, MI 48103, (734) 996-2444
JT Superspeedway, Golden Ave., Battle Creek, MI 49015, (616) 965-0116
Larry's Performance R/C's, 42246 Mound Rd., Sterling Heights, MI 48314 (586) 997-4840
Lazer RC Speedway, 2858 N. Wilmoth Hwy., Adrian, MI 49221, (517) 263-2806
Motor City Speedway, 16025 23 Mile Rd. Macomb Twp., MI 48042 (810) 677-2311
N.M.R.C.C. Raceway, Hobby Toy, Main St., Gaylord, MI 49735, (517) 732-3963
R&L Hobbies & Racing, 9782 Portage Rd., Portage, MI 49002, (616) 323-3686
Sandhill off Road R/C, Wood St at Vincent St. Saginaw, MI 48602;
Village Hobbies, 195 N. Elm St. Hesperia, MI 49421 231-854-1374

MINNESOTA

Elbow Creek R/C Racepark, 8892 Townline Rd, P.O. Box 313, Forbes, MN 55738 (218) 744-5234 www.paintwerksracing.com
Ray's Raceway Park, 105 3rd Ave. NE., Glenwood, MN 56334, (320) 634-5246
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BY DARRYN JOHNSON

YOKOMO YZ-10

YOKOMO YZ-10

For anyone who races model R/C cars, Team Yokomo needs little introduction, as their involvement in the racing scene dates back to before the Associated RC12e (Yokomo's racing ties with Team Associated were strong even back then, with Yokomo supplying tires and motors). Yokomo is one of hardcore racing's brightest lights, with many state, national and world championships under their belt. The YZ-10 was extremely successful in racing circles in the late eighties. Following up their worlds-winning wonder the Dog Fighter, the YZ-10 represented a major design change from previous models. Gone was the complicated gearbox design. For better weight distribution, the chassis also now accommodated the popular "saddle pack" battery configuration. Also added was four-wheel independent suspension with four shocks (the previous models had monoshock front ends, and the first had the monoshock setup at the rear as well.



RESULTS FROM 1988

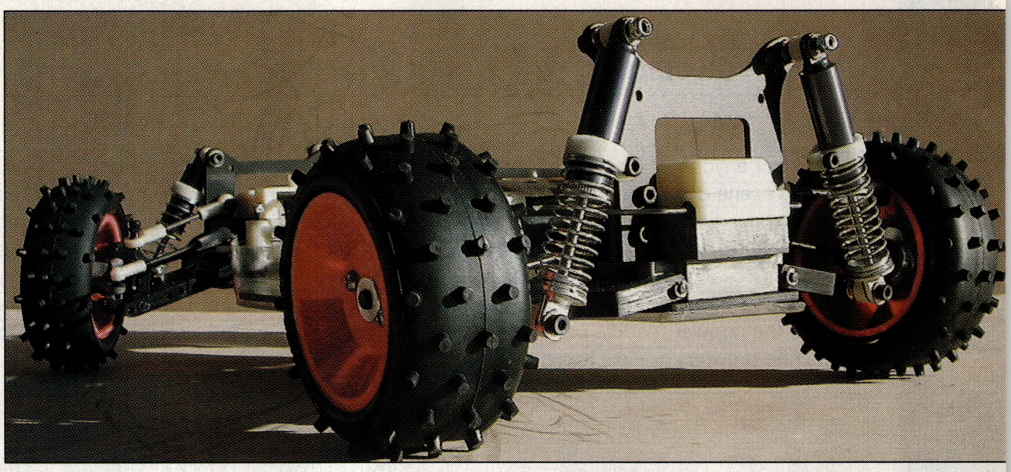
The YZ-10 had some pretty impressive results in its first year of competition:

Jan 24—TQ and winner of the Reedy race
Feb 6—TQ and winner of the US Winter Nationals
Apr 17—TQ and winner of the Swiss Nationals
May 29—TQ and winner of the Taiwanese Nationals
Aug 28—TQ and winner of the Japanese Nationals
Sep 11—Winner of the German Nationals
Oct 2—TQ and winner of the Italian Nationals
Oct 3—TQ and winner of the Australian Nationals

KIT FEATURES

The YZ-10 had many outstanding features that made it a package that was really tough to beat on any racetrack, and without modification. Let's have a look at some of the more standout features from this classic Dog Fighter.

- Saddle pack chassis with allocation for seven cells
- Four-wheel independent suspension with oil filled dampers
- Efficient two-belt drive system.
- Lightweight alloy bulkheads for transmission and suspension
- Lightweight alloy screws for most areas
- Choice of two 4WD systems: automatic 4WD (one-way) or locked, full-time 4WD
- Limited-slip ball differentials both front and rear
- Complete ball-bearing set
- Complete set of universal-joint drive shafts
- Rear sway bar
- Lexan body with undertray to provide substantial protection for electronics and drivetrain



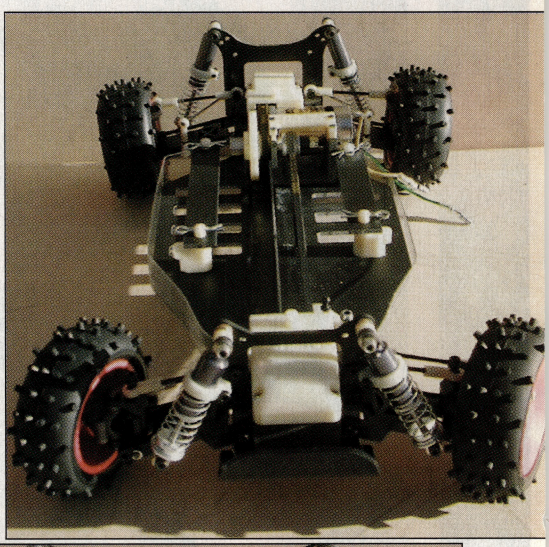
The saddle pack chassis was very rigid. One interesting feature of the chassis was the allowance for a seventh cell on the right side. This was a sign of the times, as the U.S. racing fraternity was pushing for a class that they wanted to be called "international." This class was to be seven-cell and four minute racing. With Yokomo being heavily aligned with Associated, they obviously wanted to cater to this potential new class of racing. This class never really took off, and the idea was abandoned at major events. Six-cell, five minute racing was to become the standard international modified class. So YZ-10 owners now had the added advantage of being able to change the location of their cells to give different handling characteristics—another tuning advantage!

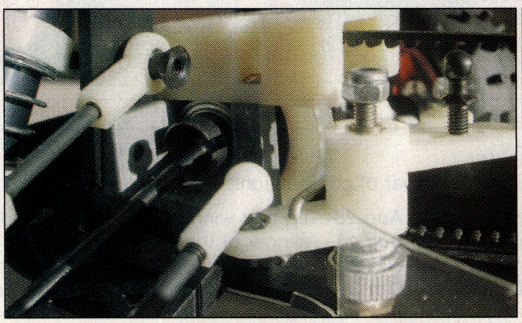
The transmission of the YZ-10 was very smooth and efficient—something that could not be said for a lot of the competitors at the time. Many Yokomos were ballistic in a straight line because their owners were able to gear up because of this efficiency. The ability to either have the layshaft as a one-way drive system to the front (part time 4WD) or locked (full time 4WD) was also a huge advantage on many tracks.

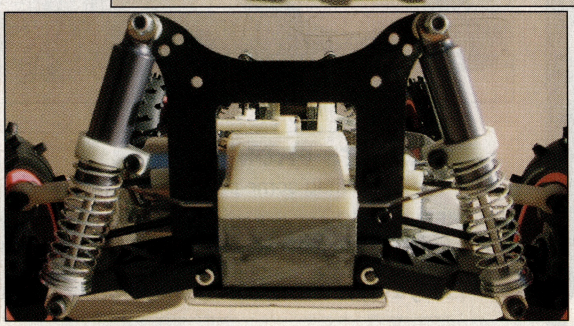
One thing, however, that was a bit of a worry with the car was the open nature of the drivetrain. Yokomo attempted to rectify this potential problem by making a very smart looking lexan shell that incorporated an undertray that mated with the main body to make a "semi-sealed" chassis structure. This was very effective in keeping all but the smallest of stones from entering the internals.

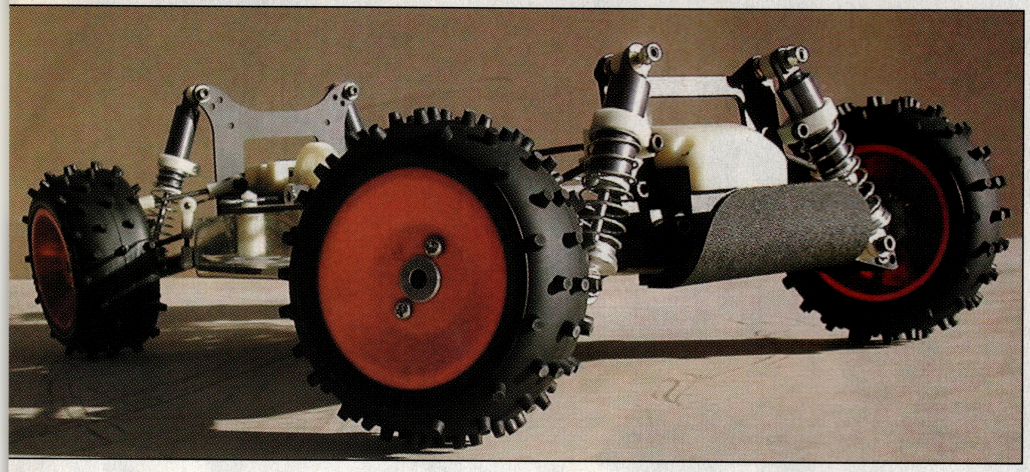
The suspension of the YZ-10 was a revelation for the time as well. Yokomo really did their homework with the car. Not only did the car sit EXTREMELY low when compared with other cars, but it also had huge amounts of useful suspension travel. Only on extremely rough tracks did the car suffer from its low ride height. On most tracks the car was simply on "rails," as it could hug corners like no other car of the time.

It was not all "beer and skittles" for the YZ-10. Issues with rather leaky shocks, poor quality tie rods (read: made of cheese) and the open drive train suffered from Murphy's law: the only small rock on the track would inevitably find its way into the drivetrain and jam it up, causing dam-







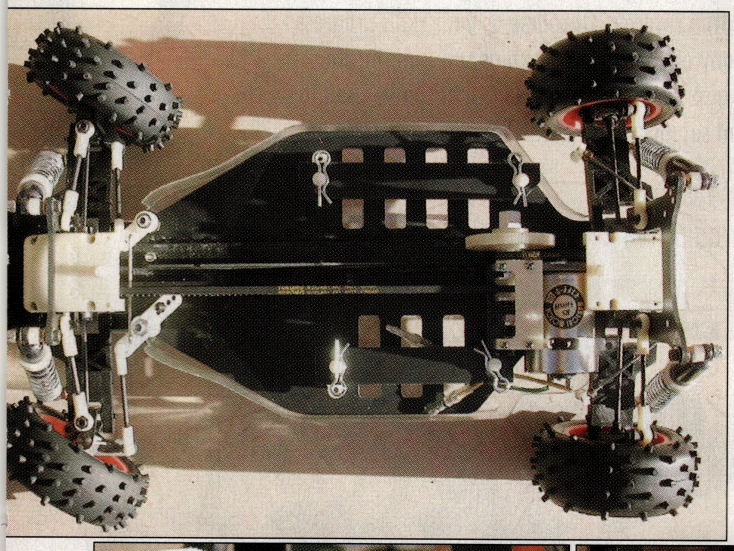


age to the soft plastic pulleys.

All that being said, however, the YZ-10 was a VERY capable racer—in any hands.

WHAT TO LOOK FOR

Like most vintage racecars , the toughest finds are, of course, the body set and undertray. Even harder to find is the original wing. Original tires are pretty difficult to locate, as are either the original white (U.S. market) or pink (foreign market) wheels. Other issues are of course that open drivetrain. Not many people who raced these cars can say they never had a failure related to a stone or pebble jamming up their front or rear pulley. The damage often left the car useless, as the belts were quite finicky in their tracking. Keep an eye out for stripped alloy threads—especially on the bulkheads and steering knuckles. It was very easy to strip these parts. Keep an eye out for "stressed" plastic on the suspension arms around the hinge pins.



As a general rule, most of the real "race" specific cars of the era will have stood up quite well. These cars were designed for competition, so they tend to be more robust in construction and performance.

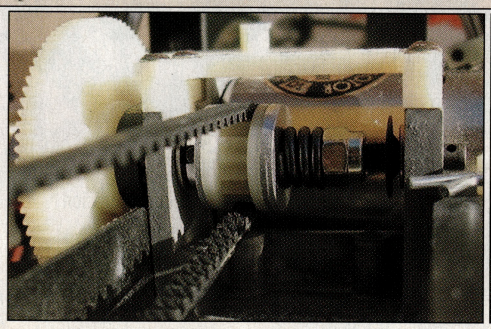
COLLECTIBLE QUOTIENT

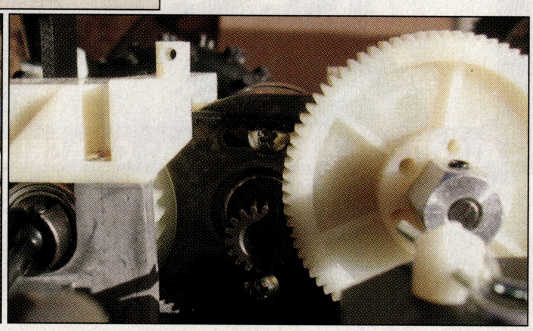
• What's it worth? I have kept my eye on Yokomos for a while now. They are not in the Kyosho class of collectibility yet; however, as they have been so dominant over the years, many racers will want one on their shelf or in their collection. I have seen used examples in poor condition go for as little as $40, with a new built example fetching around $220. A NIB kit would be expected to reach at least $300 on a poor day. I have yet to see a NIB kit on eBay.

• Parts availability. Parts are going to be a bit hit and miss on any Yokomo. Yokomo was one of "those" manufacturers that constantly changed their cars—sometimes releasing a new model within eight months of the previous one. You may find that you will locate some parts at your local track or shop, as these cars were very popular in racing circles. The fact that they are not really thought of as highly collectable yet means that there should be many parts still around.

CONCLUSION

I have always been a big fan of Yokomo. Their total commitment to racing and everything to do with it has always impressed me. The fact that they have never tried to be anything other than a professional racecar manufacturer speaks volumes to their commitment to the hobby. The quality of the YZ-10 is without doubt. The collectibility of the car for the vintage race enthusiast would have to be very high, as it is a real benchmark car for the company. The fact that the car looks like a million bucks when painted and ready to run makes it even more desirable. Cheers till next month. *www.darrynsretrorc.rtox.com*





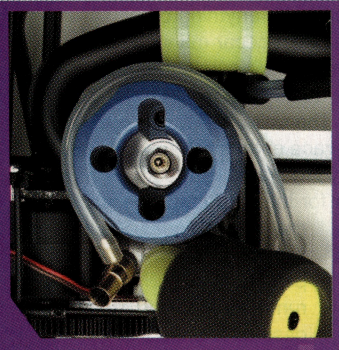




We've equipped the XXX-NT Sport RTR with JR's programmable XR2i radio system. The XR2i, while more sophisticated than many of the radios that come with competing RTR nitro trucks, is anything but complicated. In fact, you don't have to know a thing about programming to take advantage of some of the XR2i's best features, like digital trim controls. Of course as your skills progress, you can benefit from the XR2i's many other features, such as sub-trim, throttle curves and end-point adjustments. The XR2i also has 2-model memory that can be used to store settings for another RC truck or two different setups for the XXX-NT Sport.

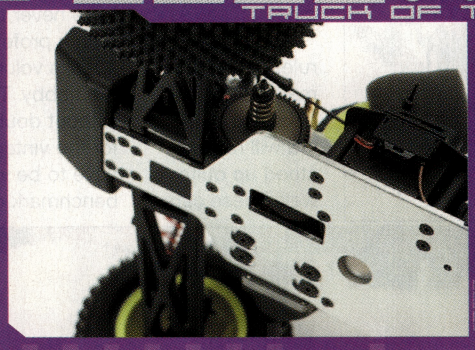
"Of all the RTR kits I've ever come across this has got to be the nicest radio I've ever seen included." Xtreme R/C Cars

2002 TRUCK OF THE YEAR



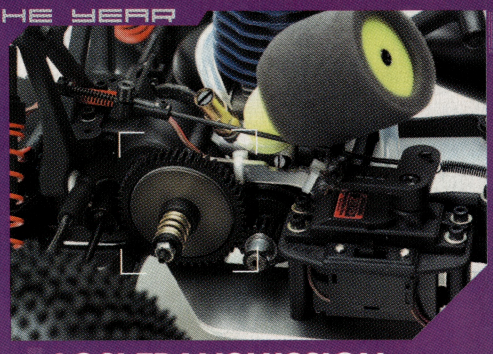
MACH .15 ENGINE

Pre-installed Mach .15 engine features large anodized aluminum heat-sink head for cooling, includes convenient recoil starter and comes complete with aluminum exhaust manifold and tunable high-torque pipe.



AIRCRAFT ALUMINIUM CHASSIS

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LOSI TRANSMISSION

In addition to the "Monster" diff, the transmission features a unique compound gear for a lower 4.11:1 drive ratio. The stacked design and small diameter spur moves the weight back and lower for better handling.

LOSA088

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XXX-NT SPORT RTR

2002 "TRUCK OF THE YEAR"

READY-TO-RUN

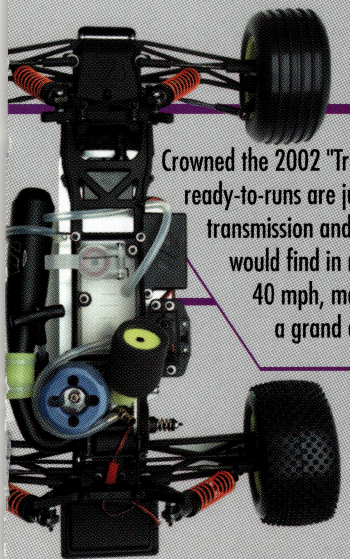
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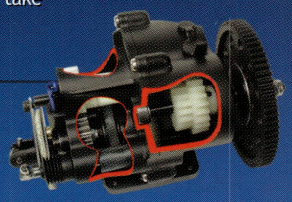
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