NEWSFLASH! Reedy TC Champs Coverage



Xtreme R/C Cars

THE REAL WORLD OF R/C CARS WITH AN EDGE

RC10GT Goes Factory Team



Exclusive!
We test Sanyo's new 3000!



HOW IT WORKS:

Off-road sway-bars
Sedan Diffs

PLUS...

T-Maxx Tips, XXXT Hookup,
Cleaning your nitro,
and MORE!



HPI Nitro RS4 Racer 2

Does it reset the standard?

July/August 2000
A $3.99 CANADA $5.99
08
Issue 6.0

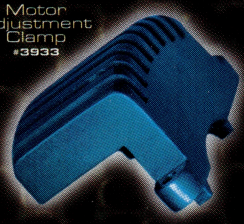
Totally Factory TC3

FACTORY Team

Cool parts for the RC10TC3...
Send for your FREE
Factory Team Catalog.

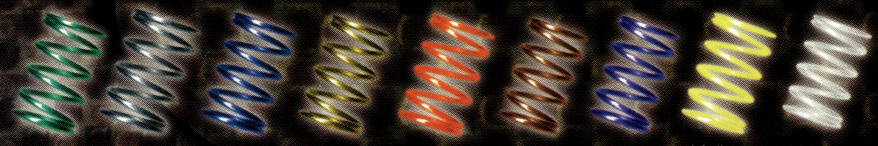

Blue Titanium Turnbuckle Kit
#1356


Blue Screw Kit
#3935


Motor Adjustment Clamp
#3933


Motor Adjustment Cam
#3932

OPTIONAL SPRINGS



Green 12 lbs. · Silver 14.5 lbs. · Blue 17.0 lbs. · Gold 19.5 lbs. · Red 22 lbs. · Copper 25 lbs. · Purple 30 lbs. · Yellow 35 lbs. · White 40 lbs.


Graphite Rear A-Arms
#3891


Graphite Steering Blocks and Rear Hub Carriers
#3877

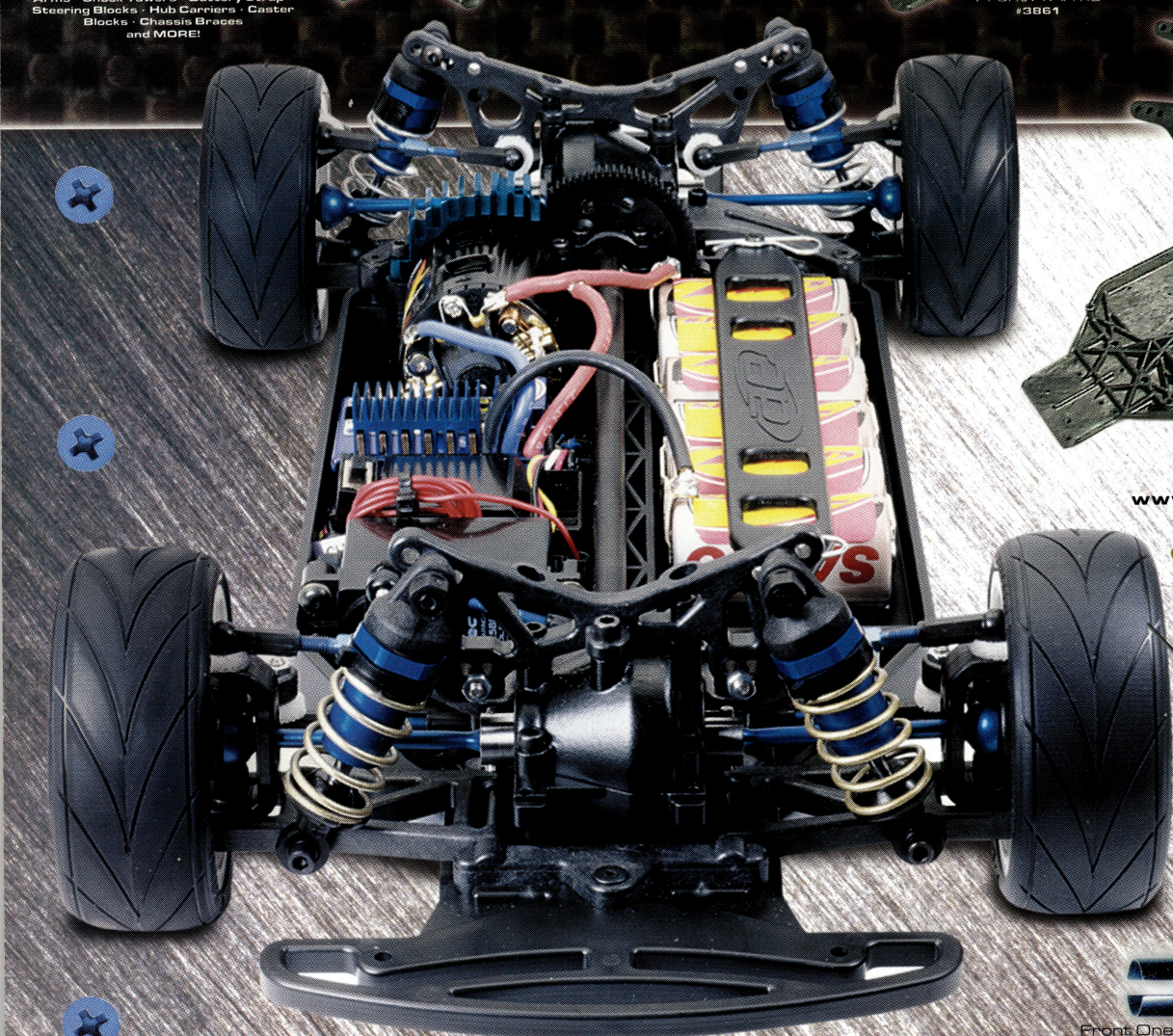
Graphite Battery Strap
#3854

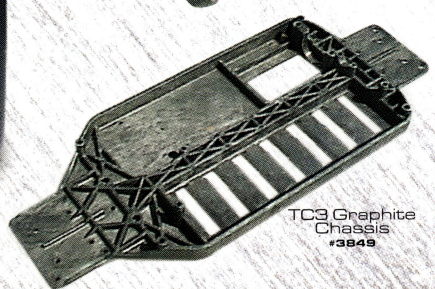
Graphite Front A-Arms
#3861


Graphite Shock Towers
#3896 Rear
#3882 Front

•TC3 Full Graphite Component Set #3961

Includes: Chassis · Front & Rear A-Arms · Shock Towers · Battery Strap · Steering Blocks · Hub Carriers · Caster Blocks · Chassis Braces and MORE!




TC3 Graphite Chassis
#3849

Visit our Website:
www.rc10.com
www.teamassociated.com


Anti-Ro Bar Kit
#3960

Blue Threaded Shock Body Kit (4)
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Front One-Way Main Hub w/bearings
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Trinity Off-Road Shoot Out
2wd, Matt Francis
Truck, Adam Drake
4wd, Brian Kinwald

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

Reedy Race Of Champions
Brian Kinwald

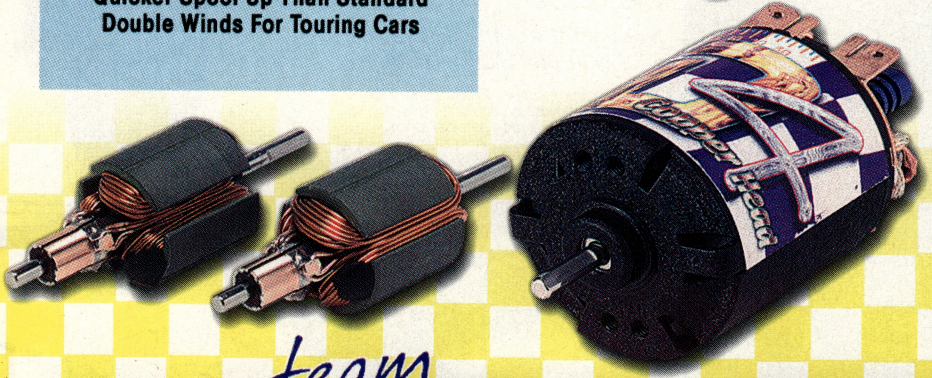
Florida Winter Champs
Truck, Matt Francis

Trinity On-Road Challenge
Touring, Josh Cyrul

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

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

1/12th Euro Champs
David Spashett





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

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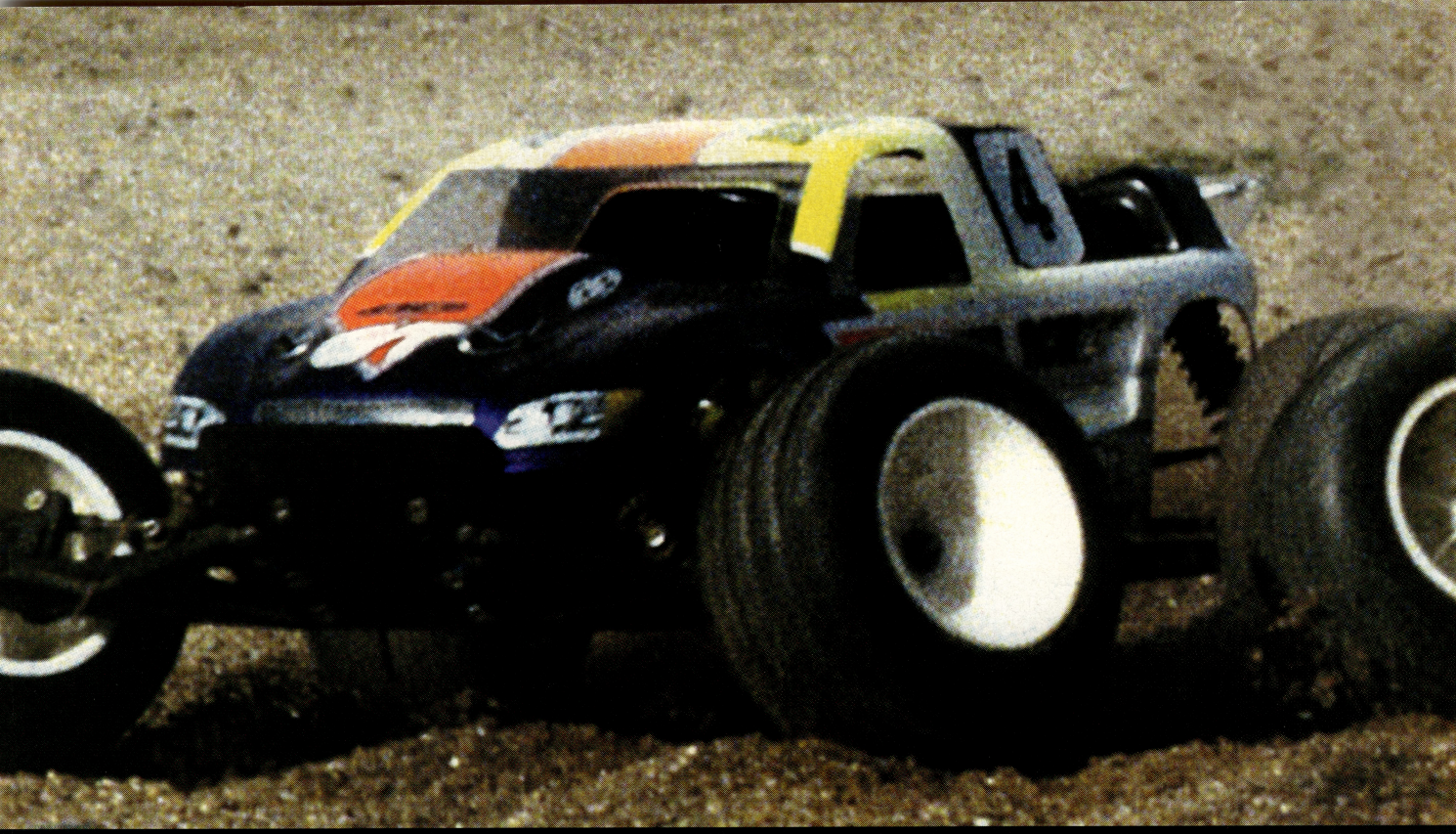


Don't Settle For Anything Less...

Here's The Team Associated RC10GT Lineup For 2000...
A GT For every racer, from Novice to Factory Pro!

Team Associated RC10GT's have been the dominant force in nitro truck racing since their introduction in 1993. No other nitro truck even comes close to the GT's winning record, including 3 NORRCA Truck World Cup wins.



All Team Associated RC10GT's feature fully adjustable caster, camber, and toe-in, fully adjustable oil-filled shocks, and our race-proven Stealth differential with 2.60:1 final drive ratio to handle the power of today's nitro engines.

The new, updated RC10GT Team kits feature one-piece racing wheels, Pro-Line F-150 Truck Body, MIP CVD's and a new, heavy-duty one-piece blue-anodized chassis which virtually eliminates chassis flex problems, and increases the GT's wheelbase to the maximum legal length.

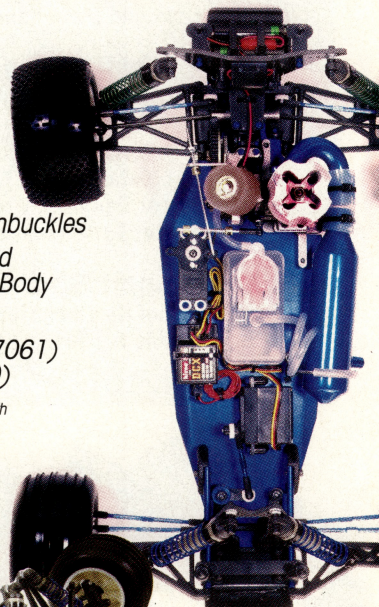
The new RC10GT "Factory Team" kits also include a Factory Blue Tuned pipe and manifold, Factory Blue Titanium turnbuckles, graphite shock towers, blue screws and more... it's the full "factory ride" GT!

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

Nobody knows Nitro truck racing better than the Team!

Factory Team Kit

- *New super-rigid Alloy chassis, blue anodized*
- *Factory Blue Tuned pipe and manifold*
- *Sealed ball bearings*
- *Graphite shock towers*
- *Factory Blue Titanium turnbuckles*
- *Pro-Line Racing Tires, and #3078 F150 Ford Truck Body*
- *MIP CVD's*
- *Available in Pull-start (#7061) or Non-pull Start (#7060)*



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



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

FACTORY Team GT

RC10GT

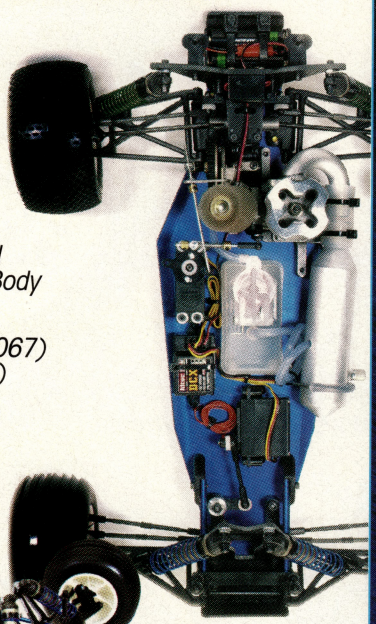
For more information on the RC10GT, visit our website:
www.rc10.com • www.teamassociated.com



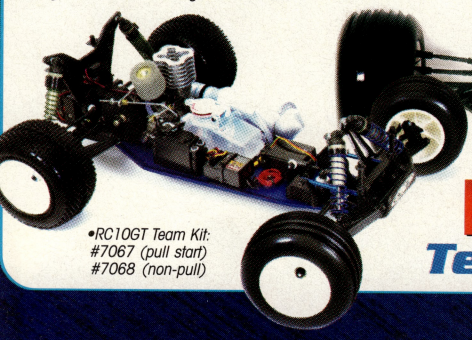
Get a REAL Associated RC10GT!

Team Kit

- New super-rigid Alloy chassis, blue anodized
- Tuned pipe and manifold
- Sealed ball bearings
- Composite shock towers
- Hard-anodized, Teflon-coated shocks
- Pro-Line Racing Tires, and #3078 F150 Ford Truck Body
- MIP CVD's
- Available in Pull-start (#7067) or Non-pull Start (#7068)



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

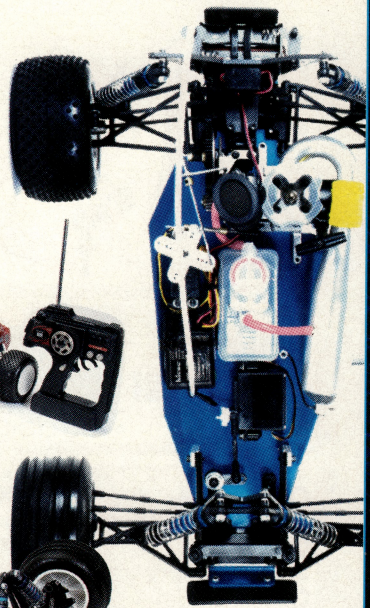


•RC10GT Team Kit:
#7067 (pull start)
#7068 (non-pull)

RC10GT Team KIT

Ready-To-Run

- Fully assembled, just add fuel and radio system batteries!
- High-quality 2-channel radio system installed
- Includes powerful Team Associated .15 engine
- Painted and trimmed body
- Uses most standard GT replacement parts



.15 Engine Lifetime Replacement Policy!





•RC10GT RTR #7090
Complete with .15 engine and 2-channel radio

RC10GT Ready-To-Run

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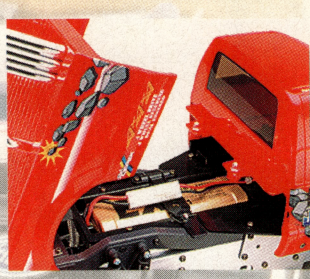
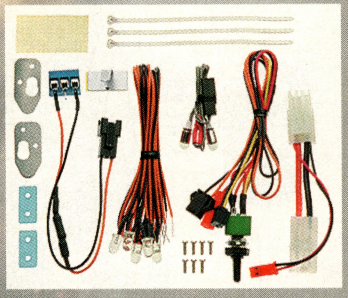


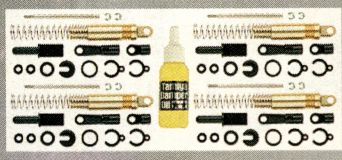
Truck Bed Tilts for Easy Battery Access (Battery Pack NOT Included)

Aluminum Bumpers, Front and Rear

Hop-Up Options:

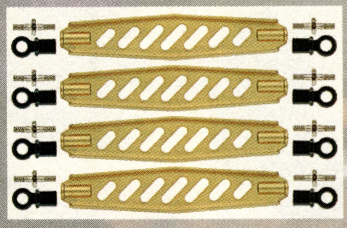


#53370 Lighting Kit Powers Head Lights and Driving Lights

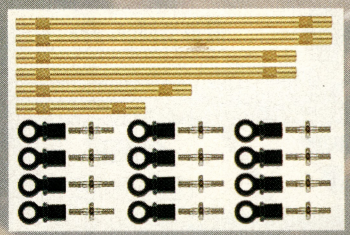


#53369 Aluminum Oil-Filled Damper Set (2 Sets Needed)

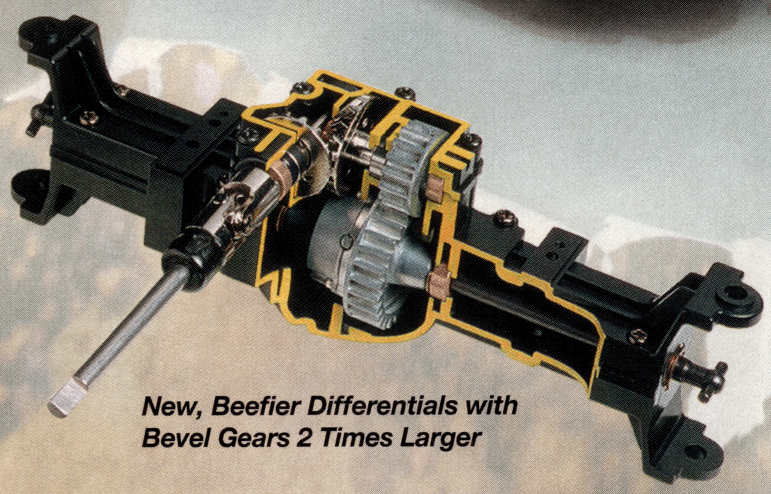
Huge, Semi-Pneumatic Tires and Chrome Wheels



#53383 Aluminum Suspension Arm Set (2 Sets Needed)

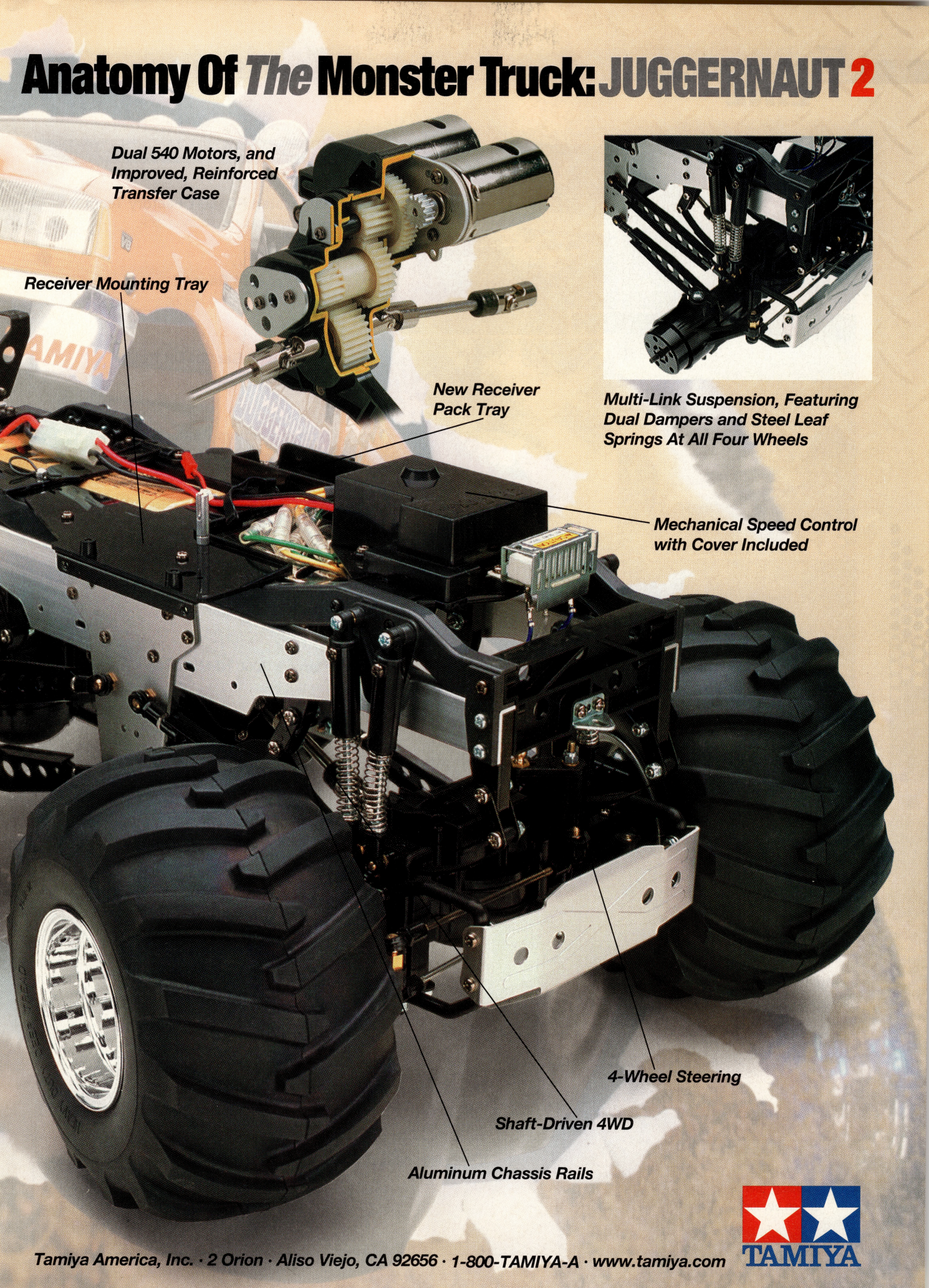


#53385 Aluminum Steering Rod Set



New, Beefier Differentials with Bevel Gears 2 Times Larger

Anatomy Of *The* Monster Truck: JUGGERNAUT 2



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ATTENTION!

There's dirt
on our ...
Just kidding, there's no
dirt on our logo.
Cover Photos by:
Elliot Crabtree



Other stuff in this issue:

The Xtreme Can Cam, Jenny McCarthy, Fidel Castro, Steel Bush the Movie, Redheads, The Jewel of DeNyle, and more.


I can control you!

Who's on the Can-Cam right now?

World Champions



Team Losi Triple-X

- *1999 2WD ROAR National Champion*
- *1999 2WD European Champion*

XXX



Brian Kinwald

- *1997-1999 IFMAR World Champion (Double-X)*
- *1999 ROAR National Champion (Triple-X), (XX-T), (XX-4)*



Team Losi XX-4

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



Jukka Steenari

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

TEAM LOSI

TEAM XX4 LOSI

Team Losi, Inc., 13848 Magnolia Ave., Chino, CA 91710

You Like?

Greetings. Right now is a great time to be involved in the world of R/C. The latest generation of ready-to-run cars is bringing droves of new people into R/C cars. Electric cars keep dropping in price. In many areas of the country, new race tracks are popping up and attendance is increasing. The increased reliability and user-friendliness of gas engines is fueling growth across the board. Among manufacturers, the general consensus is upbeat and optimistic. With all this good news, we figured now was a great time to share some good news of our own. We've made a number of changes to the look and feel of *Xtreme R/C Cars* that we hope make it easier to read, more concise, and more appealing. Check it out for yourself and see what you think.

Last year when our Art Director Andy came to work here he was chomping at the bit to make a number of changes to the magazine. Over the last couple of months he's been making lots of improvements. This month I thought I'd give him the credit he deserves by letting him make all of the changes he's been dying to make. Along with the artistic stuff we've changed a few other things. The columns "X-mail and Racers Rides", are no longer with us. They met a quick and painless fate. Instead we've got a new department called "Xtrastuff." Inside Xtrastuff you'll find stuff you'd expect to see in an R/C car magazine: reader letters, questions, photos of reader's cars, and a bunch of mindless, pointless garbage that shouldn't be in print anywhere for that matter. X-ratings is now called "Under the Scope," (we just couldn't come up with a good icon for X-rating). Well, at least all the icon's I suggested would make the magazine NC-17. In our reviews and how-to's you'll find some small changes also.

For the last five years I've had to hear, "So, when are you guys going to have *Xtreme* T-shirts?" every time I go to a race. Now instead of grabbing my crotch and saying, "I've got your T-shirt right here," I can simply say, "Ya, we've got shirts." You can get an *Xtreme* T-shirt of your own buy visiting the *Xtreme R/C* Gear page in this issue. Along with our latest limited edition T-shirt, we'll be showcasing new gear all the time.



Enough of the shameless self-promotion, what's in this month's issue you ask? We've got reviews of three hardcore, race-worthy rides – HPI's new Nitro RS4 Racer 2, Associated's Factory Team GT, and Schumacher's CAT 3000. For you backyard bashers, we reviewed Tamiya's Stadium Raider. In the how-to department; Regan LeBlanc will show you how to clean your gas car, we'll let you in on sedan diff secrets, and Mike Henry will show you how to use sway-bars in the dirt. Along with these killer how-to's, we've got Reedy Touring Car race coverage, a Losi Triple-XT hook-up and lots more. Hope you enjoy.

Mike Velez
Publisher/Editor/Racer

Xtreme R/C Cars

Editorial

Publisher/Editor **Mike Velez**
Copy Editor **Andrew Hock**
Editor at Large **Mike Henry**

Contributing Writers: Regan LeBlanc
Dan Tirre, Jack Johnson,
Nathan Miller, Richard Dee,
Dean Brown, Mike Henry.

Art & Photography

Art Director **Andrew Mock**
Senior Staff Photographer **Elliot Crabtree**
Typographer **Kaleido Graphics**

Production

Production Director **Duane Schwab**
Circulation Director **Sonya Velez**

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Read Xtreme R/C Cars.
Printed in the U.S.A

We had planned to have a model, modeling our shirts but she was tied up, literally.

NEW BODIES

ONE OF THE MANY NEW BODIES AVAILABLE FROM HPI





CIVIC COUPE SI

#7338 Civic Coupe Si (190mm)

TOURING CARS

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NEW 190mm!

911 Turbo
#7335 Porsche 911 Turbo (190mm)
#7435 Porsche 911 Turbo (200mm)

ELISE
#7433 Lotus Elise (200mm)

COUGAR
#7437 Ford (Mercury) Cougar (200mm)

ALFA Gtv
#7439 Alfa Romeo GTV (200mm)

CIVIC COUPE SI
#7338 Honda Civic Coupe Si (190mm)

CELICA
#7440 Toyota Celica (200mm)

ALTEZZA
NEW! #7346 Toyota Altezza Netz Castrol (190mm)
#7315 Lexus IS 200 / Toyota Altezza (190mm)

Mercedes-Benz AMG
#7443 Mercedes-Benz AMG S-Class (200mm)

Silvia
#7341 Nissan Silvia (S15) (190mm)

NISSAN GT R SKYLINE
NEW! #7327 Nissan Skyline R34 GT-R (190mm)
#7427 Nissan Skyline R34 GT-R (200mm)

NEW 200mm!

Stratus
#7416 Dodge Stratus (200mm)
#7316 Dodge Stratus (190mm)

BMW M Coupe
#7432 BMW M Coupe (200mm)

SUPER SIZE

NISSAN GT R SKYLINE
#7514 Nissan Super Skyline (WB 280mm)

BMW
#7512 BMW V12 LMR (WB 280mm)



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WHILE MOST COMPANIES ARE BUSY MAKING THEIR CARS LOOK PRETTY, WE'VE BEEN BUSY BUILDING WORLD CHAMPIONS!

THE NEW GT-4

1/10th GAS TOURING CAR



The GT4 is the best gas touring car I have ever driven!
-Chris Tossolini (ROAR National Champion)

This is an awesome car right out of the box!
-Barry Baker (National and International Champion)

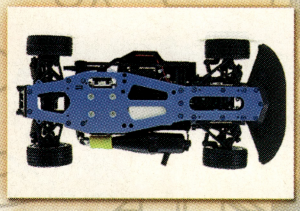
Years of development make this the best gas car available!
-Masami Hirosaka (10 Time World Champion)

PROTOTYPE SHOWN
visit our website for final version specs.

A new generation of nitro turing cars

Rather than transforming an electric touring car into a niro powered version, the all new GT4, was specially designed to handle the power of today's high output nitro engines. Built from the ground up as a purpose built competition nitro touring car, the GT4 was also designed to be user friendly for a wide range of users. Whether on a parking lot or race track, beginners and racers alike will be able to enjoy the world class performance and workmanship of the all new GT4.

KEY FEATURES



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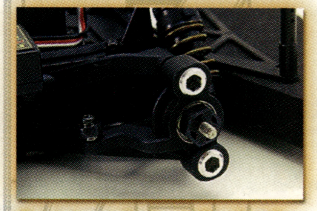
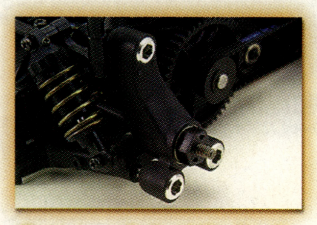
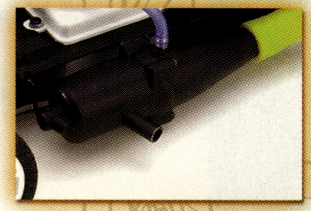


BALL ADJUSTABLE FRONT SUSPENSION



BALL ADJUSTABLE, REAR SUSPENSION



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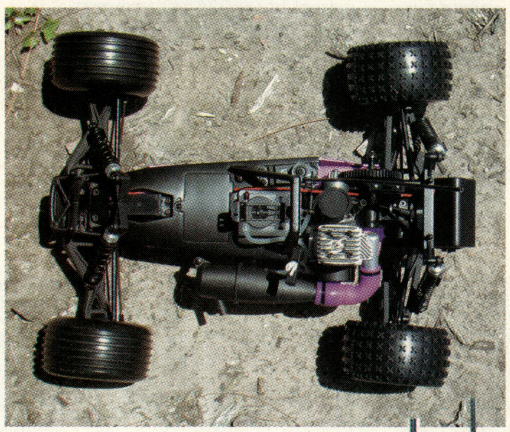
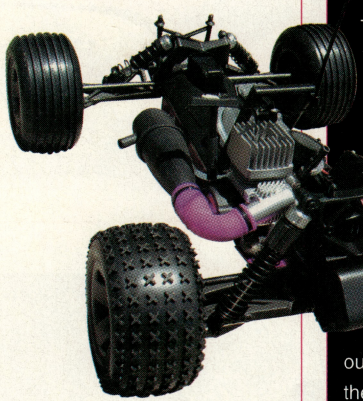
HPI's New Nitro Rush Truck

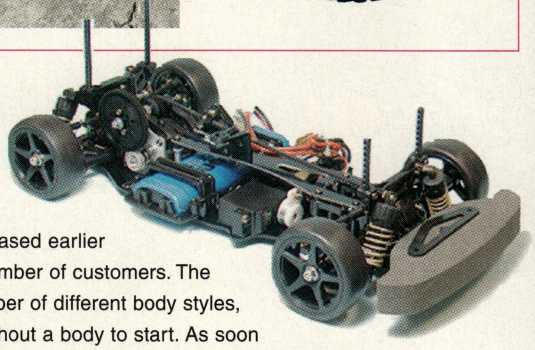
Back in October we showed you the first pictures of HPI's yet-to-be named 2WD nitro-powered stadium truck. Many months have passed and HPI is set to begin shipping the new Nitro Rush truck early this summer. HPI did something new and unique to come up with the name for the new truck. Visitors to HPI's website cast their vote on the new truck's name and logo. Okay, I know what you're thinking, "Enough of the dribble. Show me the damn truck already." Check it out, the Nitro Rush uses a 3-gear transmission to drive the rear wheels. A slipper clutch and disk brake are standard. The entire layout is built upon a purple-anodized aluminum, countersunk chassis. The chassis has bent up sides to form a nice tub design. The chassis is reinforced by a large top piece that shields the radio equipment and adds strength to the total package. The fuel tank has a reservoir built around the tank itself to handle extra fuel spill. The extra spill funnels to the bottom of the chassis and is let out through a drain hole on the bottom of the chassis. The entire suspension system, aside from the shocks, is completely newly designed for the Rush.

As you can see in the photos, the steering servo on the Nitro Rush mounts upside down between the left and right steering turnbuckles. The steering turnbuckles mount directly to a servo saver mounted to the servo. Holes are cut out in the chassis so that steering bellcranks can be added later. The Nitro Rush will come with HPI's FE .15 pull-start engine. The engine uses an aluminum manifold along with a molded silicone header and molded tuned pipe. Many of the upgraded drive accessories (pipes, brake disks, etc.) that fit other HPI cars will fit the Nitro Rush. Expect to see the Nitro Rush in stores around mid-July.





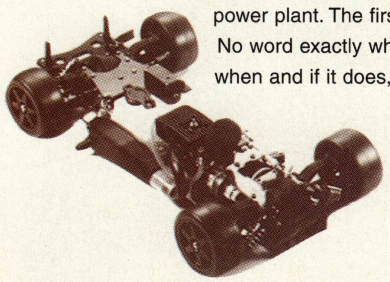
Tamiya TA04

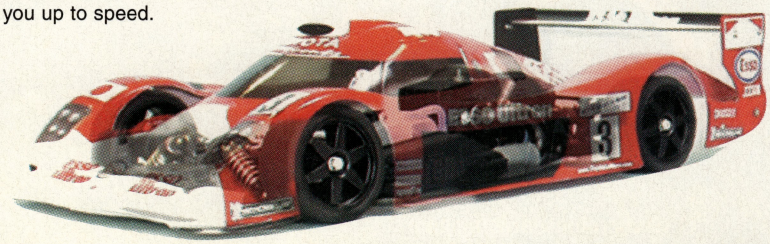


It's official. The TA04 is on its way to the States. Later this year Tamiya will release the TA04 touring car chassis. The TA04 is based largely on Tamiya's test sled, 414X that was released earlier as a testing vehicle to only a small number of customers. The TA04 will eventually come with a number of different body styles, but will more than likely be offered without a body to start. As soon as the TA04 hits our shores, look to *Xtreme R/C Cars* for a complete review.

TGR

Check out these pictures of Tamiya's latest Nitro Prototype. It's called the TGR. The TGR is a 1/8-scale on-road nitro car that has a super low profile. A center mounted shaft gets the power to all four wheels. There's plenty of room for a two-speed transmission. The kit uses a disk brake to slow things down. The TGR will use a .15 size engine as its power plant. The first body available for the TGR will be a Toyota GT-1. No word exactly when or even if this model will hit U.S. shores, but when and if it does, we'll keep you up to speed.

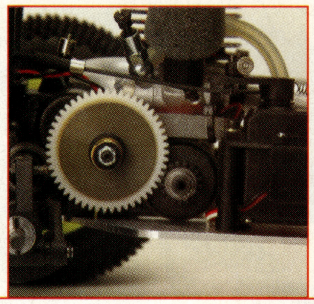


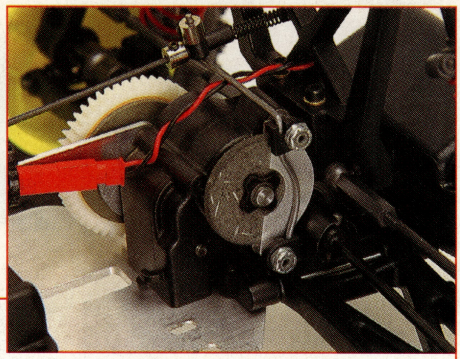


HPI is hoping you'll rush to your hobby shop to pick up the Rush. (wakka, wakka)

Pictures of Losi's XXX-NT

Last month we told you we'd have some more pictures of Losi's yet-to-be released nitro truck, and here they are. As you can see the most unique feature on the XXX-NT is the very small spur gear. A very large diff gear allows the small spur gear to be possible. Up until now a large spur gear has limited the rear suspension design on gas trucks to a certain extent. Also very notable on the XXX-NT gear box is the disk brake. Losi has abandoned the brake drum design as used on the NXT. Instead a conventional disk brake is used. What's unconventional is where it's located – on the other side of the truck's gear box, mounted to the shaft coming off the idler gear. The idler gear is the center gear in the three gear transmission. Hopefully in the next couple of issues we'll be able to share with you a complete review of the new nitro truck coming out in our hometown.







Unequaled Precision

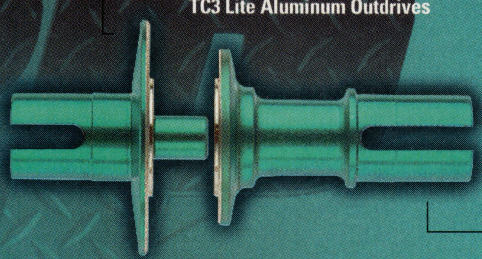
RS4 Nitro Vented Flywheel



Precision CNC machined from light- weight aluminum, this vented flywheel blows air over the clutch shoes, improving performance and extending shoe life.
RRP 1570
RRP 1571 Pull Start

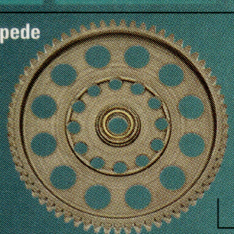
ALL NEW ITEMS

TC3 Lite Aluminum Outdrives



Blue anodized and 40% lighter than stock ball diff outdrives.
RRP 1475

Nitro Stampede Hardened Steel Spur Gear With Bearing

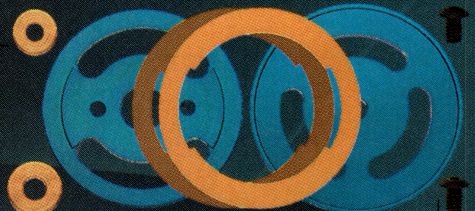


Precision machined one-at-a-time from a single piece of steel and then hardened this 65T spur will last and last. A sealed Ball Bearing is included. RRP 8565

Unsurpassed Reliability

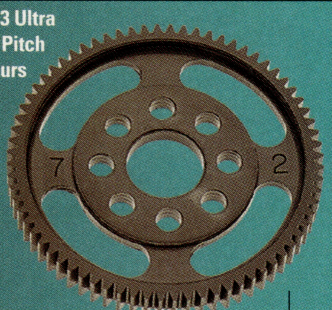
Outstanding Performance

Kyosho Ultima Blue Lightened Slipper Kit



The rear plate is hard anodized to reduce wear and the front plate is color treated. The front plate is designed to hold the slipper pad forcing the pad to slip on the rear plate. When pad shows sign of wear just flip it over for a new surface. Metal parts are CNC machined for a flawless fit. RRP 7515

TC3 Ultra 48 Pitch Spurs

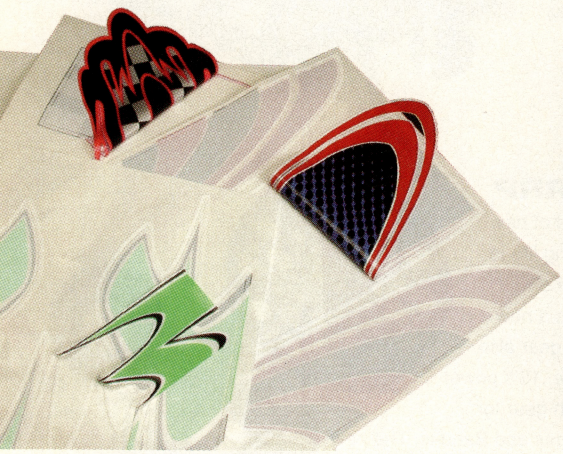


Tough, smooth and quiet, These new spurs are precision machined from heat-resistant plastic, to mesh flawlessly with our Pinions. 48P Ultra Machined Spurs are available in even numbers from 70T thru 80T, RRP 1670 - RRP 1680.

www.robinsonracing.com

New Masks from Orion

On last month's cover car, we used Thunder Designs decal set from Team Orion. The car looked great. This month Team Orion's got three new designs along with a number of new colors to add to the mix. In fact, this month's cover Factory Team GT Pro-Line F150 is also sporting some of the new decals. Look for the new colors and designs on sale now.



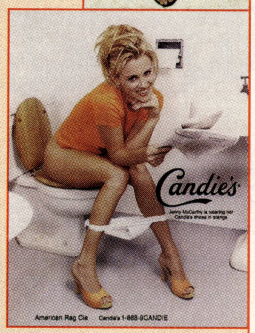
Babe of the Month

Jenny McCarthy



Before we go any further with this month's "Babe of the Month" I need to apologize to all of you. Since selecting and writing last month's B of M I saw a very recent movie staring Melissa Joan Hart. The photographers, makeup people, or Photoshop artists at Maxim must be magicians. Because I felt duped. Please accept my apologies for last month's selection.

You know Jenny, she worked her way from Playboy and MTV to get her own sitcom on a real television network. Aside from her annoying, goofball attitude, Jenny is a 10 (the attitude takes off two points).



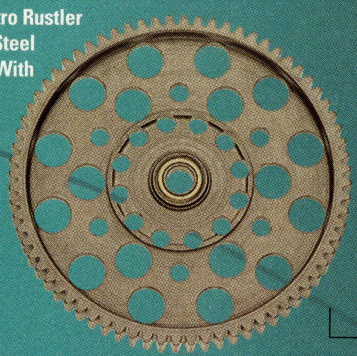
About Jenny: Jenny attended Catholic school growing up. In high school Jenny used to work a meat slicer in a Polish grocery store. That's a fantasy we could get into. Picture it, Jenny in her knee high socks and plaid skirt as she forcefully and rhythmically runs the ham and roast beef across the slicer as she's making your foot long sub. (Andy, our art director, fantasizes about seeing her cram meat into sausage casings.)

Our favorite picture of Jenny: Jenny posed on the can for a Candy's Shoe ad. It was the inspiration for Mike's picture in this month's Starting Box.

Her shocking fact: In college Jenny ran around her dorm naked on a dare. Could she be Scott Hughes' sole mate?

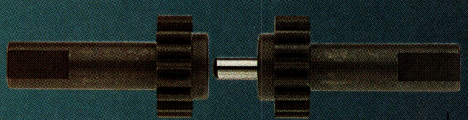
Superb Quality

T-Maxx/Nitro Rustler Hardened Steel Spur Gear With Bearing



Precision machined one-at-a-time from a single piece of steel and then hardened this 72T spur will last and last. A sealed Ball Bearing is included. RRP 8572

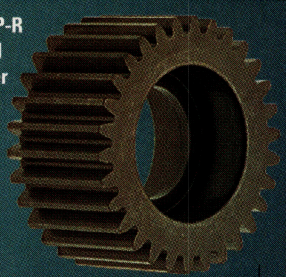
Rustler/Stampede/Bandit/Sport Nitro/Electric Sun Gears



CNC Machined from a from bar stock, these hardened, Sun Gears will last longer in your Traxxas machine. No serious racer should do without these gears. RRP 8500.

Intelligent Innovation

Ultima GP-R Hardened Steel Idler Gear



Cut from solid steel stock, this gear is lightened and then hardened for super quiet precision and extra long life. RRP 7505



1999 World Cup and National Champion

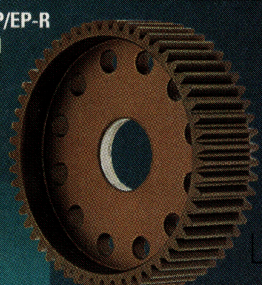
"I only care about performance, and that's why I run Robinson Racing gears and slipper clutches exclusively."

— Richard Saxton

ALL NEW ITEMS

Thoughtful Design

Ultima GP/EP-R Hardened Diff Gear



Hard anodized, precision machined aluminum diff gear. RRP 7500

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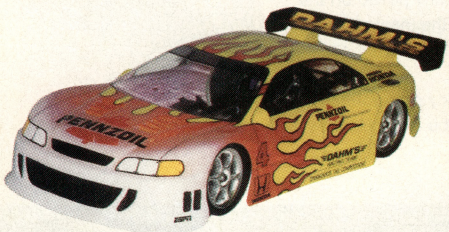
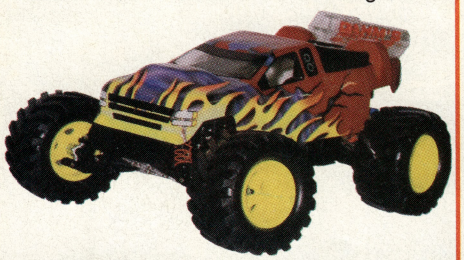
D236 -Light: **$19.98** - **D237**-Strong: **$21.98**



ACCORD HDF FITS NITRO RS4 & 4TEC!
200MM RACING SEDAN! D283 -Strong: **$21.98**



SLAMMER MGT™ RC10GT & MAX ST
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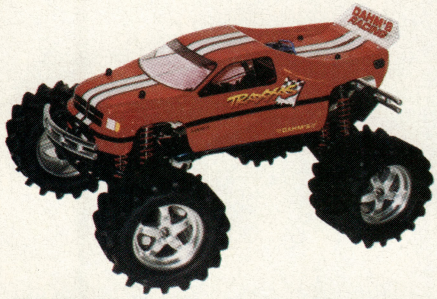

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Trinity's new Titanium Screws



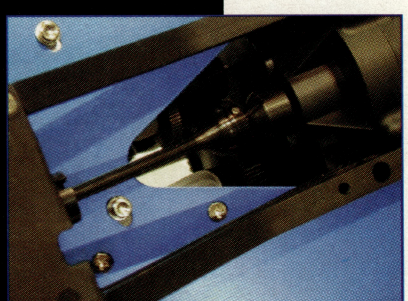
You've got titanium hinge pins, turnbuckles, ball studs, so how about screws? Get "Screwed By Trinity" all over again with their new line of titanium metric screws for Yokomo, Kyosho, HPI, and Tamiya sedans. The screws are available in a number of different sizes. The new screws offer the same strength as steel screws, yet weigh about the same as aluminum screws.

New Steel From RRP



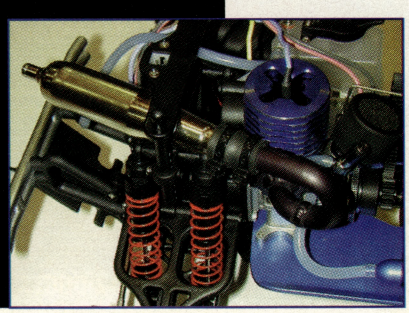
Robinson has just unleashed a load of new metal gear items designed to prolong life in durability in a number of cars. For the Traxxas T-Maxx and Nitro Rustler is a new large 72 tooth steel spur gear. The gear also acts as a flywheel to smooth out the .15's power band. Also for Traxxas is a new Sun gear for nitro and electric Rustlers, Stampedes and Bandits. The new sun gears are hardened compared to the stock setup. And for Kyosho's new GP and EP Ultimas is a hardened lightweight aluminum diff gear. Counter that in the GP with a hardened steel idler. Look for all of these new gears in stores by the time this goes to print.

MIP T-MAXX Stuff and a New Temp Gauge



At a recent retailer trade show in Las Vegas, MIP showed of their first batch of T-Maxx parts to be released later this summer. On the truck pictured are CVD replacements for the center shafts and for the dogbones, a new Stinger Pipe, and 4-in-1 Clutch Shoes. We'll give all of these new parts a try in next month's issue.

For the last couple of months it seems like every hobby shop we called was out of MIP's popular On-Board Temp-Gauge. Is some temperature baron trying to corner the market? Has he been buying up all the Temp-Gauges? Not that we know of, but MIP will soon be releasing a new, second generation Temp-Gauge. The new gauge will feature an on/off switch and will read in either Fahrenheit or in Celsius depending on what the user selects.





Flex those monster muscles in forward and reverse!

SNAKE BITE

with Nitro Power and Quick Reverse Clutch

Pack the triple-threat performance of nitro power, 4-wheel drive and the awesome Quick Reverse Clutch...into a body that's *dripping* with vehicular venom. The result? Kyosho's Snake Bite—a roaring 1:10 scale replica of the arena-rattling, full-size monster truck. You've never seen a model with such menacing detail, capable of such incredible moves!

No road block can stop the sneaky Snake Bite. Its secret is Kyosho's durable, preassembled QRC (Quick Reverse Clutch). Using your ordinary 2-channel radio, you can rip into reverse... and get right back on the tail of your astonished prey.

Snake Bite springs into action instantly, with just one or two pulls on the included GS-11X engine's heavy-duty recoil starter. A center shaft drive transmission with two gear diffs puts the power to all four wheels—where the independent suspension and oil shocks tame rough and twisty terrain.

To recreate the Snake Bite's "concept" look, Kyosho supplies grill fangs, red side-mounted eyes and a Lexan® tonneau cover with wrinkled canvas texture—all the details you need for a machine that shows no mercy. Sink your fangs into sizzling scale monster truck action with the Snake Bite. For the location of the Kyosho dealer nearest you, please call 1-800-682-8948 and mention code number 2330L.

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Chassis Specifications
Length: 15.7 in (398.8mm) • **Width:** 11.4 in (289.6mm) • **Wheelbase:** 10.4 in (264.2mm)
Weight: 4.0 lb (1814.4g) • **Engine:** Kyosho GS-11X w/recoil start (included)
Requires: 2-channel radio w/2 servos, glow fuel, glow starter

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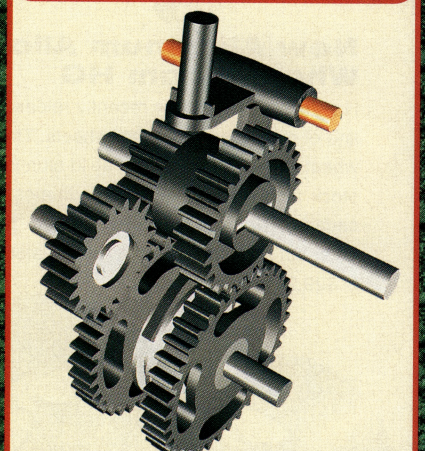

Kyosho's revolutionary Quick Reverse Clutch lets you slam into reverse using 2-channel control. Factory assembled and installed, the QRC can handle even brutal back-and-forth shifting.

HPI's new S-class body

Grab Barbie and some WWF The Rock or Vince McMahon action figures and you could shoot your own little "Smack Down" soap opera sequence. I can picture it now, you roll your sedan into the scene sporting HPI's new S Class body, cut to Vince and Barbie, then The Rock body slams Vince across the hood of his S-class. Okay, maybe we're getting a little carried away here, but take a look. Check out the killer detail in HPI's new 200mm S-class sedan. This thing is sweet looking. The new body is even detailed down to the swept-back headlights and low profile trunk deck. The S-class will fit most any 200mm nitro sedans and comes with decals.



The IRS is looking for you!

IRS Racing that is. At a recent retailer trade show in Las Vegas IRS showed of their new solid aluminum center drive shaft for the Associated TC3. The aluminum shaft is made to a super tight tolerance and is a direct replacement for the stock hollow fiber shaft. Also on display from IRS were lightened out-drives for the TC3 and other cars.

New Aluminum Alloy Wheels from HG

Hammad Ghuman has recently released a new line of machined aluminum wheels. The new wheels are machined from solid aluminum stock. The wheels are offset to fit most touring sedans. Two different styles are currently available, but more are planned. Suggested Retail is $29.95 a pair.



Sedan Titanium
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Bring your sedan up to speed with the awesome PUNISHER line of titanium turnbuckles and precision pin kits.

#4071 STREET WEAPON Turnbuckle & Pin Kit $43.25
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#4272 YR4M2 Turnbuckle & Pin Kit $41.50
#4371 SST2000 Turnbuckle & Pin Kit $47.00
(A trick billeted aluminum wrench is included in every combo kit)

HEY! Your brother plays with your car and accidentally gets it demolished by a passing street sweeper truck. Oh, what to do? Locate your injured Punisher turnbuckles, if any, and return them for guaranteed replacement.

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1/10 scale Piggyback Reservoir Kits are available to upgrade Progressive Suspension EDC shocks and stock Associated™ Shocks.

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PBR-1001 ..... Set of 2 ..... SRP $32.50
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1/8 scale Piggyback Reservoir Kits are available to upgrade stock shocks for the following vehicles:
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*1/8 scale kits are available in Blue or Black. 1/10 scale kits are available in blue, black, gold, purple, silver, and red. Please note color when ordering.

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Agitator



chrome

#2651C fits Stampede & Rustler Electric Front
#2652C fits Stampede & Rustler Electric Rear
#2653C fits Nitro Stampede & Nitro Rustler Front
#2654C fits Nitro Stampede & Nitro Rustler Rear



white

#2651W fits Stampede & Rustler Electric Front
#2652W fits Stampede & Rustler Electric Rear
#2653W fits Nitro Stampede & Nitro Rustler Front
#2654W fits Nitro Stampede & Nitro Rustler Rear

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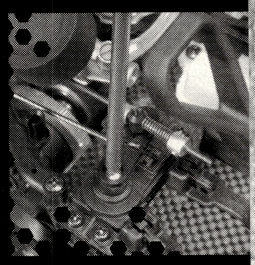
quick TIPS

Not Too Tight

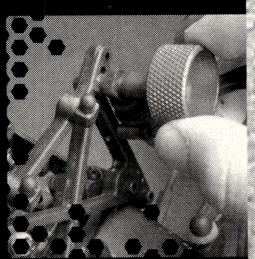
When building a kit many of us have a tendency to think that tighter is better. This isn't always true. Sure you don't want anything to fall off when your car hits the ground, but over-tightening can do plenty of damage and hinder performance. Here are some key areas you want to make sure you don't over tighten:



Servo Horns - not only can you damage the servo by stripping the output shaft, you can also put unwanted strain on your servo that might not allow the servo to easily or quickly comeback to center. If your servo hums after you tighten the servo horn chances are things are too tight. Tighten the servo horn so that there is no space left between the head of the screw and the horn that's being held in place.



Wheels - over tightening wheels will slow your car down and possibly damage bearings. Tighten wheels down until side-to-side slop is minimized. When you get close to the point of minimum slop, spin the wheels to make sure the bearings are still free spinning. If you're checking rear wheels or a 4WD, remove the engine or pinion gear to check for free spin.



Shock Mounts - Don't over tighten either the upper or lower shock mounts. All four shocks should be floating in their mounts so that the shock can pivot on the mounts at any angle. Tighten the shock nuts until the shock cannot move up and down on the shock screw, but can pivot from side to side without any binding.

Don't Freak Out



This might seem like something simple, but it often goes overlooked. If you're experiencing any radio problems one of the first things you should inspect is where your receiver is located. Make sure that your car's receiver is located as far away from the motor or high-power wires coming from the speed controller. High power wires and the motor expend a small amount of radio-frequency (RF) noise that might interfere with receiver reception. Also, another quick thing to try is mounting the receiver on its side rather than its bottom. Some components inside the receiver may pick up RF only when at a certain angle compared to the component in the car that's generating the unwanted RF.

Quick Tips for Fuel

• **Always** shake your fuel container vigorously for a few seconds before putting fuel into your fuel bottle or fuel tank. Some lubricants in the fuel have a tendency to settle and separate over time.

• **Store** your fuel in a cool dry place. Keep your fuel somewhere where it won't be subjected to great changes in temperature or humidity.

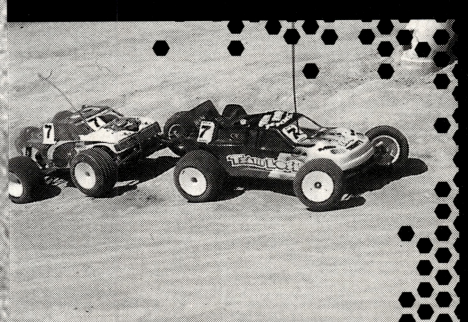
• **Once** you find a brand of fuel that you like and suits your needs, stick with it. But, should you decide to change brands always richen the high-speed needle a bit before using the new fuel just incase the new brand has less lubricant than your old brand. Once your engine is warm with the new fuel you can re-tune the engine.

• **Keep** your investment safe. Place a few drops of after-run oil into your engine's carb and turn the engine's flywheel a couple of times to work the lubricant through the engine. You can use after-run oil designed for this purpose, Marvel Mystery Oil, or automatic transmission fluid. Do not use Silicone-based oil as it will wear your engine out after a short time.



Watch The Fast Guys

Want to learn how to dunk a basketball, watch Michael Jordan; want to learn how to hit a golf ball, watch Tiger Woods; want to find the fastest way around a track, watch the fastest guys. Often times at a big race you'll see the top drivers watch each other drive the track. The drivers watching are looking to see if there are any areas on the track that they can improve on. The next time you go to your local track or any track for that matter, watch the fastest guys drive the track. Take note where they slow down and enter turns. Pay attention to where they accelerate coming out of turns. If it's an off-road track, watch where they hit jumps and where they land. By watching the fastest guy at the track drive, you'll save yourself plenty of time. You'll have a head start since you know where the fastest racing lines on the track are.



When watching the fast guys, be sure that you're not watching the fast novice guys.

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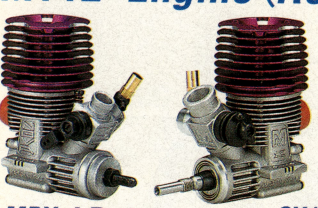
- Adjustable Camber/Toe/Caster angle (only Front)
- Full-Bearing



■Technical Date■

• Length	380mm	• F.caster Angle	6.2°~14°
• Width	198mm	• Gear Ratio	1st 7.421:1/2nd5.717:1
• Wheel Base	260mm	• Weight	1,640g
• Tread (F/R)	172mm/172mm		

MT12 Engine (Rear Exhaust)



MT12S1 SG-Shaft, Slide Carb.
MT12R2 STD-Shaft, Rotary Carb.
MT12S2 STD-Shaft, Slide Carb.

Cubic Capacity : 2.1c.c. Bore : 13.80m/m
Power : 1.15HP Weight : 215g
Rpm : 36.500rpm Shaft : φ11m/m
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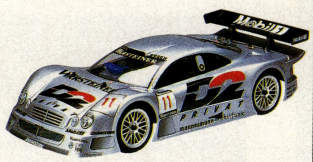
PRIME12/MTX-2 BODY 200mm



K1001 CASTROL TOYOTA TOM'S SUPRA GT BODY



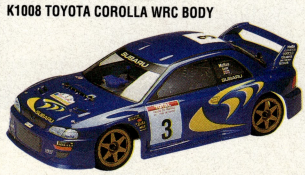
K1005 MERCEDES BENZ CLK-GTR BODY



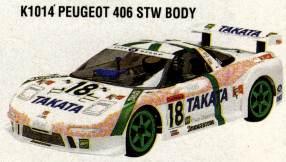
K1008 TOYOTA COROLLA WRC BODY



K1014 PEUGEOT 406 STW BODY



K1010 SUBARU IMPREZA WRC BODY



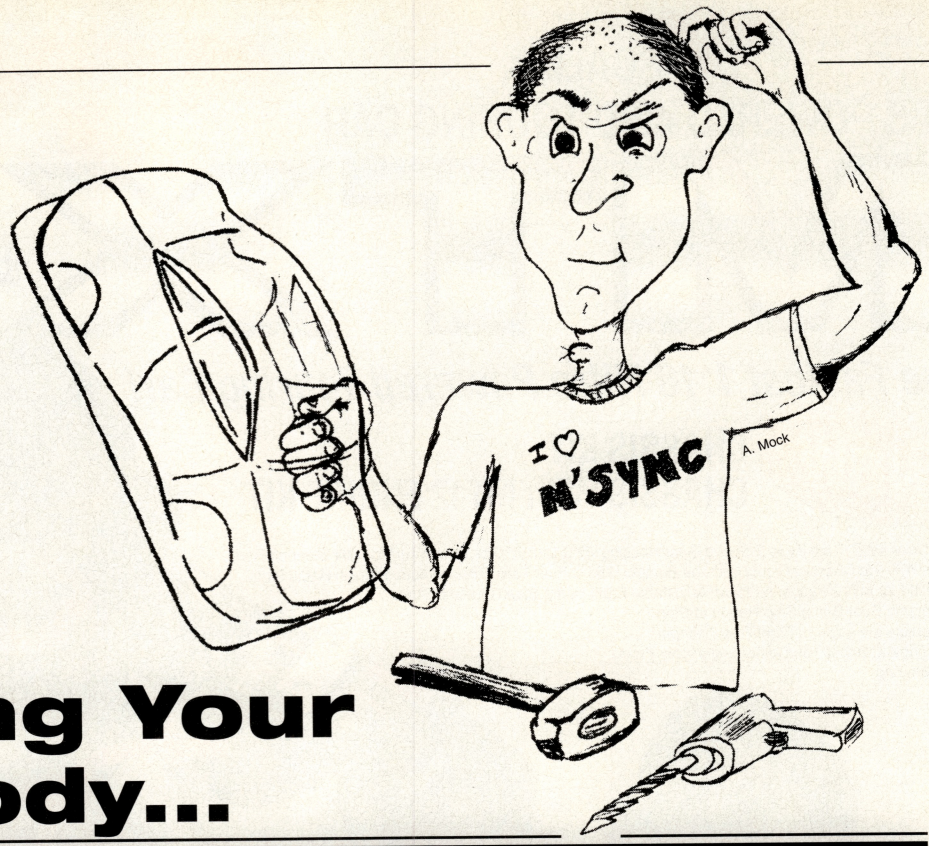
K1016 TAKATA DOME MUGEN NSX BODY



K1012 MITSUBISHI LANCER EVOLUTION V WRC BODY



K1018 DODGE RAM TRUCK BODY



Mounting Your First Body...

Just dim the lights, put on some romantic "boy band" and you're ready to go. Oh wait!

by Nathan C. Miller

Mounting your first body can be traumatic; I mean, there you are with a clear plastic shell that only vaguely resembles a car or truck. I know I wasn't the only newcomer who looked at that vacuum formed hunk o' plastic and wondered, "This goes on that HOW?" Hey, it can seem scary at first, but hopefully this month's Starting Box will help ease your fears.

Off-road trucks and buggies

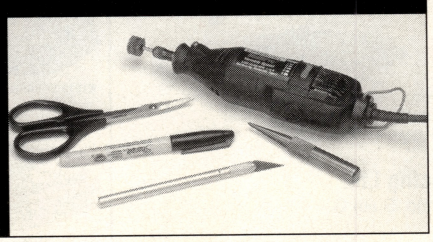
If you started out with one of these, consider yourself lucky. Most of the time, trucks and buggies come with trim lines and body post holes marked for you. Start out by trimming the body along these lines, and drilling the holes for the post out as large as marked. Now, test fit the body on the chassis. It should just plop down nice and straight. If the body-mounting holes are too small, enlarge them slightly until the body rests on the chassis without being forced. Be careful not to make the hole too large, or the body will rattle around. This is bad for two reasons. First, your car will sound like a rattletrap. Second, all that movin' and shakin' will lead to premature wear and cracking. Not a good thing!

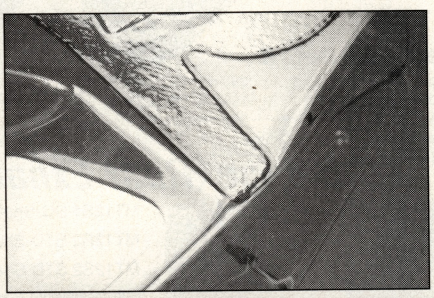
After the body is in place, make sure that it doesn't rub the tires, impede the suspension action in any way, or interfere with any other moving parts, like steering tie rods. Also, if you have a buggy, test to make sure that the

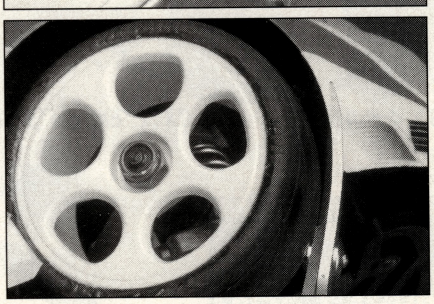
Tools You'll Need

Any job is easier if you have the right tools. Here's a brief list of the stuff that makes mounting bodies less painful.

- **Curved Lexan scissors:** Specially made to cut bodies, these are a must have. These are also great for making wheel well openings nicely rounded.
- **Tapered reamer:** This tool makes nice, neat holes, and it can be used to slowly enlarge them until they are as big as needed.
- **Sandpaper:** Use it to get rid of sharp edges or any burrs.
- **Moto-tool:** These usually come with a wide variety of different sanding drums and disks to make things nice and smooth. A moto-tool is also good for drilling holes, and with the right bit, can be used like a tapered ream. If you don't have one of these tools, I recommend you get one. You'll wonder how you ever lived without it. Dremel, Black and Decker, and Craftsman all make a wide variety of these tools to fit just about any budget.
- **A good, sharp hobby knife:** To start holes for the other tools, and remove the "flashing-like" edges that remain when you sand the edges of the body using a moto-tool.
- **A Sharpie marker:** Essential for marking body post holes and wheel wells.





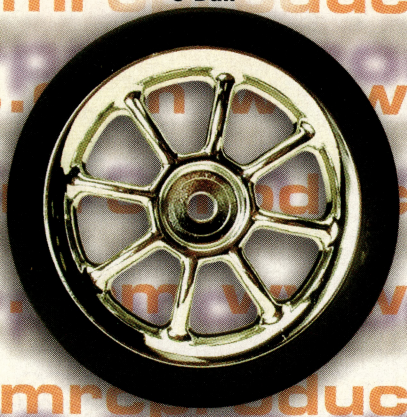


Top: Be sure to properly identify the cut lines before you begin cutting.
Above: You may have to cut around the edges to make sure everything fits okay.

We really don't condone the use of "Boy Bands" to seduce anyone...

Got Wheels?

8 Ball



Striker



Psyclone



Vortex



Chicane



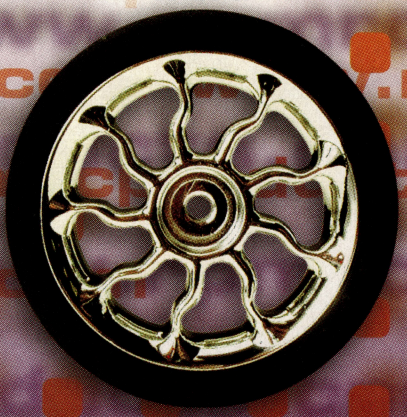
Spartan



Illusion



Sunburst



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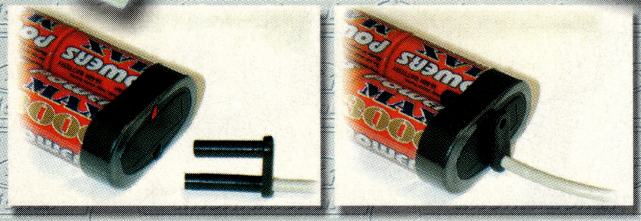

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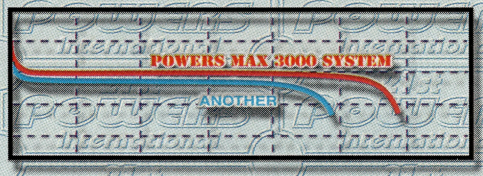

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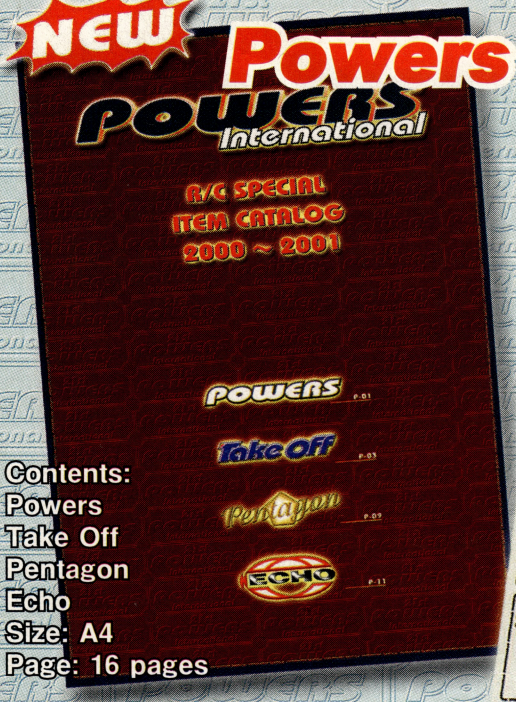

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Body Mounting on Film

Just a few of our favorite movies dealing with the same subject as this month's Starting Box.

American Pie 1999

A modern day John Hughes film, but with lots of sex. Those crazy kids. This movie will have a lasting impact on pop culture, or at least us. Our favorite part of the movie had to be the bed-cam setup. In fact, that scene gave us an idea. Now online it's the *Xtreme* Bathroom Cam. Now anytime of the day you can see *Xtreme* editors and staff consulting reference materials for inspiration.



Risky Business 1983

This movie has it all: Guido the killer pimp, an often naked Rebecca deMornay portraying a high dollar prostitute, a very fast Porsche, a Do-it-yourself brothel, and a young Tom Cruise who cheats and ends up paying for his first, uh, body mounting session.

The Last American Virgin 1982

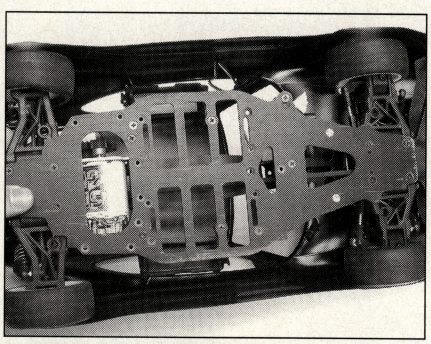
If you missed this movie, consider yourself lucky. It's not that this movie was that bad. But, maybe we're just strange. We don't think that the lead female love interest should be sporting more facial hair than Fidel Castro.

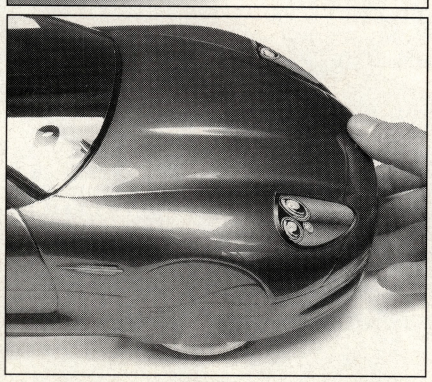


wing mounting wire holes are in line with the wing tubes on the chassis.

If everything looks good here, you're ready to give the body its final sanding. Try and make the bottom edge as level as possible, and make sure there are no burrs or sharp points anywhere. Not only will the body be less likely to snag, but the turn marshal with thank you for being kind to his fingers. After you've done this, you're either ready to paint the body, or if you painted first, you're ready to drive!

Below: Lining things up properly is very important before you get the scissors. Bottom: Keep the body level when you decide where to cut the body mounting holes.





Sedans and Other On-road Cars

Depending on what kit you have, you may be fortunate enough to have all your mounting holes and wheel wells marked. However, this is pretty rare, as the bodies most manufacturers include with kits are made as stand alone items that can be sold separately. (This is especially true of pan car oval bodies.) This means you have to be patient, and mark these things out yourself. It's not really that hard.

Start by turning the body upside down onto its roof; make sure the bottom edge is trimmed and sanded first. Next, place your car inside the shell. Maneuver the car around until it is centered from side to side, and the front wheels are where you want them. Using a marker, put two dots on the body to show where the front body mounts should be. Now, repeat for the rear of the body. Make certain your marks are where you want them, and that the body is straight. When you are ABSOLUTELY SURE the body is where you want it, carefully make the holes for the body mounts. After this, set the body's height to where you want it; make sure to leave enough ground clearance the it will not drag on the ground during hard cornering. Also, like with the off-road cars, make sure the body goes onto the mounts easily without stretching or bending the mounts. This flexing will hurt the body and can actually tweak the chassis!

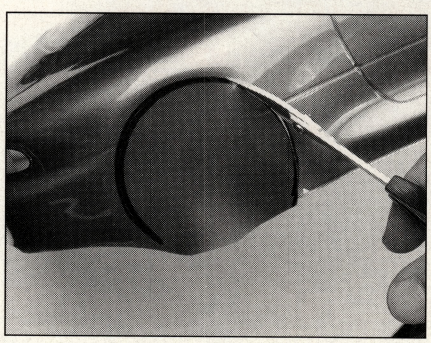
Now comes time to make your wheel-wells. This is relatively easy. The technique I've always used is to first mount a fresh set of tires on the car and then either trace around the outside edge of the tire, or place a drafting compass at the center of the axle, and trace around the outside of the tire's edge. Now, using those curved scissors, cut the wheel-well along the marks you made. Sand the wheel-wells smooth, keeping them nice and round. Nothing kills a fresh foam tire faster than a sharp edge along a wheel-well that can rub the tire. At this point, test to see if the body interferes with the suspension action or steering. If anything rubs, slowly open up the wheel-wells until nothing hits. The best way to test this is to put this car on the track and test – at low speeds! Listening is the best way to tell if something is making contact. Viola! Done!

Now why did I tell you to make the body mount holes first? Mainly, because with this method, there is less of a chance of the rear wheel-wells being misaligned if you would make just the holes for the front of the body and wheel-wells first.

Just A Few More Things...

Don't forget that you may have to make some extra holes in that body. Antennas need a hole to pass through, and if you have a nitro car, don't forget hole for the exhaust stinger, a hole for cooling air to get to the engine, and if they can be made without weakening or adversely affecting the car's handling, a hole for a glow igniter and pull-start cord. Don't go overboard; all those holes can make a body fragile, or make it flex at speed, which will give you handling problems that will leave you scratching your head. And remember, always take your time when mounting a body. After you've done it a few times, it will be like second nature. Improperly mounting a body can be a painful experience – avoid it at all costs.

After marking the wheel well with your compass cut the well out with lexan scissors.



We thought about putting an Elian Gonzalez reference here, but decided not to.

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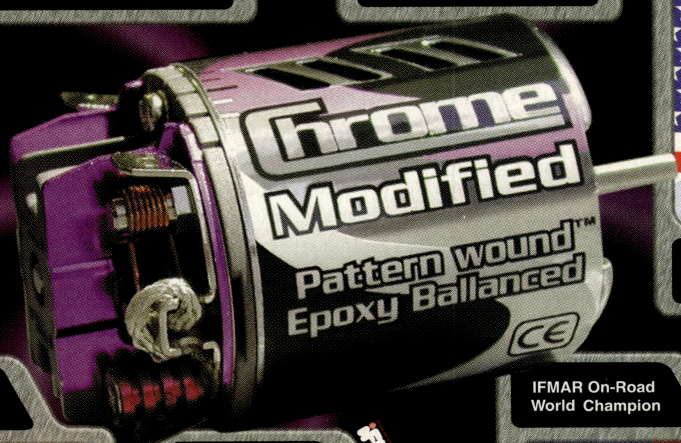

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Associated FACTORY TEAM GT

by Mike Henry



It's no secret that nitro-powered vehicles are the true crowd pleasers of the R/C world. The sound of their 2-stroke powerplants always grabs the attention of the spectators. After watching a round or two of nitro racing, newcomers to R/C usually point to the gas-burners and say (to borrow from a current ad campaign), "That's the one I want."

The Team Associated RC10GT (gas truck) was the vehicle that broke the mold when it was introduced in 1993. It was designed to win races, and it has done just that, having three NORRCA World Cups to its credit. The truck was engineered so well that with very few changes since its introduction it remains competitive to this day.

Associated has once again pulled out all of the stops with the debut of the Factory Team GT. A quick glance reveals a lengthy list of hop-ups that are standard equipment on the truck: A blue anodized chassis, factory blue manifold and tuned pipe, graphite shock towers, and Unobtanium shock shafts, just to name a few. The A-Team is hoping nitro racers will point to the Factory Team GT and say, "That's the one I want." It sure looks good on paper and on the work bench. But, is it truly worthy of the Factory Team designation?

Hits:
- Can you say hop-ups?
- Rock-solid everywhere on the track
- Simple design is easy to maintain and work on.
- Great value considering all you get.

Misses:
- Kit clutch sucks
- No window masks included with the body.

Instructions	4
Parts Quality/Fit	4
Durability	4
Tunability	4
Overall Performance	5
Value	4

Thanks to Thunder and his cool decals, this paint job took less than an hour.



Steering

The Factory Team GT uses the same proven bellcrank and draglink setup to turn the front wheels. The servo saver tube and adjustment nut are anodized aluminum. A small titanium turnbuckle links the steering servo to the servo saver. (Nice touch!) The kit includes 30-degree caster blocks and 30-degrees of kick-up.

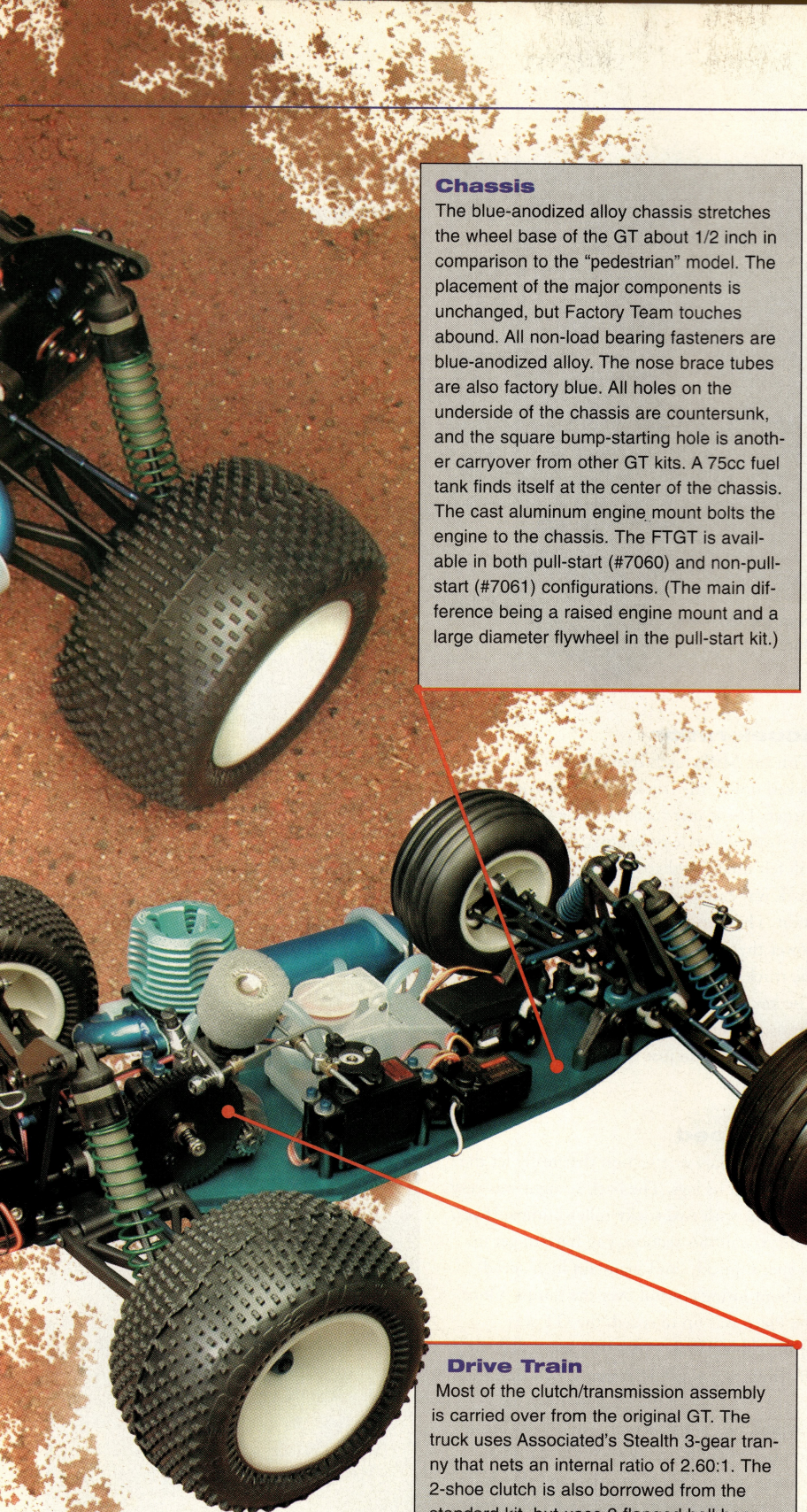
Suspension

The "FTGT" uses the same hard anodized Teflon-coated shocks as the Team Kit. However, the standard shock shafts are tossed in favor of Associated's Unobtanium units. They are not only smoother, but they will last longer, allowing longer intervals between servicing. Both front and rear shock towers are made of woven graphite for added rigidity. The geometry is unchanged, as is the"standard setup." The kit also comes with blue-anodized titanium turnbuckles.

Wheels, Tires, and Body

As with previous GT kits, the FT version comes with Pro-Line tires. The truck uses "The Edge" up front and Bowties in the rear, both in M2 compound. The rolling stock mounts to AE's lightweight plastic concave-style wheels. The kit also includes a Pro-Line F-150 truck body.

Racers who don't particularly like Associated cars have been heard to yell "FTGT!"



Chassis

The blue-anodized alloy chassis stretches the wheel base of the GT about 1/2 inch in comparison to the "pedestrian" model. The placement of the major components is unchanged, but Factory Team touches abound. All non-load bearing fasteners are blue-anodized alloy. The nose brace tubes are also factory blue. All holes on the underside of the chassis are countersunk, and the square bump-starting hole is another carryover from other GT kits. A 75cc fuel tank finds itself at the center of the chassis. The cast aluminum engine mount bolts the engine to the chassis. The FTGT is available in both pull-start (#7060) and non-pull-start (#7061) configurations. (The main difference being a raised engine mount and a large diameter flywheel in the pull-start kit.)

Drive Train

Most of the clutch/transmission assembly is carried over from the original GT. The truck uses Associated's Stealth 3-gear tranny that nets an internal ratio of 2.60:1. The 2-shoe clutch is also borrowed from the standard kit, but uses 2 flanged ball bearings instead of bushings. Steel MIP CVDs transfer power to the rear wheels. A 32-pitch, 66-tooth spur gear mates to the single disk slipper unit. Using the provided 15-tooth clutch bell gives the truck a final drive ratio of 11.44:1. A floating fiber disc brake brings the GT to a halt. The kit is designed with the racer in mind, so no engine is included. However, the FTGT kit does sport a blue manifold and tuned pipe.

Assembly Tips

Team Associated's instructions are always among the best in the industry, and the Factory Team GT manual is no exception. Most of the illustrations are CAD drawn, but actual photos are used throughout. Use common sense and work at your own pace. The same instructions are used for both the RTR and Team/Factory Team kits, but any differences between the two are well-explained. The kit also includes a useful "How to tune your GT" video – a nice touch for first-timers and novices. Here are some other tips that may speed assembly:

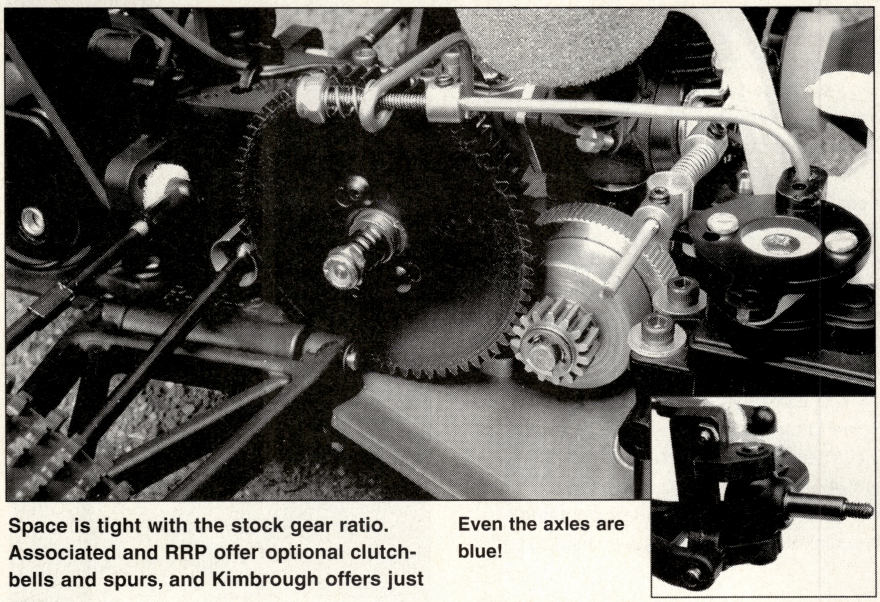
Bag B, Step 6
Attach the nose brace tubes before you bolt the nose tube mounts to the chassis. The braces will not slide through the front shock tower once the mounts are in place.

Bag E, Step 4
When building the differential, assemble it so the diff ring's sharp edges are facing each other. Close examination will show that each ring has a smooth edge and a sharp edge.

Bag L, Step 4
Smear some Factory Team Green Slime (#1105) at the end of each shock shaft before assembling the shocks. This will protect the O-rings from the sharp edges on the ends of the shock shafts.

Engine Installation, Step 8
Make sure your throttle linkage is operating properly before you fire the engine for the first time. The instructions do a fine job of illustrating how to setup your linkage, but for a thorough explanation refer to Issue 5.7's "Set Up Your Throttle Linkage."

Mike Velez read of couple of Regan's articles; now Mike thinks he's a nitro expert.



Space is tight with the stock gear ratio. Associated and RRP offer optional clutch-bells and spurs, and Kimbrough offers just spurs.

Even the axles are blue!

Testing

For testing we took the GT to K&M Raceway in Grand Terrace, CA. The track featured a little bit of everything and ended up a perfect proving ground for the truck. A quick tour of the pits convinced us to pick up a set of Losi Step Pins, in silver compound, but our initial run was with the kit tires. We arrived with little time to spare, so we signed up and started tuning the engine. We did have a chance to break in the Trinity-Picco .12 back at *Xtreme* HQ, but getting a useable idle setting proved difficult with the kit's 2-shoe clutch. *Xtreme* bigwig Mike Velez, suggested installing an MIP 4-N-1 clutch. (MIP #3012) The MIP unit is spring-loaded, and that helps the clutch disengage quickly when the engine is off throttle.

The first two heats were frustrating as we were leaning out the engine for race conditions during the heats. By the end of the second qualifier, the Picco was running strong, but I was stuck near the back of the B Main. The GT was so much faster than in the previous heat races that I had to re-learn my way around the track. I made my way to the front of the pack, and ended up winning the B Main by more than half a lap! I brought the truck in for fuel, and a quick temperature reading since we got bumped into the A Main.

The horn sounded and I was off again. I began driving with more confidence, making my way to 4th position from dead last. A few mental errors prevented me from challenging for the lead, but the truck was rock-solid everywhere. I feel confident that with a few more heats the GT could have been running up front. Needless to say, Mike and I were elated with the truck's performance.

Acceleration

With the MIP clutch installed and the slipper locked down, the truck leapt from corner to corner. The loamy track conditions prevented any Top Fuel-style holeshots, but the FTGT still felt quick. Perhaps most important, the truck was extremely stable under hard acceleration. The Trinity-Picco mill made way more power than was needed for the tight track, but the truck made use of every bit of throttle. The key to fast lap times at K&M is driving a consistent line from turn to turn. The GT allowed me to do just that when I had to grab the throttle.

Top Speed

There was only one section that really let the GT stretch its legs. The back straight was very long, but with two tricky roller-bumps. If you want to nail this section, you have to get up to speed quickly, and maintain high speed without losing control over the jumps. Once the Picco was up to speed, the GT was unflappable. While not a true top-speed run, the truck was running at about two-thirds of its potential. Since the Factory Team kit includes ball bearings everywhere possible, it's no puzzle why it was so fast. The 11.44:1 gearing covers a lot of ground, and should be perfect for almost any track. Did I mention the truck was fast?

Jumping

The track at K&M was truly jump-laden. Simply put, the FTGT took to the air smoothly and predictably. Not once did it get crossed-up while airborne, even when the jump was taken with less-than-ideal skill. A few times the truck did want to "nose up" after launching over the steep table-tops, but that's more a driving adjustment than a legitimate gripe. (Do you see a pattern developing?) Nine out of 10 times the GT just hit the face of the jump, cleared the top, and touched down with no drama. The kit's sus-

Article continued on page 87.

The Specifics

Item Info
Part #: 7060
MSRP: $482.95
Estimated Street Price: $300

Vehicle Type
Nitro .12-size engine powered, 2WD, off-road competition race truck.

Chassis Type
Type: Flat Pan
Material: 2.5mm anodized aluminum chassis with countersunk holes

Wheels and Tires
Associated white dish wheels with Pro-Line M2 Rear Bow Ties, Pro-Line M2 Front Edge tires.

Transmission
Type: Three-gear
Diff: Adjustable ball
Drive Shafts: MIP CVDs
Slipper: Adjustable friction
Internal Ratio: 2.60:1
Bearings: Yes

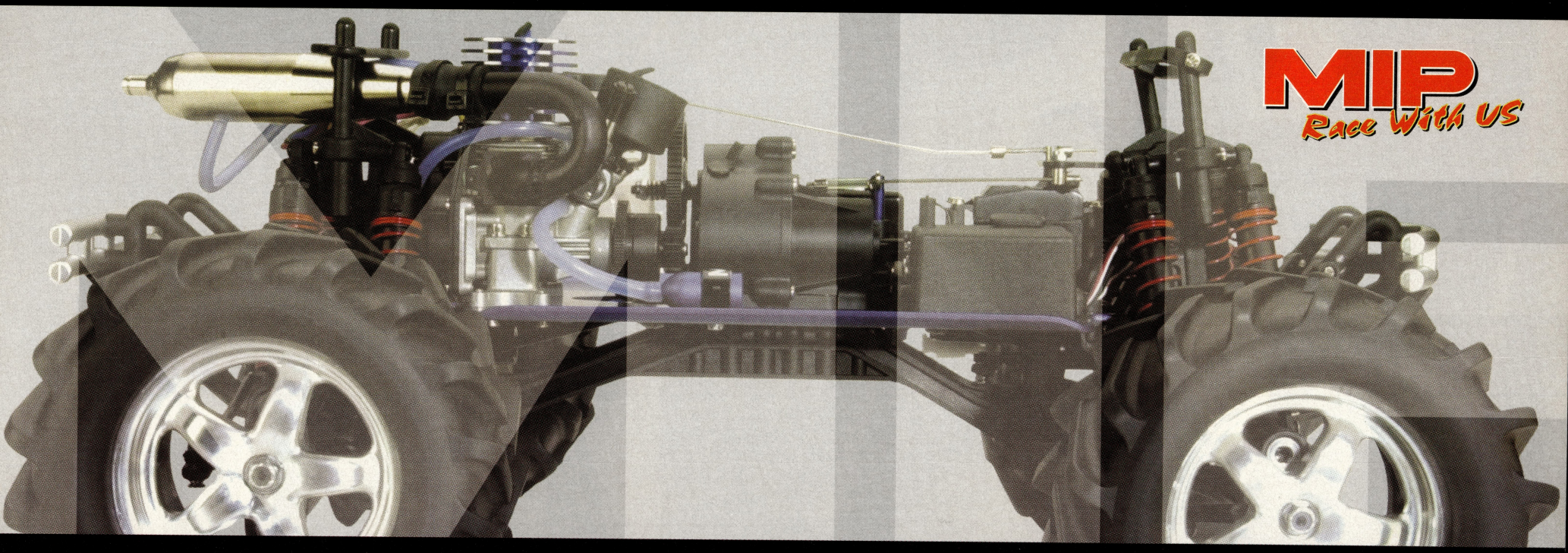
Suspension Design
Type: Independent, molded composite lower arms and adjustable upper control links with steel turnbuckles.
Damping: Coil-over, oil-filled shocks, aluminum anodized, coated shock bodies, molded shock caps and pistons, unobtanium shafts, and O-ring seals.

Other Items You'll Need
2-channel radio with 2 servos, receiver battery pack, fuel, fuel bottle, .12 or .15 size engine, glow-plug ignitor, starting box, paint, CA glue.

Our Test Gear
Futaba 3PJS FM radio with Hitec DCX Receiver, one Hitec #945MG servo, one JR Racing #Z4758 servo, Trinity Picco .12 non-pull start engine, O'Donnell 20% fuel, Duratrax Fuel bottle, Thunder Tiger glow ignitor, Mugen Seiki starter box, Parma Fastcolor paint, Thunder Designs mask, and Losi Tread Lock glue.

Main Competition
Team Losi NXT, HPI Nitro Rush, Kyosho GP Ultima ST Type-R, Team Losi XXX-GT (yet to be released).

Sinus problem? Try a big whiff of burnt nitro. That will clear out your head.



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BOOST BOTTLE KIT

Increase your engine's bottom end acceleration with a more consistant power band.

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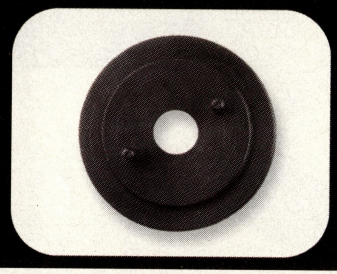

HEAVYWEIGHT FLYWHEEL

Manufactured of steel to increase traction and help the engine idle much more consistantly.

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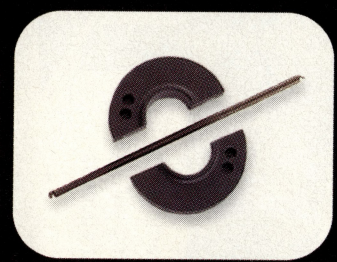

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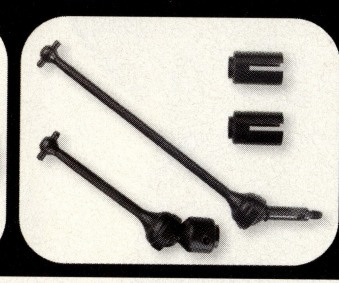

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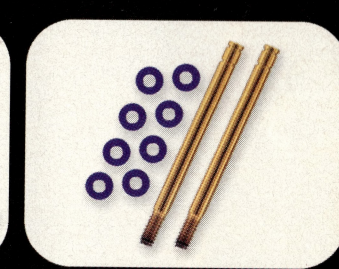
#1486 *(center)*



GOLDEN SHOCK SHAFTS

Titanium nitride coated for smoothness and durability. MIP Blue Shock Seals are simply the best.

#1494 *(Shock Shafts)*

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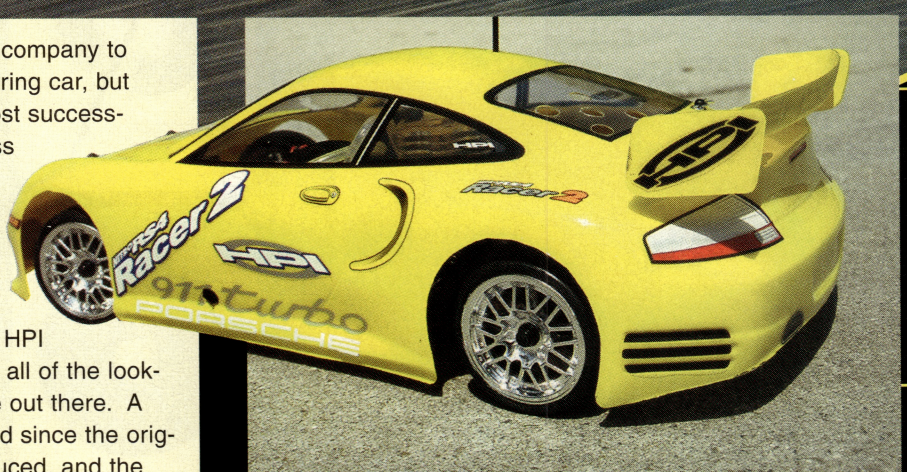
NEW MIP UPGRADES FOR THE TRAXXAS T-MAXX

HPI NITRO RS4 RACER 2

by Mike Velez

RPM's chrome wheels complement the HPI 911 Turbo body perfectly.

HPI wasn't the first company to introduce the nitro touring car, but they are by far the most successful. I'd venture to guess that there are more Nitro RS4 cars in the marketplace than all of its competitiors combined. If imitation is a compliment, than HPI should be flattered by all of the look-a-like chassis that are out there. A few years have passed since the original Racer was introduced, and the competition nitro sedan market is more crowded than ever. To maintain their dominance, HPI has decided to present the market with the second generation Nitro RS4 Racer. Let's take a good look at all of the Racer 2's new features and see if it's got what it takes to stay ahead of the competition.



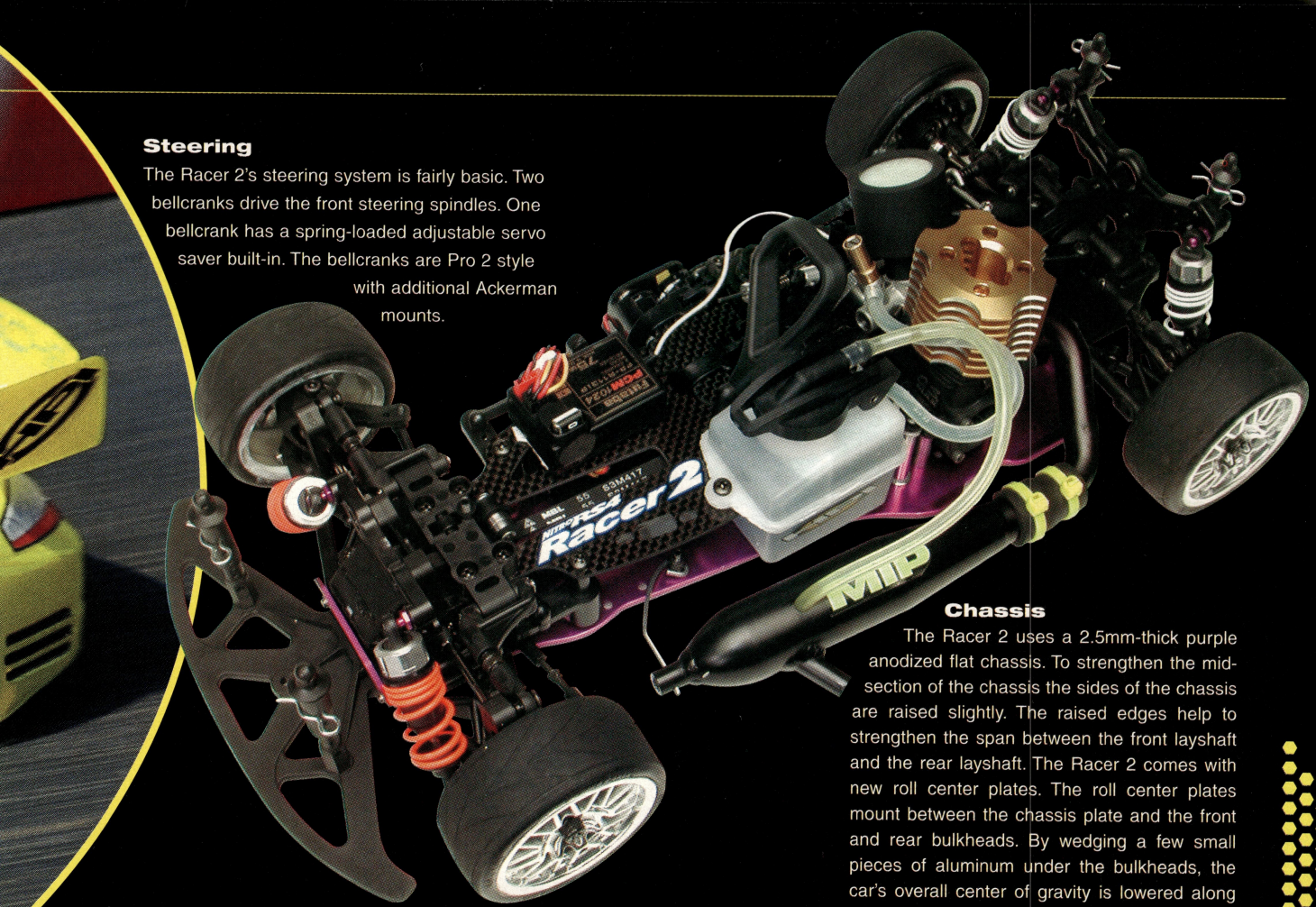
Hits:
- Solid performance overall.
- Outstanding parts support.
- Great value.
- Choice of tires and body.
- Easy to work on.

Misses:
- No tuning advice.
- Pull-start engine mounts & flywheel on a racer kit.

Instructions	3
Parts Quality/Fit	4
Durability	4
Tunability	3
Overall Performance	4
Value	4

Steering

The Racer 2's steering system is fairly basic. Two bellcranks drive the front steering spindles. One bellcrank has a spring-loaded adjustable servo saver built-in. The bellcranks are Pro 2 style with additional Ackerman mounts.



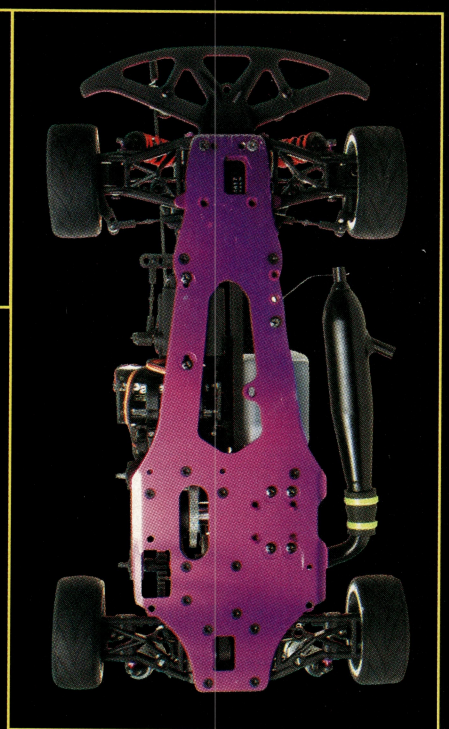
Chassis

The Racer 2 uses a 2.5mm-thick purple anodized flat chassis. To strengthen the mid-section of the chassis the sides of the chassis are raised slightly. The raised edges help to strengthen the span between the front layshaft and the rear layshaft. The Racer 2 comes with new roll center plates. The roll center plates mount between the chassis plate and the front and rear bulkheads. By wedging a few small pieces of aluminum under the bulkheads, the car's overall center of gravity is lowered along with the front and rear roll centers. The end result should be a car that handles better than without the plates. In order to keep the drive train geometry the same as originally designed, a roll center plate is also placed underneath the front layshaft support. An intregal part of the Racer 2 chassis is a woven graphite top deck that fastens the front bulkhead to the center layshaft supports.



Drive Train

As you can see the Racer 2 is a 4-wheel drive touring car. A .12 or .15-size engine mounts to the chassis just behind the middle of the chassis. The kit comes with a large diameter flywheel and a spring-retained two-shoe clutch. The MIP-style clutch can be mounted in one of three different hole combinations depending on the responsiveness you're looking for. The clutch is covered by a 15-tooth clutchbell. The clutch bell is supported by a one-piece needle bearing. If previous experience holds true, this needle bearing will need to be replaced before I finish my first gallon of fuel. The engine clutchbell drives a metric pitch spur gear that uses a three-belt system to move power to the front and rear differentials. Belt tension in the front is adjusted by a bearing-supported belt tensioner attached to the front bulkhead. The front and rear differentials are beveled gear diffs. I was disappointed when I found this out. Gear diffs perform well but don't offer the easy adjustability that ball differentials offer. Once you get past the diffs, race worthiness is back in full effect thanks to original MIP Shiny CVDs. In the front and rear, CVDs move power from the diffs to the wheels. To bring the kit to a stop, HPI includes a large fiber brake disk.



The original Nitro RS4 has been copied by a number of different companies.

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Hard Drive

Race Secret

COOL RACER, FRIDAY, GOT SPEED?

GOT SPEED?

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

YO JOEY,

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

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

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

Later,
Cool Racer



Trash

deans

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www.wsdeans.com • deansco@earthlink.net

Other Features

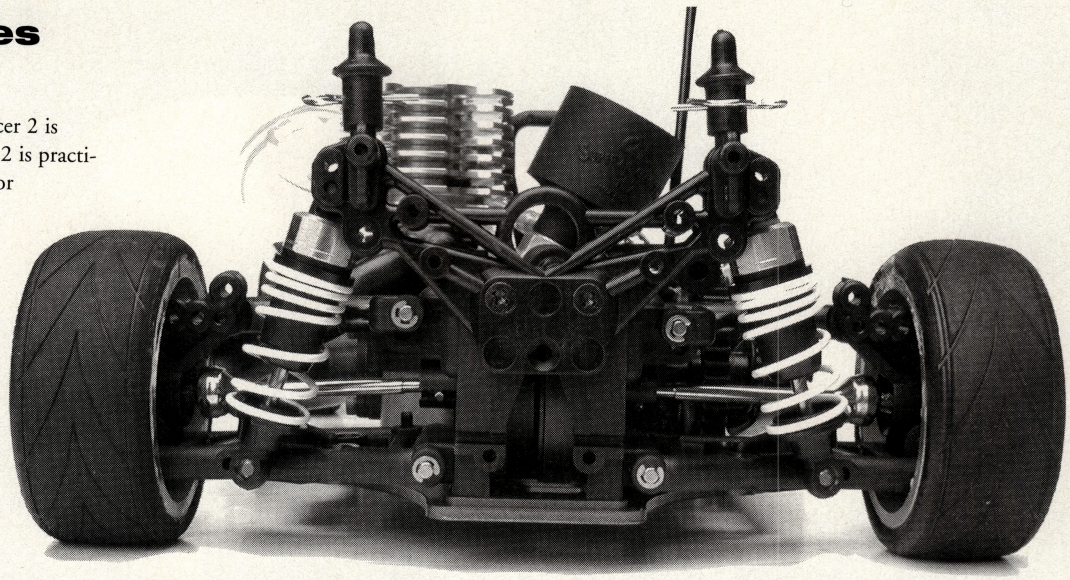
Suspension

The suspension system on the Racer 2 is very solid. The front of the Racer 2 is practically all from the electric Pro 2. For balanced performance characteristics, the Racer 2 uses front and rear arms that have mounting points that are equal distance from each other. In theory, this design should give the front and rear of the car a balanced feel. Both the front and rear arms leave open the option for a sway bar. A far as adjustability goes, the Racer 2 gives you just enough different adjustments to adapt the car to just about any race condition. There are a number of shock mounting locations as well as camber mounting locations. Front and rear camber is easily adjustable thanks to some very thick steel turnbuckles. The kit comes with 8- and 10-degree caster mounts to change how the car reacts when entering turns. Four oil-filled, coil-over shocks flank the suspension arms. The suspension arms and most of the suspension are molded from a material that isn't the stiffest stuff around, but isn't brittle either.

The Racer 2 comes with full ball bearings, stainless steel hingepins, purple anodized aluminum shock ball ends, a removable graphite battery mounting plate, a large front bumper, finished looking body mount caps and a 75cc fuel tank.

Tires, Wheels, and Body

Okay, this headline's a little misleading. That's because the Racer 2 doesn't come with a body or tires, only wheels. The idea is to let the consumer decide on which tires and body to use based on their own preferences or track requirements. Racers should appreciate this feature since the cost of tires and a body aren't factored into the cost of the kit. By the way, the wheels that come with the Racer 2 are standard 1mm-offset, 26mm, white mesh wheels.



Pricing and Availability

HPI's Nitro RS4 line is by far the most popular nitro sedan line around. That means that parts should be easy to come by at most hobby shops. The car's huge popularity also means that there is a great number of available aftermarket components from dozens of different manufacturers. As far as price goes the Racer 2 carries a street price of $260.

Once my Racer 2 was built I outfitted it with the following gear:

- **O.S. .12 CV Hyper Engine**

The Hyper is O.S.'s latest .12 high-performance offering. The engine comes with O.S.'s 10A slide carb. This poses a challenge since the Racer 2 only comes with linkage for a barrel carburetor. I had to pick up HPI's A889 kit to mount the engine.

- **MIP Manifold and Tuned Pipe**

The MIP manifold and pipe fit the Racer 2 perfectly and kept the Hyper engine running smoothly and responsively.

- **Two Hitec HS-925MG servos**

These are Hitec's new all metal gear super high-speed servos. These servos feature tons of torque and speed.

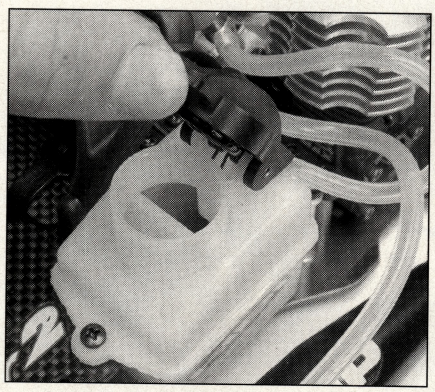
- **Pro-Line V-Rage S2 Tires**
- **RPM Chicane wheels**
- **HPI 911 Porsche Turbo Body**

Testing

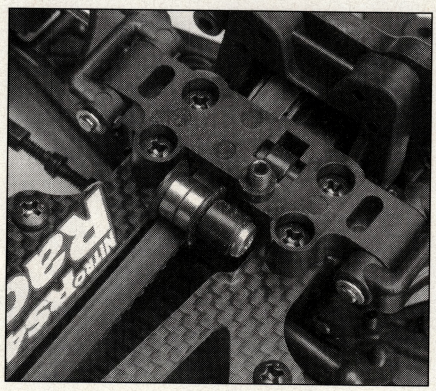
Acceleration

Once the CV Hyper was broken in, I lit things up. The O.S. power plant delivered plenty of pop. The slide carburetor helped the Racer 2 accelerate like a bullet. When starting from a stop, I was able to spin the wheels. During acceleration, the car maintained plenty of control. Once the steering trim was set correctly I was able to hit the gas hard without my hand on the wheel and the car would maintain a straight line.

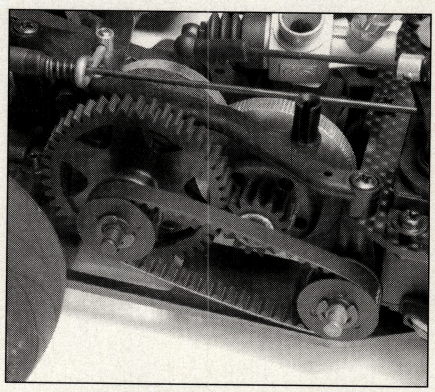
One Nitro RS4 lookalike even shares a lot of the same pieces with the RS4.



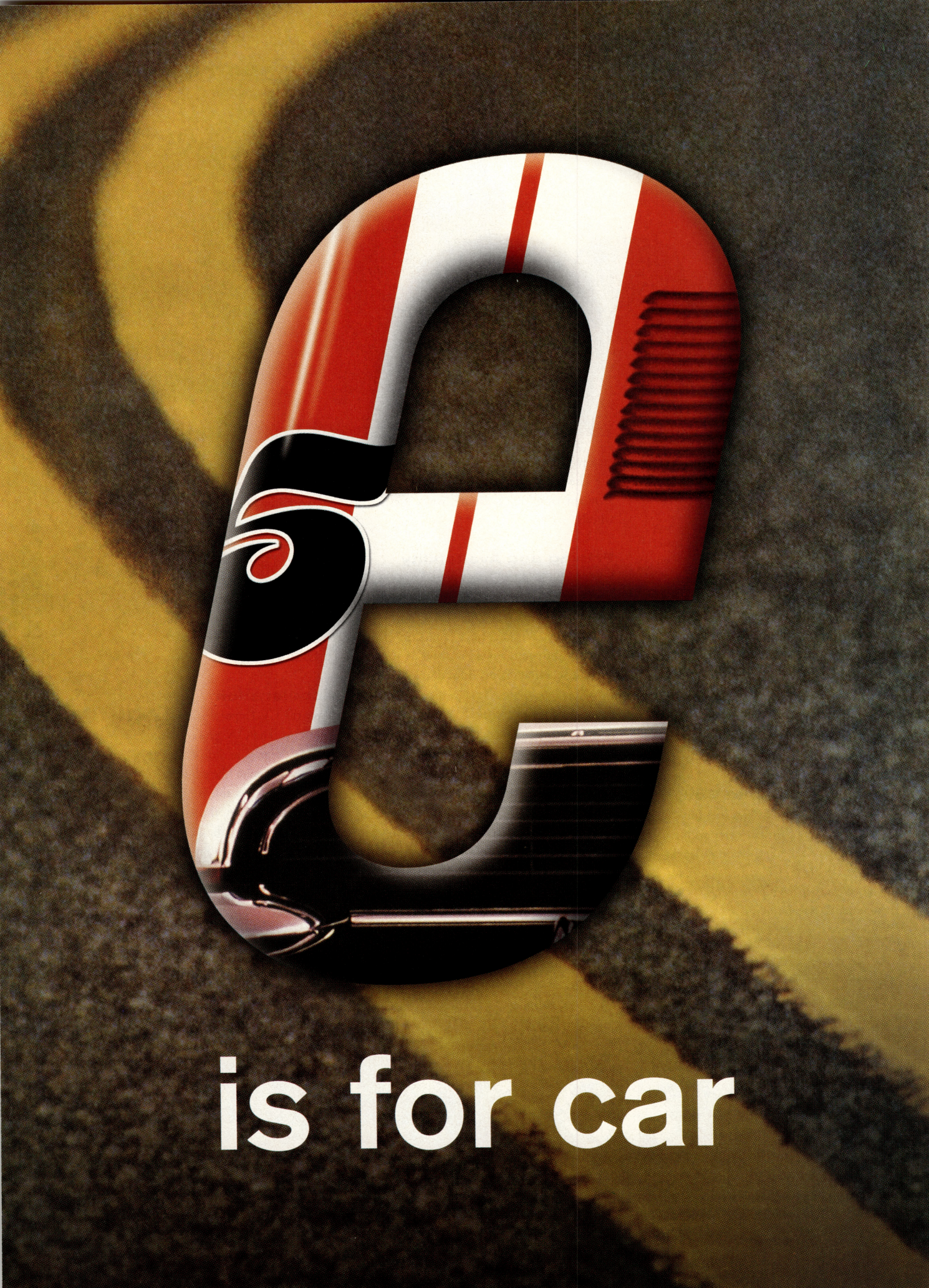
The Proceed-style fuel tank has no primer button and has the pressure fitting built into the cap.

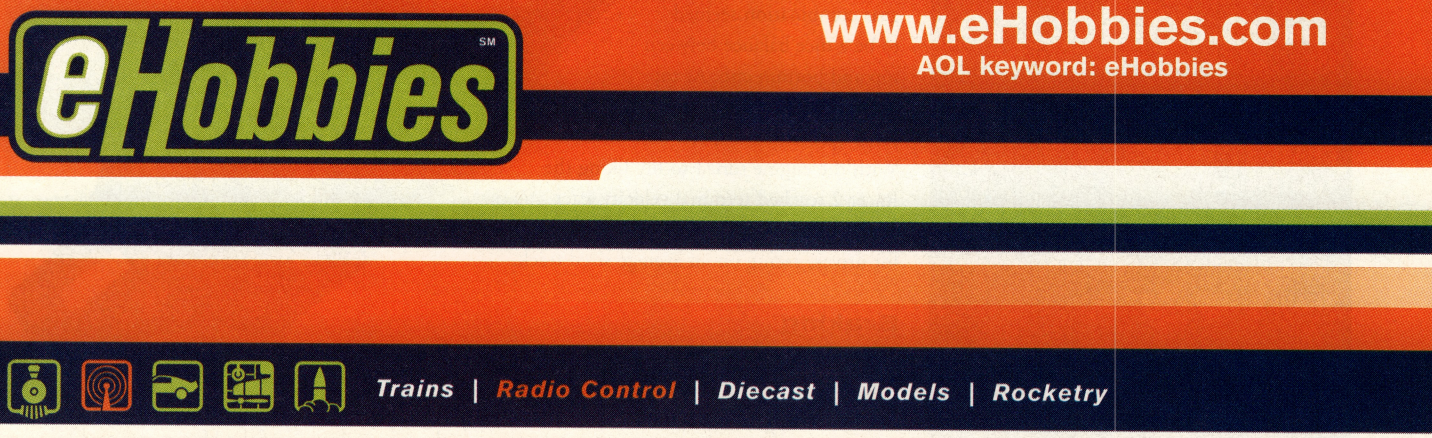


The front belt tension is adjusted by a ball bearing-supported tensioner.



One of the first hop-ups on my list will be the center belt tensioner.


is for car



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The Specifics

Item Info
Part #: 426
MSRP: $439
Estimated Street Price: $260
Manufactured in Japan.

VEHICLE TYPE
Nitro-powered 1/10-scale touring car. Rear-mounted .12 engine 4WD.

CHASSIS TYPE
Type: Double Deck
Material: 2.5mm-thick aluminum chassis with graphite top deck.

TRANSMISSION TYPE
Type: Dual bevel gear differentials with three transfer belts.
Drive Shafts: MIP Shiny CVDs
Diff: Bevel gear
Bearings: Yes

SUSPENSION DESIGN
Type: Independent, molded lower arms, adjustable upper control links. Molded shock towers
Damping: Coil-over, oil-filled shocks, molded pistons, molded shock bodies, molded shock caps with bleed holes, steel shafts, O-ring seals.

WHEELS AND TIRES
One-piece mesh wheels; tires not included.

OTHER ITEMS YOU NEED
2-Channel radio system with 2 servos, .12 or .15 size engine, .12 size tuned pipe and manifold, 200mm body, four tires, starting box, glow starter, fuel. receiver battery, CA glue, and paint.

OUR TEST GEAR
Futaba 3PJS radio system with receiver, O.S. Hyper .12 engine, Hitec HS925MG servos, HPI Porsche 911 Turbo (7435) 200mm body, MIP Tuned .12 On-road pipe and manifold, Mugen RII Pro Starter starter box, Trinity Monster Horsepower 20% fuel.

MAIN COMPETITION
Serpent Impact 10, Kyosho GP Ten FW-04, Yokomo GT-4, Mugen MTX-2



The Roll center plates alter the car's overall geometric feel just enough to notice a difference in handling. The roll center plates slightly lower the car's center of gravity for better handling and allow the use of softer suspension springs all the way around.

Top Speed

The 15- to 44-tooth gear combination seemed to be a nice balance between top and bottom end. At top speed the Racer 2 felt as fast as some cars with a 2-speed transmission. With the engine tuned to my liking the Racer 2 reached terminal velocity after about 40 feet. This should be a good distance for drivers racing on an average sized track.

Braking

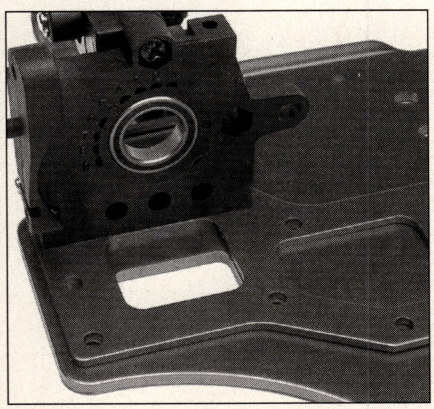
The large fiber disk brake did a good job of bringing the car to a halt. Even at top speed the car came to a stop just a few feet after the brakes were applied. The brakes didn't lock up initially which helped the car to maintain some control during hard braking. Even after a ten minute long run the brakes didn't show much sign of fading.

High-Speed Handling

When cruising down the street at top speed, the car remained responsive. Quick slalom movement on the steering wheel caused the car to sway quickly, but it maintained control. At top speed going into a sweeping turn, the car did push more than I thought it would, but after letting off the throttle a bit the car maintained a tight line at high speed.

Low-Speed Handling

Through tight technical turns, the Racer 2 did a good job. Turn-in was consistently very sharp and precise. With the out-of-the-box setup the car was very point-and-shoot, which fits most gas car driving styles well. The kit's included clutch was a good match for the responsiveness of the Hyper engine. On and off the throttle hard the clutch kept the car very responsive. On and off power, the car hand plenty of turn in steering. When exiting turns hard the car had a tendency to push, but it was very controllable and predictable. Only a couple of times did the V-Rage tires break loose from the asphalt.



Rear belt tension is adjusted by placing the rear bearing inserts in one of ten positions.

Rough Track Handling

The stock springs did a good job of handling some rough road surface. I ran the car over a drainage divet in a parking lot and the car maintained control even at a pretty decent click.

Overall Driveability/Stability

The Racer 2 has a good solid feel. I noticed-some areas the car wanted to push a bit, but the car was always consistent and very controllable. The car is easy to drive. On the track, the Racer 2 is very user-friendly.

Damage Report

I didn't intentionally smash the car into a curb, but I did by accident. I did something stupid. When I was breaking in the engine, I dropped my temperature probe. Well, I bent down to grab it and didn't bother to stop the car. At high idle, the car ran straight into a concrete curb. The front bumper managed to absorb everything with out a scratch on the car. After a full weekend of running the car, I cleaned it thoroughly and took a look at the car. The front suspension might have been set a little low because the front of the chassis showed a lot of wear identified by silver

It won't be long before Racer 2 wanna-be's hit the market.

No Painting Required!



No Extra Cost!



Nitro 4-TEC - Hot 50+MPH!

Introducing Traxxas Multi-Color Bodies!

The number-one selling name in Ready-To-Run now comes with the best-looking bodies. These durable bodies are fully trimmed and finished in up to 6 vibrant colors, including metallics. Best of all, there's **no price increase.** Add up the cost of the paint and materials, plus your time and effort, and you'll see what an unbeatable deal a colorful Traxxas RTR really is. Log on to Traxxas.com to see all the awesome new color combos and to check out the performance specs of each Traxxas model.



Nitro Stampede



Nitro Rustler



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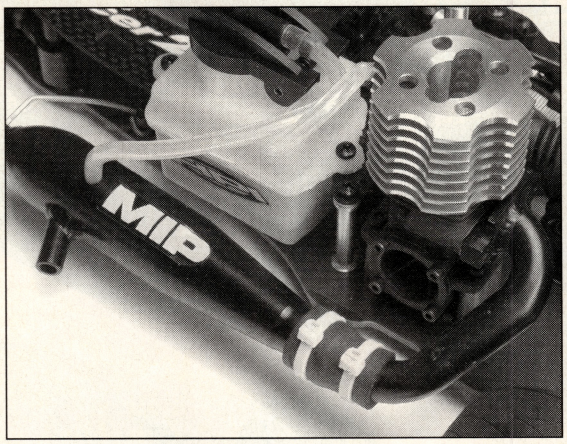

The MIP pipe and header were the perfect fit for the Racer 2.

scratches on the bottom of the chassis. There was also wear on the non-countersunk screws that hold down the engine and servo. Aside from that there were no visible signs of wear or damage.

Conclusion

Before the Racer 2 hit the track I got the sense that HPI wasn't sure if they wanted the kit to be a full-fledged racer or an entry level racer. I'd have to say the Racer 2 falls somewhere in the middle. There are some features that make it a true racer – the clutch, the brake disk, the shiny CVDs, the graphite upper deck, the lack of body and tires, etc. But then there are some features that aren't really race type – pull-start engine mounts and flywheel, linkage for only a slide carb, gear diffs, bushing steering. There are other cars on the market that sell for a whole lot more that are completely race speced out. At $260, the Racer 2 is perfect for someone that is looking to getting into nitro racing but doesn't want to spend the cash for all the hop-ups up front. Out of the box, the Racer 2 is definitely able to make most drivers look like a pro. The Racer 2 is a solid package with very good performance and unlimited potential.

Building Tips

Staff photographer Elliot and I had the Racer 2 built in just a few hours. The kit went together fairly easily. The instruction manual is easy to follow and pretty thorough. There are some addendum sheets that are included that must be paid attention to. Any hobbyist with average building experience should have the Racer 2 together in about four to five hours. Here are a couple of tips to help you build:

• Step 3:
The upper hinge pins go in a little tight. Use a hobby knife to trim away any molding if you need to.

• Step 4:
There are no arrows on the diffs as indicated in the instructions. Just be careful and test fit things before you tighten everything down. Also on this step, pack some grease onto the internal diff gears before tightening the diffs.

• Step 31:
Attach the fuel tank to the upper deck before you place the upper deck on the car.

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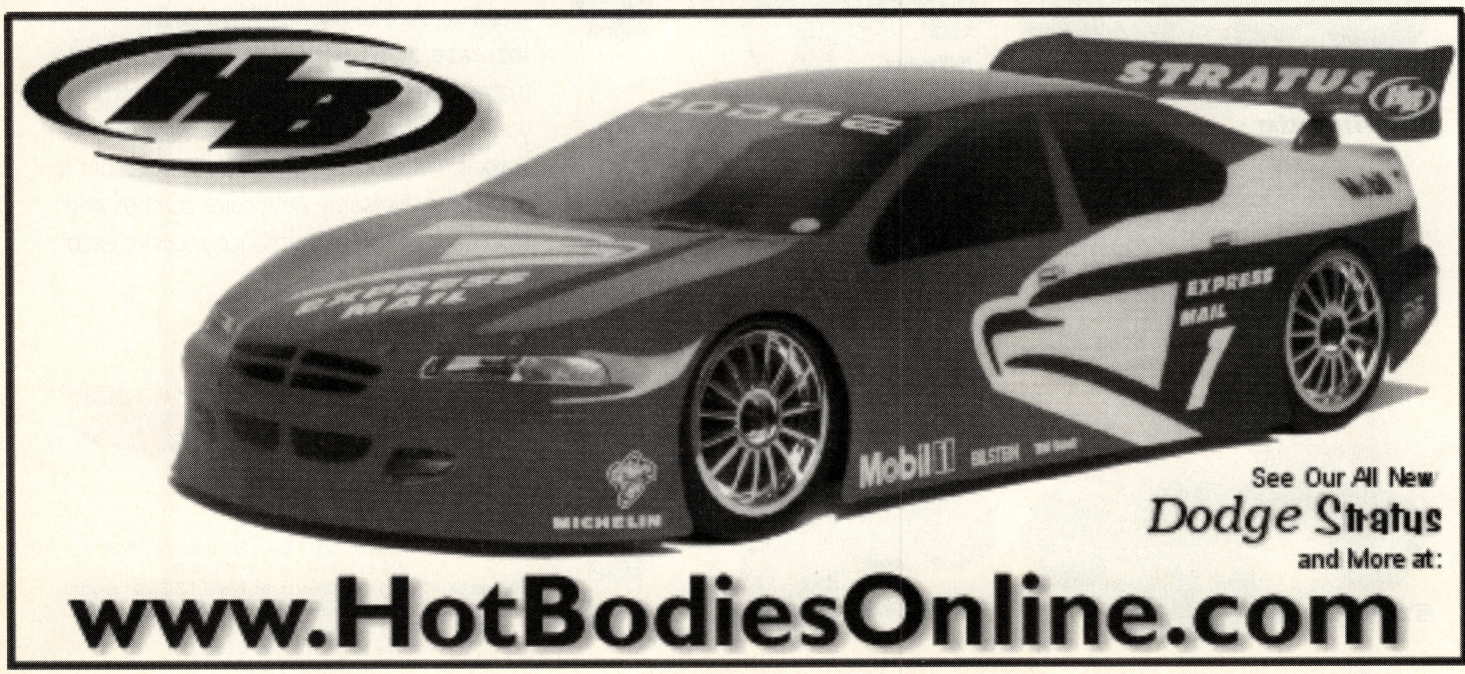

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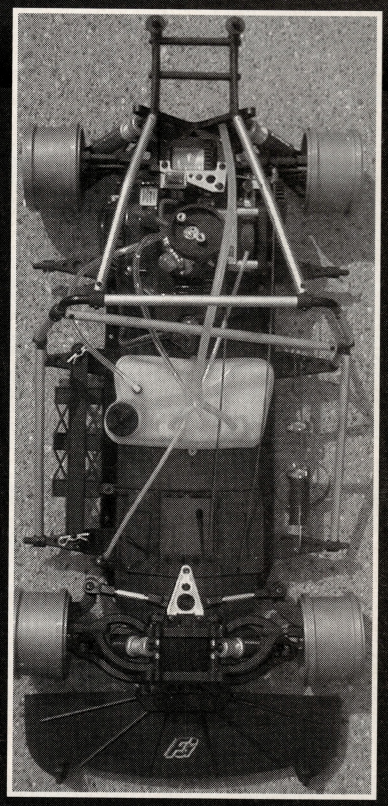

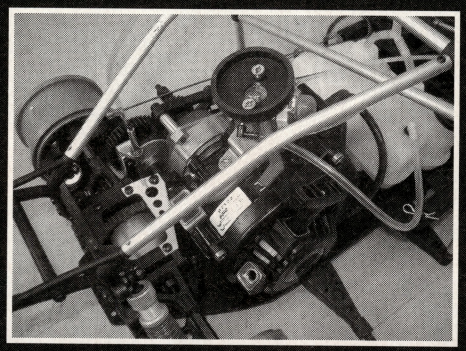

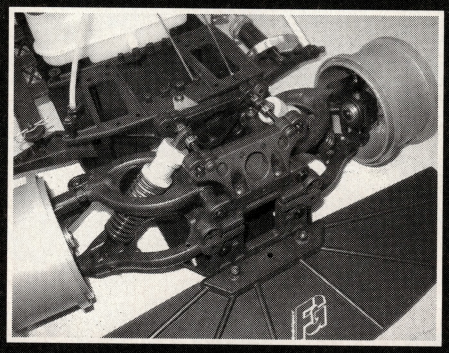

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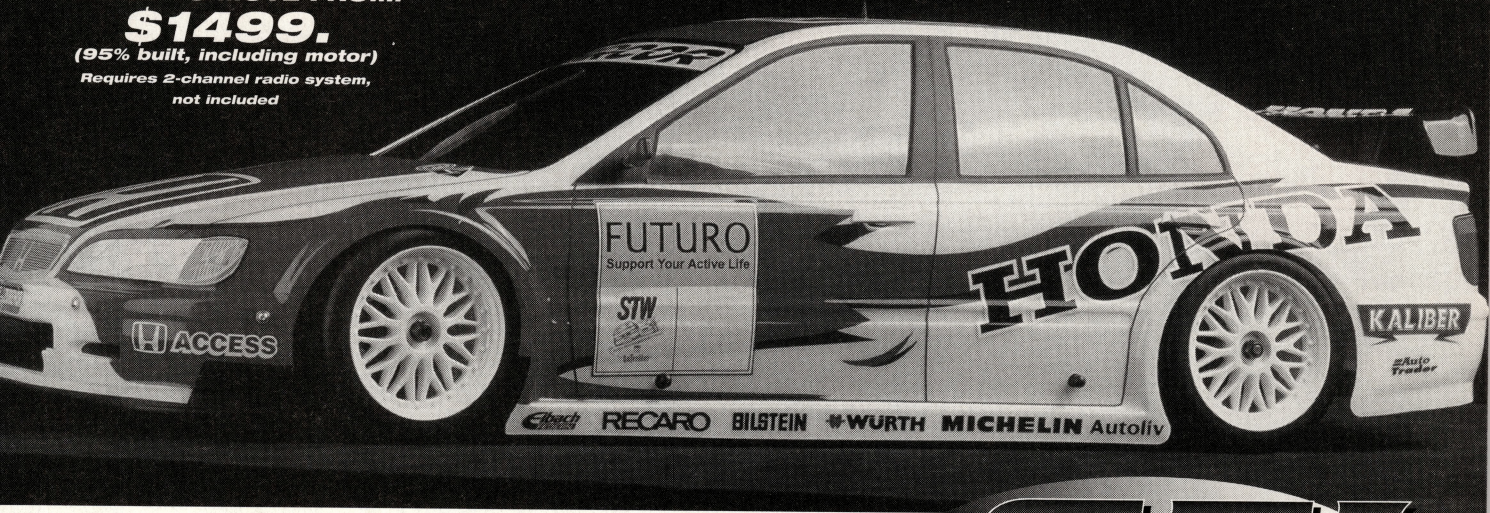

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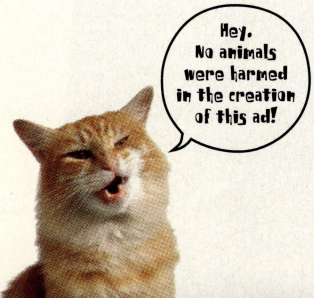

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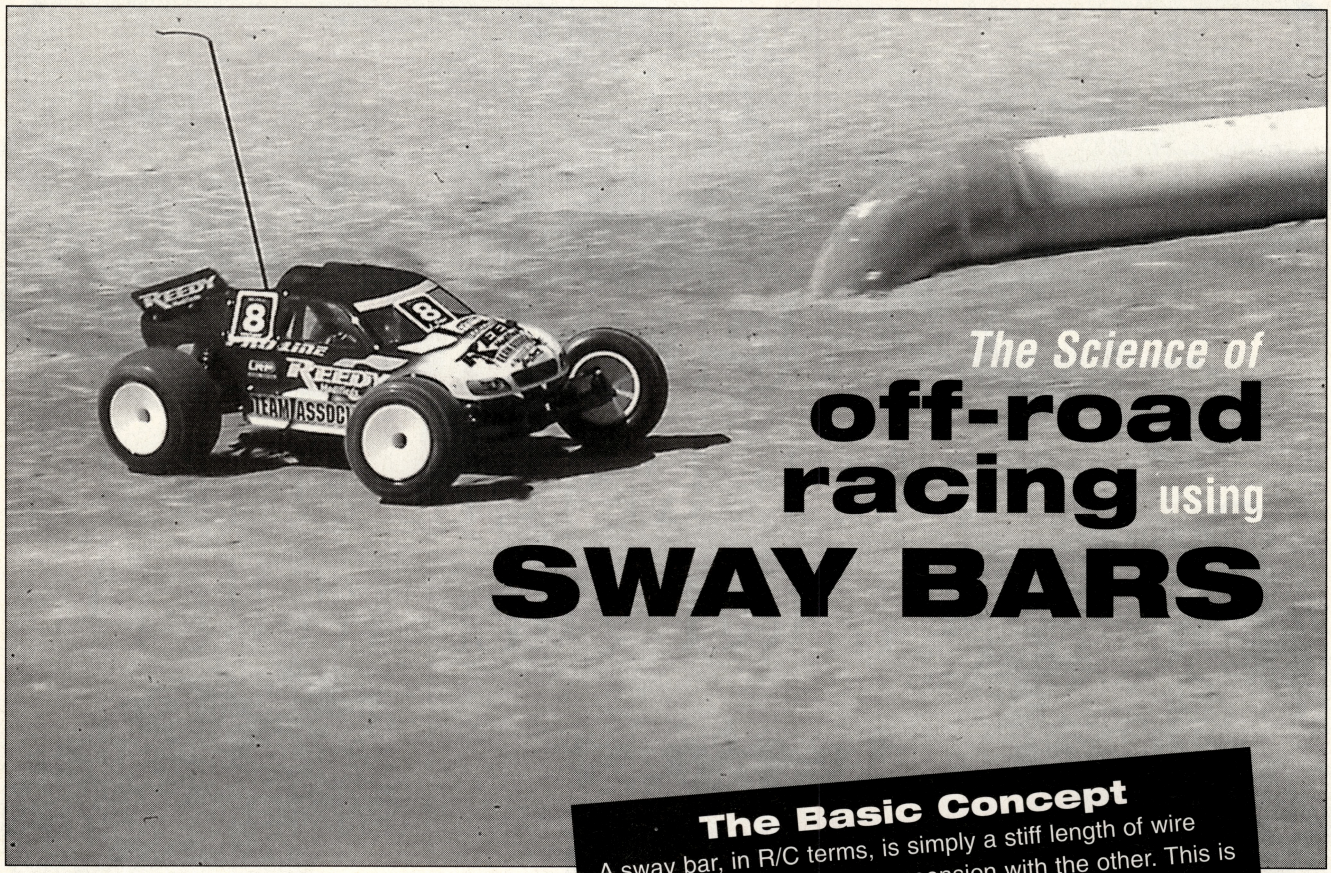


The Science of off-road racing using SWAY BARS

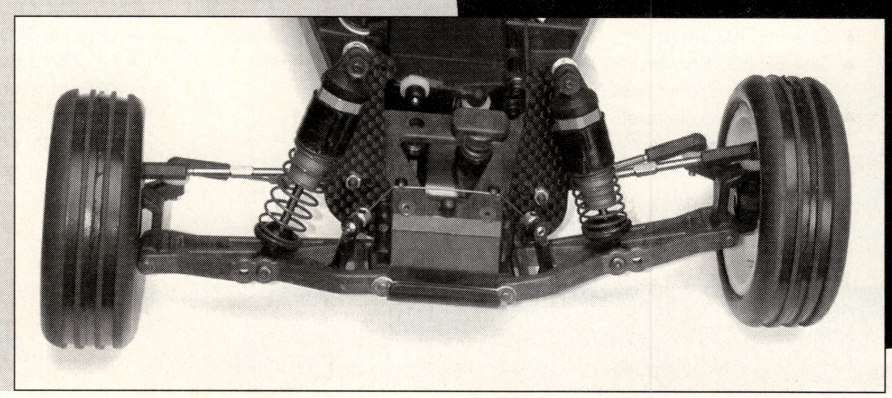
Sway bars are also know as Anti-Roll Bars...

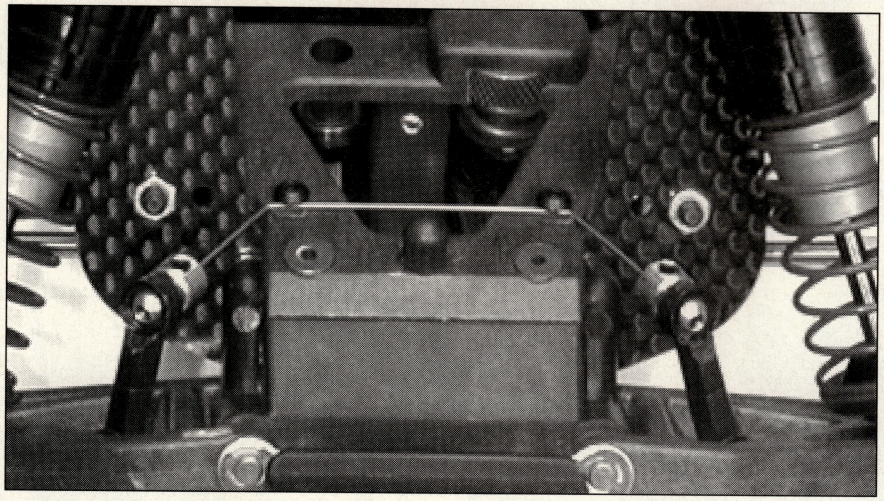
For a lot of racers, tuning off-road vehicles can be an overwhelming task. Most modern buggies and trucks offer a myriad of camber link holes, shock mounting positions, and shock/spring combinations. So why would you want to throw the potential monkey wrench of sway bars into the mix?

All off-road tracks have at least one thing in common – dirt. Beyond that, conditions can vary from billiard-table smooth to horribly rutted, from large sweeping bends to increasing radius corners that can turn your car inside out. Most American tracks are fairly aggressive, but no two feature the same layout. To get the most out of your chosen mount, it's imperative that you have the ability to tune it to any given condition. Book setups are designed to work well in most situations, but they are only a happy medium.

The Basic Concept

A sway bar, in R/C terms, is simply a stiff length of wire that links one side of the suspension with the other. This is an oversimplification, but a starting point. The goal of any sway bar is to reduce chassis roll. How does this improve handling? Perhaps the best way to illustrate how a sway bar works is to study how one is installed on a car (in this case, a Team Associated B3). When a car enters a turn, the suspension on the outside of the car compresses. Without a sway bar, the inside suspension will normally go to full rebound. This is not a bad thing; in fact, this is simply weight transfer at work. When a sway bar is installed, things become complex in theory, but the result is less weight transfer and reduced chassis roll. The sway bar-equipped car entering the same turn still compresses the outer suspension, but when the sway bar begins to take effect, the same side of the sway bar begins to rise. The rigidity of the bar causes the inner side of the bar to be pulled up, which softens that side of the suspension. Most sway bar kits include at least two different size bars. The thicker the sway bar, the softer the inside suspension will be, and the more chassis roll will be reduced.



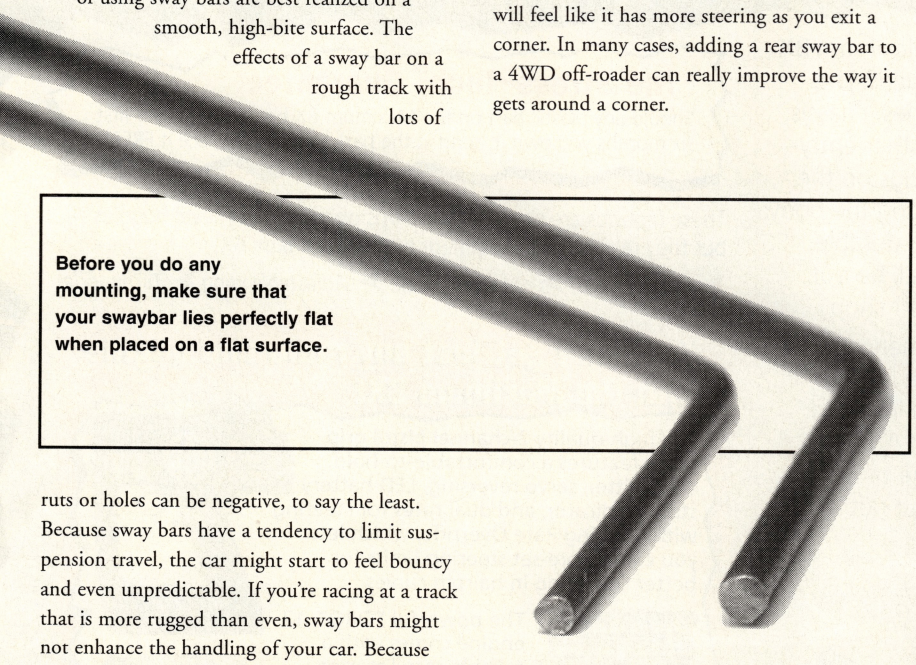


When installing a swaybar, make sure that it can move freely and isn't encumbered.

Do You Really Need Sway Bars?

Normally, opinions on tuning suspension can vary greatly. Ask 10 people what they think is a good setup, and you're likely to get 10 different answers. However, most racers agree the benefits of using sway bars are best realized on a smooth, high-bite surface. The effects of a sway bar on a rough track with lots of ruts or holes can be negative, to say the least. Because sway bars have a tendency to limit suspension travel, the car might start to feel bouncy and even unpredictable. If you're racing at a track that is more rugged than even, sway bars might not enhance the handling of your car. Because 1/10-scale cars are so small, and things happen so fast, it's almost impossible to see a car's suspension working over smaller bumps or ruts, but if you could slow down the action, you might be shocked to see how much is actually happening. For this reason it's recommended that you start with the smallest sway bar, in the most conservative mounting position. Some sway bar kits allow you to adjust how much leverage the bar has on the suspension. Start with the least amount and go from there.

Adding a sway bar to the front of a vehicle can help tone down input or take away the jerky feeling on a really hooked up track. The bar will in effect slow down the front suspension's reaction to the surface. Again, begin with the most conservative bar/geometry. Using a very thin front sway bar can really improve response without sacrificing rough section handling. Using a sway bar in the rear will noticeably affect the car's handling in two different ways: The car will exhibit less steering feel entering a turn, and it will feel like it has more steering as you exit a corner. In many cases, adding a rear sway bar to a 4WD off-roader can really improve the way it gets around a corner.



Before you do any mounting, make sure that your swaybar lies perfectly flat when placed on a flat surface.

Installation

Getting the most out of sway bars requires meticulous attention to detail when you're installing them. Read the manufacturer's instructions carefully. The first thing you'll want to do is make sure the bar itself is perfectly flat. If the bar is not flat, installing it will cause your car to tweak. This could make the car pull to one side while accelerating or braking. It could also make your car jump erratically as an uneven or tweaked bar will pull the suspension more to one side. Be careful when you're tightening the small set screws on the bar itself. They should be snug, but not torqued down. If you overtighten them, you may accidentally bend the bar.

You'll also want to make sure that the sway bar moves freely. In the case of our B3, do not overtighten the two button-head screws that attach the sway bar to the top plate (in the front) or the rear bulkhead (in the rear). Make sure there is no binding before you hook everything up and hit the track.

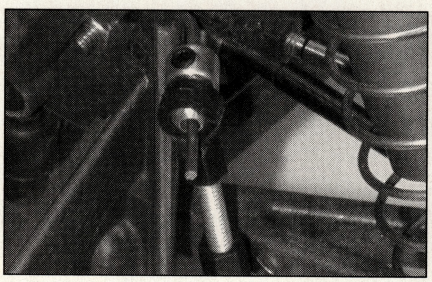
Last, and perhaps most important, you need to ensure that the bar is mounted evenly on both sides. If you don't own calipers, borrow a set. This isn't an adjustment you can eyeball and expect good results. Now that you have a solid understanding of how sway bars work, you can see how critical concise installation is.

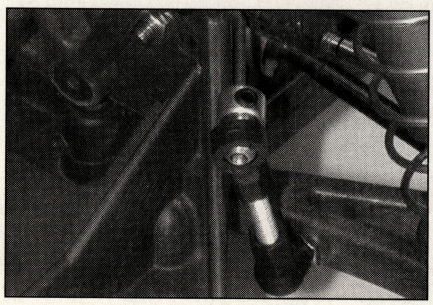
While on the subject of installation, it's worth noting how the bar's mounting position can affect handling. Moving the links closer to the cross section of the sway bar will cause the bar to move more as the suspension is compressed. The inverse is also true, if lesser effect is desired. This can be a useful tool if you want to vary the amount of leverage without using a smaller or larger sway bar.

Luckily, disconnecting a sway bar is a no-brainer. Simply remove the linkage from one side of the bar, and it will no longer have an effect on the car's handling.

What To Look For

How do you know if the sway bar if helping your car around the track? The only person who can determine if it's working is you. The positive aspect of tuning with sway bars is that the effects





In these two photos, the mounting location on the bar has been moved. Pay close attention when you mount the bar that both the left and right sides are equal distances from the bends in the swaybar.

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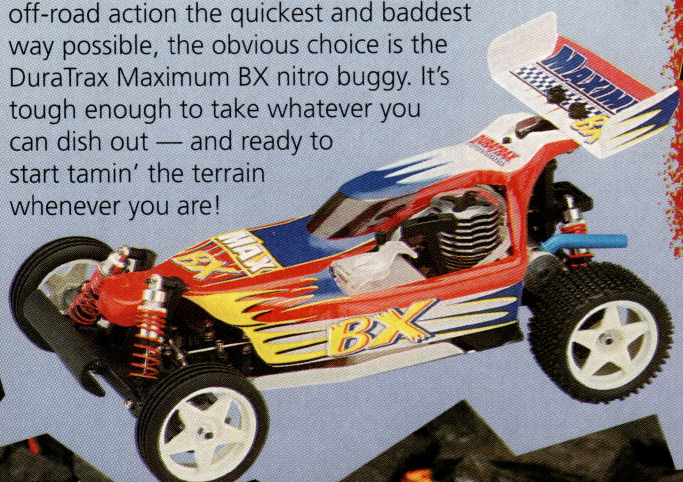

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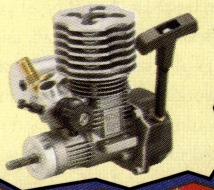

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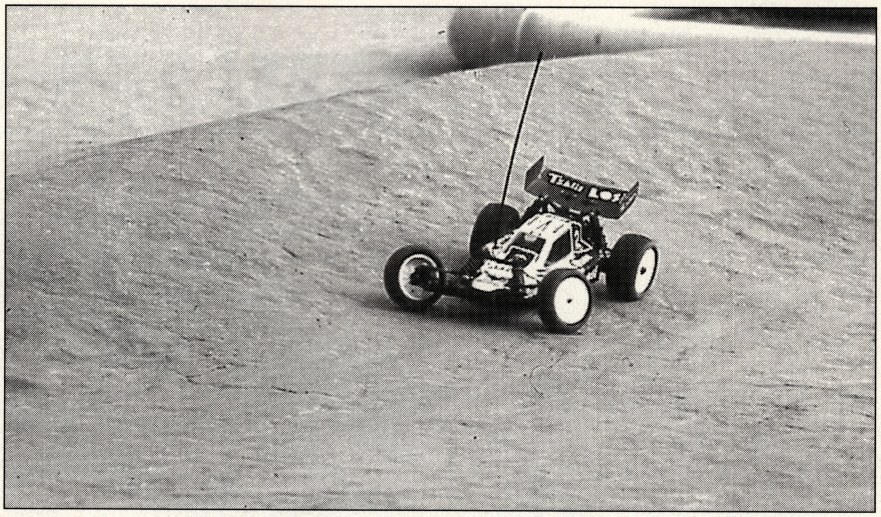
on your car's handling will be evident immediately. While there is no right setting or perfect sway bar size, the laws of physics never change. Adding a front sway bar to your car will to some degree, if installed correctly, slow the weight transfer and numb the steering of the front suspension. If you feel the car is reacting too slow, you may want to experiment with a smaller bar or try moving the links toward the front of the car. If the car is too hard to drive over the rough stuff, then the disadvantages might outweigh the benefits.

The same goes for things out back. If adding the sway bar to your car takes away too much steering entering a corner, or your car wants to hook exiting a turn, you might want to try a smaller bar, or move the links farther back in respect to the car.



Wrap Up

Sway bars can be a useful tuning aid, but remember, they should be used to fine tune a vehicle, not as a starting point. If your truck or buggy is pushing in every corner, or getting crossed up over every jump, you probably need to go back to the book setup and make adjustments from there. However, if you feel confident on 90 percent of the track you're racing at, fitting sway bars to your ride just might help you finish at the front of the pack. Just remember that tuning with sway bars is not always an exact science. Don't be afraid to try something new. You can always go back to your safe setup if things don't work out.

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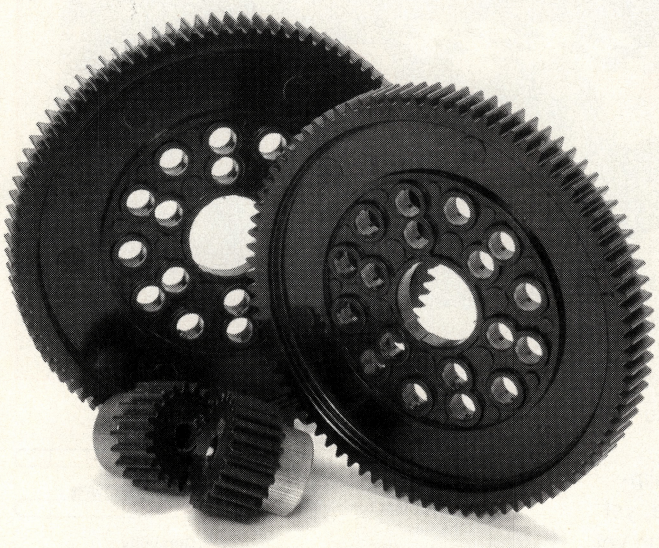

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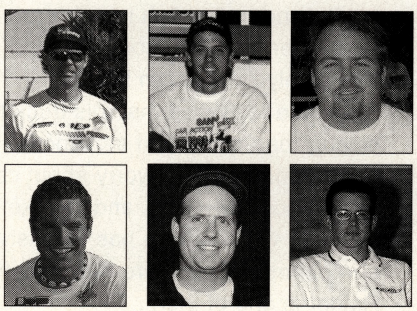

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Tamiya STADIUM RAIDER

by Terrence Raymundo





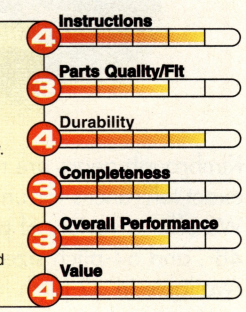
Some guys spend more on a first date than the cost of this kit.

Fun, fun, fun. Hey, isn't that what R/C is about? I mean, I'm sure there are those who live and die by the R/C transmitter, and there are those who say that you haven't experienced anything until you've raced. I know they are out there, because I was one of them. However, there's still nothing like getting together with a few of your friends, charging up a few battery packs, and having fun just driving. After spending some time with Tamiya's Stadium Raider, I've come to realize that this truck fits very well in the "having fun just driving" part of the last sentence!

You don't want to worry about camber settings, differential slippage, shock bleeding, and the like. You want something simple, yet capable. Well, Tamiya has extensive knowledge in making tough yet durable models that are definitely fun to drive, and the Stadium Raider is one of them.

Hits:
- Simple chassis design.
- Competent handling out of the box.
- Durable 4WD.
- Truck/sedan dual personality.
- Easy to work on.

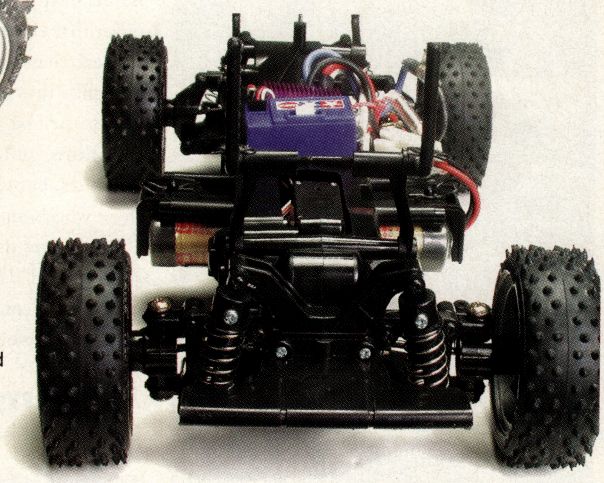
Misses:
- Not a true off-roader.
- Low ground clearance.
- Upper suspension developed some slop.



Chassis

The Stadium Raider uses the familiar TL-01 chassis as its backbone. The TL-01 chassis is a molded, monocoque-type, two-piece frame. It features built-in shock towers, a tunnel for your stick-pack battery (the TL-01 chassis only accepts stick-pack batteries), and a removable gear cover for checking pinion gear mesh. Once you seal up the chassis halves into the monocoque-type assembly, the Stadium Raider's chassis is pretty stiff due to the box form the two molded halves take when assembled. It may seem like a simple design when compared to today's molded graphite tubs and dual-deck chassis, but simplicity is what makes the Stadium Raider so much fun.





Drive Train and Transmission

The Stadium Raider features a drive system centered around a single, heavy-duty metal drive shaft. This drive shaft runs in its specifically-designed channel found on the right side of the molded chassis. A tough metal bevel gear is found on each end of this shaft. From here, motor power goes through two reduction gears that spin enclosed bevel-gear differentials. Steel outdrives, dog bones, and axles complete the setup and spin the Stadium Raider's pin-spike tires (more on this later).

Tamiya includes a Mabuchi 540-type closed-can motor in the kit. This motor bolts directly to the chassis in one of three preset positions depending on what pinion gear you use (19-, 21-, or 23-tooth). A 19-tooth pinion gear is included, a good choice by Tamiya since the higher gearing can overcome the larger diameter off-road wheels.



Suspension

The Stadium Raider handles the dirt with its independent suspension. The lower arms are two-piece affairs, which create a strong lower arm compared to some one-piece lower arms I've broken on other vehicles. The molded, non-adjustable upper arms attach to the outer hubs and the chassis with Tamiya step-screws. Steel screw-in suspension shafts hold the lower arms in place. The Stadium Raider's shock towers are molded in as a part of the chassis halves.

The Stadium Raider is equipped with four coil-over, friction-dampened shocks. Instead of using oil and pistons for dampening, Tamiya keeps it simple by using a metal shaft "trapped" inside a rubber tube inside the shock body. Silver springs hold the chassis up above the ground.

My first Tamiya truck was the Black Foot, an R/C legend.

The Specifics

Item Info
Part#: 58246 (Tamiya Stadium Raider),
Estimated street price:$110-120.
Manufactured in Japan.

Chassis Type
Molded, two-piece monocoque-type design with stick-pack tunnel, removable gear cover, and built-in front and rear shock towers.

Wheels and Tires
Tamiya molded dish-type wheels, one-piece gray with Tamiya 4wd "Spire" pin-spike tires.

Transmission Type
Shaft-driven four-wheel drive, bevel-gear differentials, steel outdrives, axles, and dogbones, metal and molded bushings.

Suspension Design
Independent, with two-piece molded lower arms and non-adjustable upper control links.

Suspension Dampening
Coil-over friction shocks with molded shock bodies, steel shafts and silver springs.

Vehicle Type
Electric-motor powered, four-wheel-drive stadium truck.

Other Items Needed
Electric motor, Electric Speed Controller (ESC), 6-cell stick pack battery, 2 channel radio with one servo, paint for the body and CA glue for the tires.

Test Gear
Airtronics RV2P radio with receiver, Futaba standard steering servo, Trinity 1300mAh sport pack, Trinity 5D motor, Parma Faskolor paint.

Main Competition
HPI RS4 MT, Yokomo MR-4 MT

Other Features

Steering

To steer this truck, the steering servo is mounted dead center in between the two chassis halves, facing downward. Two equal-length, non-adjustable molded steering rods reach out from two openings on the chassis located just behind the front suspension arms. These steering rods attach to both the steering knuckles and the steering servo with screws for positive mounting. Tamiya also includes a servo saver with different fittings to allow the use of virtually any popular brand of servo.

Tires, Wheels, & Body

Topping off the Stadium Raider is Tamiya's "TRT" (Tamiya Racing Team) truck body. This truck body features large fender openings, an aero-roll bar, and a flat tonneau cover. This is basically the same truck body found on Tamiya' s semi-monster trucks, like the Mad Bison and Wild Dagger. One-piece gray dish-type wheels are bolted to the Stadium Raider's axles. These wheels have a noticeable offset that effectively widens the Stadium Raider's chassis considerably. Tamiya Spire pin-spike tires are wrapped around these wheels. At first glance you might mistake the wheel/tire combo for a sedan-sized wheel with rally tires, but closer inspection shows that these wheels and tires are closer to racing spec 2.2 inch sizes used in the competitive 4WD racing world. The tires themselves are made of a semi-hard compound that feels like it could last for many off-road romps in the dust.

Testing

The Stadium Raider immediately called out to me to drive it in the dirt. On my particular test day it wasn't exactly perfect off-roading weather. Temperatures were on the chilly side, and it was very humid – almost to the point that you could actually call the moisture in the air rain! Upon completion of assembly, I took the Stadium Raider out on a test drive in a nearby open parking lot to see how the truck fared on the asphalt before going to the dirt field across the way.

Acceleration

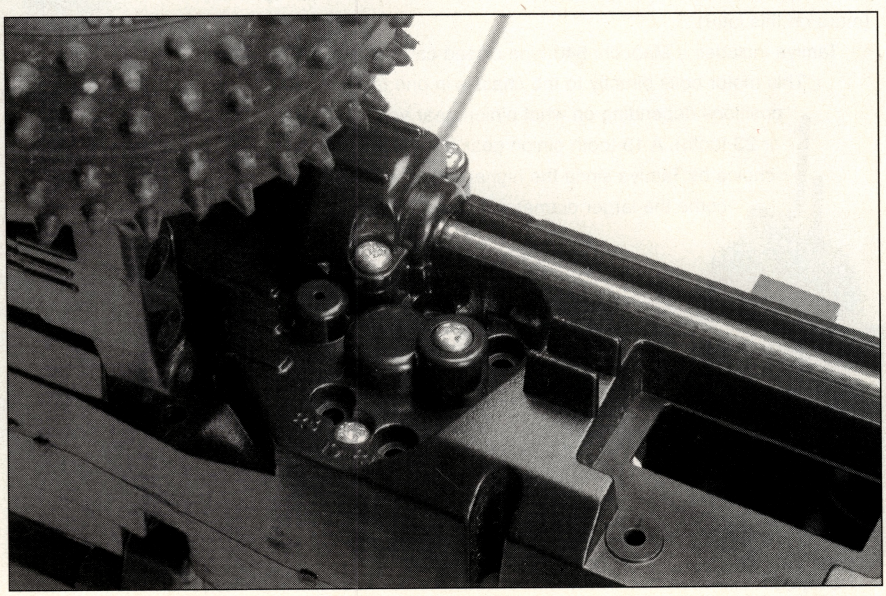
I swapped out the stock motor with a Trinity 5D motor I had lying around. I geared the Stadium Raider with the highest possible gear ratio (19-tooth), and by doing so gave the truck ample power off the line. The truck body would lean back on occasion during standing-start throttle pulls. Acceleration was very good even with the kit gearing. The high gear ratio would translate into dirt kicking launches from a dead halt.

Top Speed

With the 5D, the Stadium Raider had ample top-end speed – not ballistic, but good enough. Since the Stadium Raider was meant more for torquey, tail whipping action, the included transmission gears served their purpose. However, if you really want to make your Stadium Raider fly (at the expense of some low-end grunt) Tamiya has an optional speed-tuned gear set specifically for the TL-01 tranny.

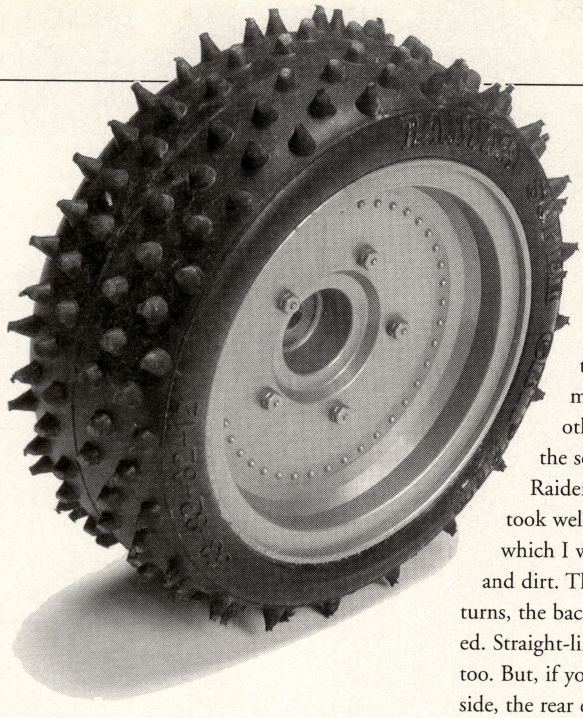
Low-Speed Handling

Low-speed handling was actually pretty good, even with the taller profile and the not-so-downforce-inducing truck body. The pin-



Gear mesh for dummies. To make things easy on you, Tamiya has indicated exactly where to tighten the motor down depending on what size pinion gear you run.

Too bad all cars didn't set your gear mesh for you.



The large knobby tires and large diameter wheels are the only significant difference on the Stadium Raider versus other TL-01 chassis'.

spike tires did a decent job keeping the Stadium Raider pointed in the right direction. On quicker switchbacks, the rear end would hint at oversteer, but I never actually saw the rear end of the Stadium Raider to come around during my test drive. I did think that a nice set of oil-filled shocks would do wonders for this truck. The kit dampers were easily worked beyond their capabilities, even during low-speed driving.

High-Speed Handling

Remember how I just mentioned the hint of oversteer the Stadium Raider was exhibiting at low speeds? At higher speeds on both the asphalt and on the dirt, the truck showed its true handling capabilities. Taking a look at the chassis setup, some would think that this wasn't a capable machine but my test drive proved otherwise. Sometimes simplicity is the solution, and the Stadium Raider's simple TL-01 chassis actually took well to the high-speed driving to which I was subjecting it on both street and dirt. Through high-speed sweeping turns, the back end of the truck stayed planted. Straight-line high-speed driving was good, too. But, if you flick the steering wheel to one side, the rear end of the truck would slide out a bit before regaining traction.

Tight Turns

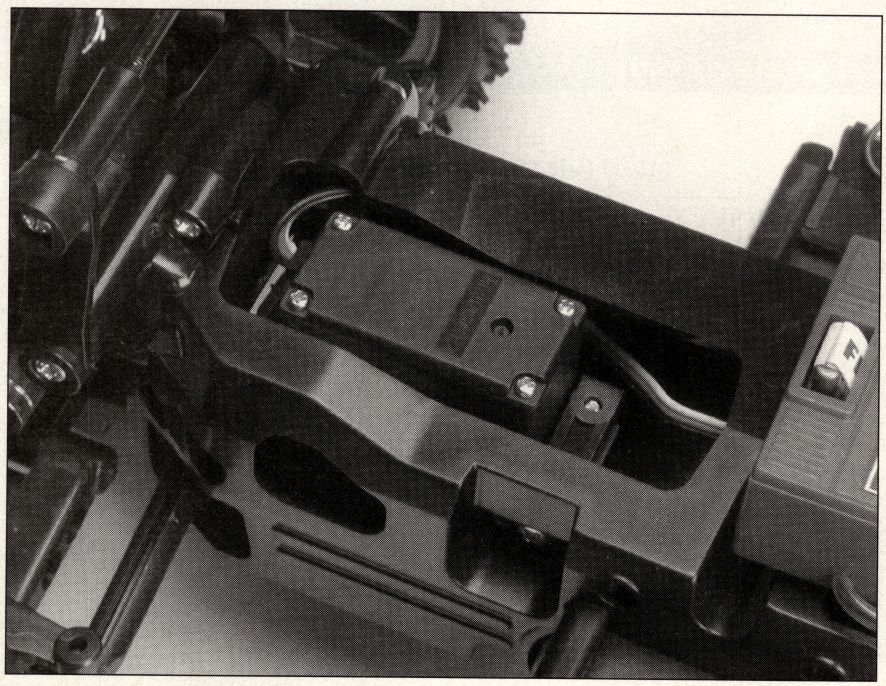
Taking into consideration that the Stadium Raider had friction shocks on all four corners, kit pin-spike tires, and the fact that I used to race TL-01 spec class, I had a pretty good idea on how the Stadium Raider would do when it came up to a tight turn. My TL-01 driving experience dictated the "come into the turn fast, tap the brake to bring the rear end around, then floor it" technique. Sure enough, this was the same way I drove the Stadium Raider, and it worked – albeit slightly better than a sedan TL-01. How you ask? Well, without the downforce that a typical sedan body with a rear wing would give, the Stadium Raider would simply turn into a tight curve a little better. The weight transfer to the front wheels when decelerating combined with the low downforce body combined to easily swing the rear end around. I deduct that if you had the tuning capability of oil-filled shocks on the Stadium Raider, you could get it handling even better.

Braking

At higher speeds, the Stadium Raider would dive whenever I jammed the brakes. The pin-spike tires actually did a good job at grabbing the ground when it was time to slow down. On the asphalt, those same pin spikes slid the Stadium Raider to a halt. Overall braking was straight and true, with no pulling to one side.

Off Road

Now I have to admit that the Stadium Raider isn't a full-blown off-road vehicle. After all, it is based on the TL-01 chassis, a chassis that debuted underneath a touring car body. This explains the lower ground clearance. The shock towers are molded as part of the chassis halves, the suspension arms are the same dimensions as its sedan counterpart, and the shocks are basically fully extended sedan versions. However, on everything but the really rocky stuff, the Stadium Raider can get through. I'd have to say that the Stadium Raider would really find home on a nice, flat, open dirt field (like a baseball field) where it can do some nice four-wheel drifts and rooster tails. It can take the smaller bumps and jumps, but I suspect that the only way it would successfully negotiate the larger jumps



The steering servo is completely protected since it mounts in the middle of the tube chassis.

Building Tips

As you'd expect from most Tamiya kits, the instruction manual is almost crystal clear. The Stadium Raider is a very easy build and go together quickly for most builders, even with little or no building experience.

Step 7, page 6
Note that the two gear shafts are different lengths. The longer shaft goes with the gear with the beveled end.

Step 21, page 13
If you must stick with the friction shocks, make sure you cut four equal pieces of the rubber tubing so that the suspension is even on all four corners.

Props to Elliot for throwing down the quick, clean paint.

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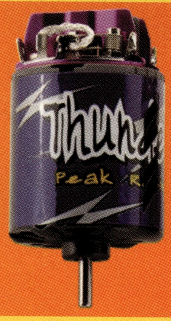

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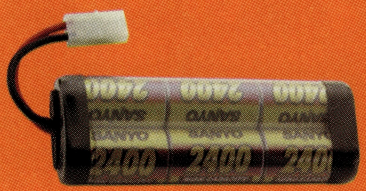
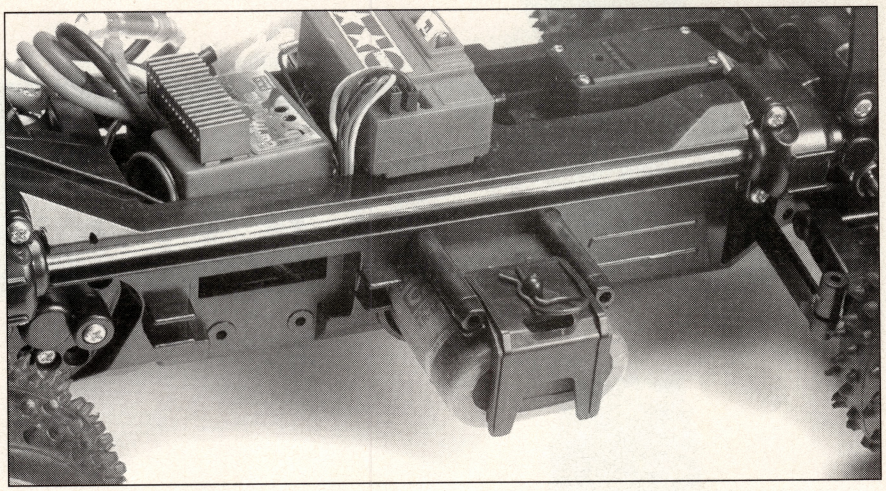


Peak's extensive range of batteries includes racer oriented ***PowerFlo*** voltage enhanced cells as well as assembled sport packs. There is a Peak battery suitable for drivers of all skill levels and budgets.

www.peakmotors.com

A steel drive shaft runs the length of the truck to power the front wheels.



is if there were a matching landing ramp on the other end. It kind of reminds me of the latest wave of full-sized SUV vehicles – tuned more for the street than the dirt.

Maintenance

Tamiya's no frills TL-01 chassis design cuts down on maintenance very well. With sealed trannies, one-piece suspension links, and a molded monocoque-type chassis, the truck is strong and durable as well. There is easy access to all the vital areas of the chassis, and although the 4WD driveshaft is exposed to the elements, it doesn't seem to care. After a few battery packs, the most I had to do was use compressed air to dust out the inside of the chassis.

Damage Report

After about 10 battery packs, I'm glad to say that the Tamiya Stadium Raider held up well. I didn't notice any unusually worn or broken parts on the chassis, even after taking the truck over some rough terrain during my last drive before retreating to drier pastures. (It actually started raining on my test day!) The bottom of the chassis had a lot of scratches, mainly due to the Stadium Raider's low ground clearance, but nothing was damaged or in need of replacement. The only thing I noticed was slight slop in the upper suspension area. After awhile you might want to upgrade the kit upper links to threaded rods and ball ends, because the step screws used to mount the upper arms will wear over time and might introduce some suspension slop.

Value

Tamiya has a reputation for producing quality kits, and the Stadium Raider is no exception. All the parts fit perfectly, and the instruction manual is complete enough that even a first-time modeler can get through it without a hitch. The included Mabuchi motor isn't a powerhouse, but it does help get your truck rolling right out of the box. Even the included window masking (Tamiya was doing this years back before everyone else) is a nice touch. Most of Tamiya's kits have long optional upgrade lists, so that if you just want basic you can stay basic without forking out more cash for items you don't need. On the other hand, if you want more out of the Stadium Raider, Tamiya offers many accessories to build up your ride.

Have a dual personality? Since the Stadium Raider uses the TL-01 chassis, converting the chassis into a sedan is as simple as swapping wheels and tires and lowering the shock travel slightly. Throw on a sedan body and voila! You have a 4WD touring car. I don't knock the TL-01 chassis a bit either. I've seen prepared TL-01 sedans run circles around other so-called full-race sedan chassis! Think about it - you can play in the dirt all you want during the weekdays, then if you feel like it you can take on the local parking-lot racing scene on weekends.

CONCLUSION

If fun is your game, Tamiya has something you should take a look at. The Stadium Raider is a simple yet competent design that takes the sturdy, no frills TL-01 chassis and combines it with larger wheels and a stadium truck body to create a machine that works fairly well on both on and off-road excursions. It isn't a full blown off-road machine, but when it has to go dirt, it can take it. Maybe we should call the Stadium Raider the SUV of R/C?

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T-MAXX

Tune-Up from the masters

Not in years has one single R/C vehicle had as much as an impact on the R/C landscape as Traxxas' T-Maxx. Not only has the T-Maxx changed the landscape, it's torn it up like just another patch of dirt. Out of the box the T-Max is a monster of outrageous proportions. It's massive suspension and huge tires get everybody's attention. The .15 size nitro engine roars to life with the touch of a button. Through a 2-speed transmission with reverse into the mix and you've got an unstoppable beast that's taken the country by storm.

Upgrade that storm into a hurricane with some simple, quick, and inexpensive tips that I'll show you here.

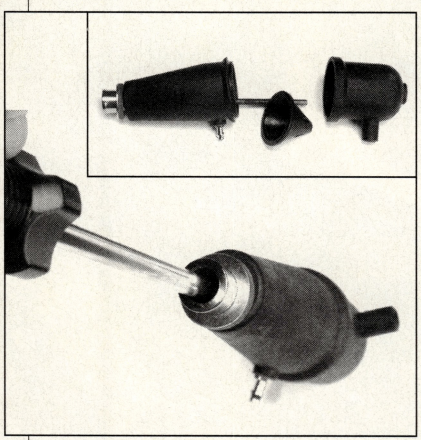
By Mike Velez

I Need More Power!

With out spending a dime there are two simple tips you can do to make sure that the engine's exhaust is more free flowing. This will translate into higher top speed and more horsepower overall.

Remove the Pipe Baffle

Inside the stock pipe is a molded baffle that helps to quiet the engine. That baffle also happens to restrict airflow. Remove the pipe by loosening the nut holding the pipe to the chassis. Then use a #2 Phillips head screwdriver to loosen the end of the pipe that has the stinger molded in (the convergence cone). You'll have to deal with a lot of grease and grime, use some motor clean or Traxxas Nitro Wash to wash all the pieces off. Once you've got the pipe dissected remove the small baffle that's pushed into the convergence cone. Once you remove the baffle reassemble the pipe. From there you can reinstall the pipe.



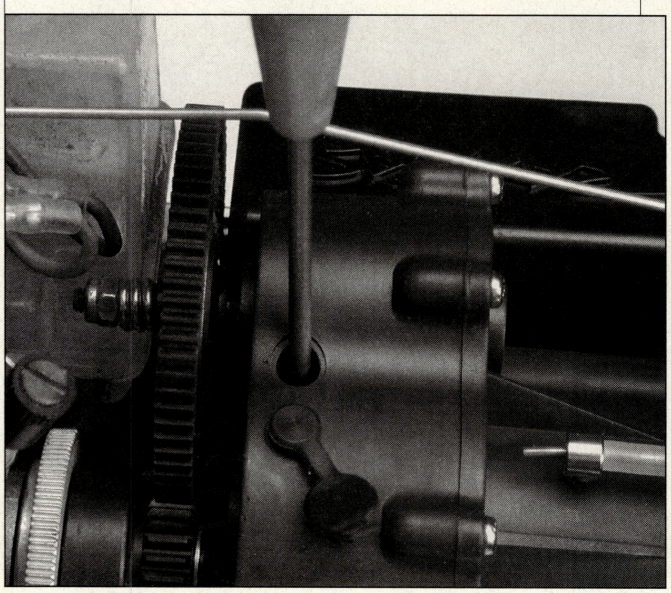
New Filter

The stock filter that comes with the T-Maxx is not designed for performance as much as it's designed to deliver plenty of filtration. Out of the box the stock filter is soaking in filter oil. Although keeps that junk out of your engine, it also keeps some of the air out. Swap the stock filter for an after-market filter from O.S. Or Motor Saver. You'll have to use a tie-wrap to keep the new filter on the throat of the carb. Couple this mod with removing the engine baffle and you'll immediately see an improvement in engine performance.

Tune That Clutch!

Tune the 2-Speed Correctly

Out of the box the shift point on all of the T-Maxx' we've come across seem to shift a little on the late side. The truck should shift into second gear just a few feet after the engine sounds like it hits top speed. To make this adjustment remove the large rubber plug from the top of the transmission. Spin the transmission's primary gear until you seed the shift point adjustment screw. This is the screw that's pointed at an angle in relation to the center of the gear. Once you spot this screw take a 2mm Allen wrench and back the screw off about a half turn. This will allow the engine to shift sooner and make your drive much more enjoyable.



You can use your T-Maxx to crush just about anything smaller than a breadbox.

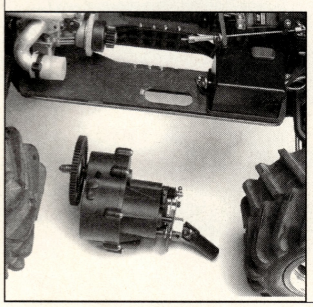
Tune The Tranny!

Adjusting the Engagement Clutch

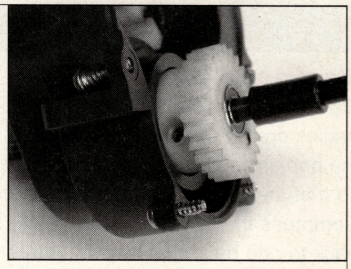
Inside the transmission is an engagement clutch that dictates how quickly your truck begins to move from standing still. You can adjust that clutch to make the truck engage quicker.

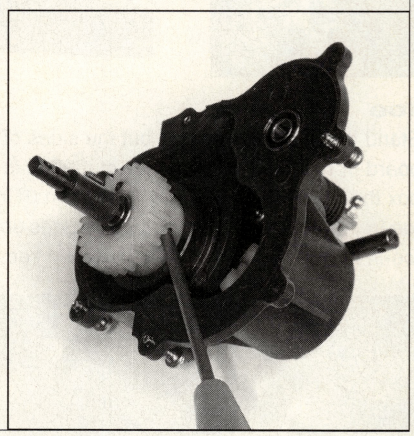
WARNING: If you have little or no experience working on R/C cars I suggest you skip this tip. You'll need to get down into the belly of the truck and unless you know your way around things you might get stuck.

Okay, you didn't heed my warning, in that case let's dig in. The first thing you need to do is remove the transmission. Loosen the brake arm from the top of the tranny, there a small set-screw on the top of the brake caliper shaft. Now turn the truck upside down and remove the eight Phillips head screws holding it in place. Once those screws are removed use a 2mm Allen driver to remove the drive yoke pins located at both ends of the transmission. Once all of this hardware is removed you should be able to wiggle the transmission out of the truck.



Once the tranny is completely out of the truck remove the Phillips head screws that hold the transmission together. Now carefully remove the two halves of the transmission. Be sure that you're working over a clean surface incase anything falls out you'll know where it goes. Once you have the tranny in two halves take the half that would have been towards the front of the chassis, it's the half with all the brake gear. Pull the lever that shifts the truck from forward to reverse so that you expose the two speed adjustment screw on the drive clutch. (See photo). Once you located this screw, the one that's at an angle, use a 2mm Allen driver to loosen (counterclockwise) it JUST 1/2 a turn. This will make the transmission engage quicker from stop. Be careful not to loosen it too far or the truck won't shift gears. After you've made the adjustment go ahead and put the transmission back to one piece. With the transmission in one piece you can reinstall it back into the truck. But before you do that, read brake gluing tip. While your putting things back together have the instruction manual close by so that you can make sure you don't miss anything.



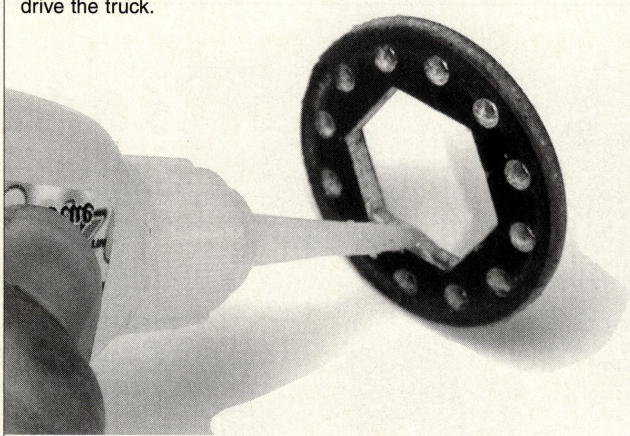


If after you install the transmission the truck doesn't want to shift in and out of reverse you'll need to crack things open again and tighten that engagement clutch.

Preventive Medicine...

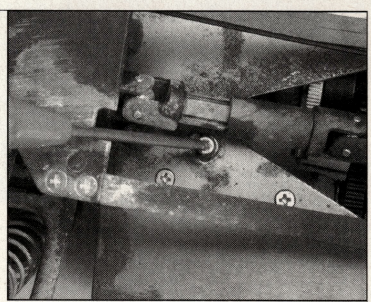
Glue on disk brake

To prolong the life of your disk brake fun a thin bead of CA glue around the inside and outside edges of the disk itself. Allow the glue plenty of time to dry before reinstalling the disk. Try not to, but if you get a little glue on the face of the disk it will wear off the first time you drive the truck.



Adjusting the engine

Should you ever need to remove the engine here's a real easy way to set the mesh. Screw the four screws holding the engine onto the chassis in place. Leave the screws loose enough so that the engine can still move toward and away from the spur gear. Now push the engine towards the left side of the chassis so that the clutchbell gear is tight against the spur. Now spin the spur gear with your finger downward. Do this about ten times. You will hear the gear mesh began to loosen up. The spur and clutchbell should spin freely for a few seconds after your finger is no longer in contact with the spur. Now keep the chassis level and tighten two of the motor screws down. Once to of the screws are anchoring the engine spin the spur again. The mesh should sound the same as it did before you tightened the two screws.





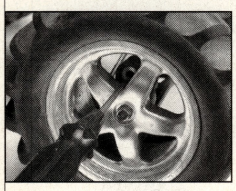
If it sounds the same as before go ahead and tighten the other two screws. If the mesh sounds tighter or looser repeat the process until you get it right.

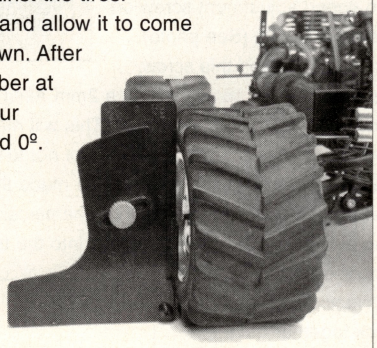
Camber & Toe...

Camber

Go around to all four wheels and make sure that the camber angles are all equal. You can do that with a camber gauge like the one shown from RPM. You'll have to turn the gauge on end so that the long side is against the tires.

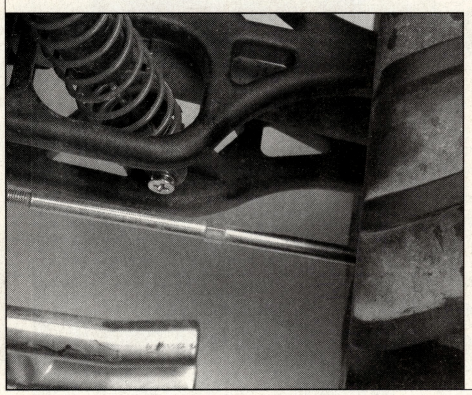
Compress the suspension and allow it to come back to ride height on its own. After you do that adjust the camber at the pivot balls so that all four wheels are between -1º and 0º.





Toe

Stand the truck on end and but the sides of the wheels on a board or ruler. Check to see what the toe is set at. Out of the box the front and rear should be set an 0º in the front and 1º toe-in in the rear. Adjust the turn-buckles so that you have 1º of toe-in in the front as well. This will help keep the truck pointed straight when you're on and off the throttle.



...and the rest.

Starting Trouble

Sometimes the amp draw of the starter motor can put a very big load on the 7.2V battery pack that you use to start the T-Maxx. If everything sounds right, but the truck just doesn't seem to light up you can remove the glow plug wire that's on the glow plug and use a conventional glow-starter to power the glow plug. This should make starting the truck easier.

Along with the tips we've showed you here keep that instruction manual handy. Traxxas did a good job of answering every possible question you might come up with. Along with that advice and tips here your T-Maxx is ready to rule the roost. Be sure to check out next month's Xtreme, we'll start tricking out our stable of T-Maxx' with gear from a number of different companies. Find out what works.

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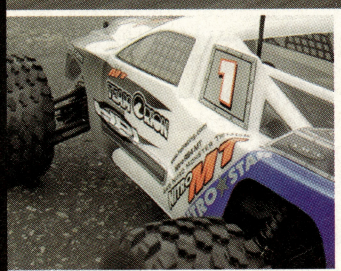
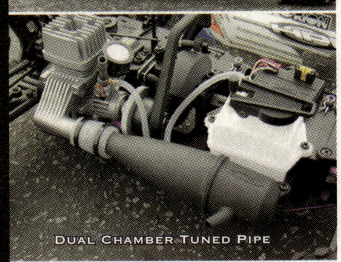
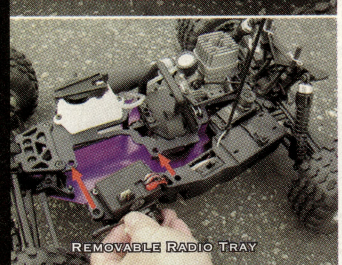
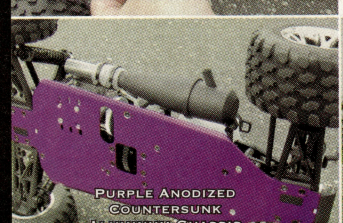
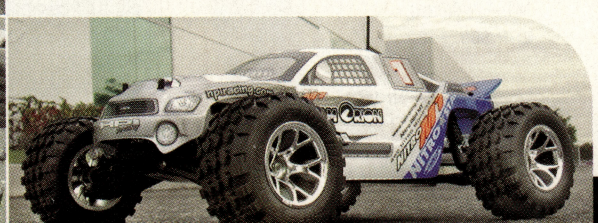












UNSTOPPABLE!

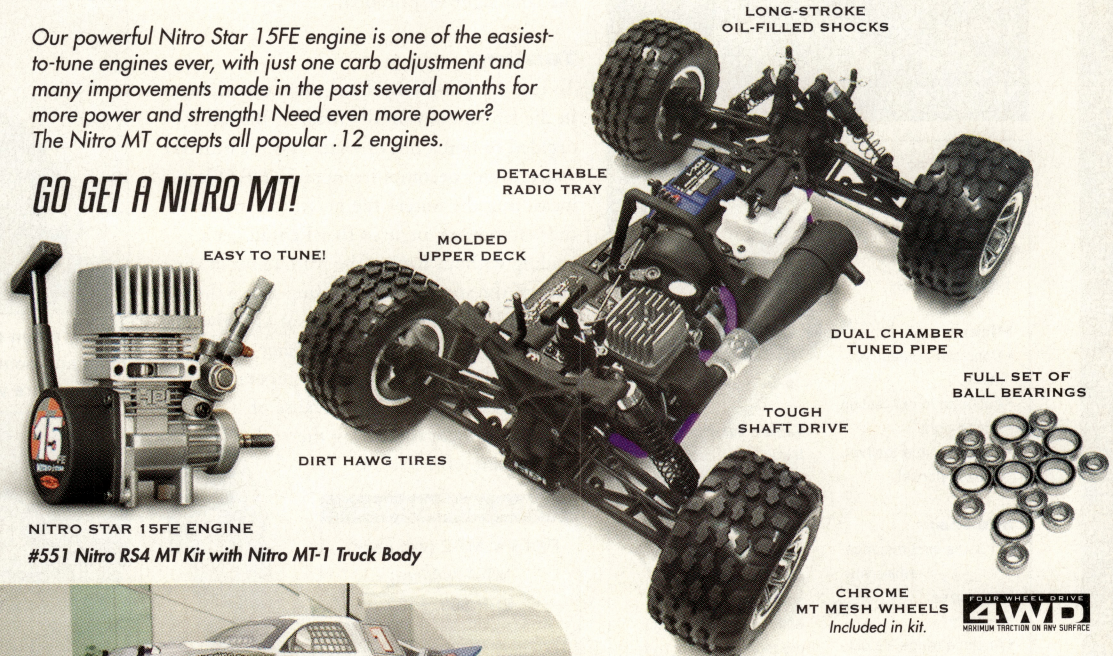
SHAFT-DRIVE 4WD NITRO MONSTER TRUCK

The full-time shaft-driven 4WD Nitro RS4 MT can handle the most extreme terrain you can throw at it! And, you can easily drop it down for high speed on-road driving. Either way, the Nitro MT delivers unstoppable 4WD traction and soaks up bumps with long-stroke suspension. Our all-new shaft drive system delivers the power to all four wheels, and the sealed diffs allow you to keep running... rocks and dirt can't stop the Nitro MT!

A tough nylon upper deck forms the backbone of the Nitro RS4 MT and features a swing-out radio tray for easy cleaning. After a long day of running your Nitro MT, cleaning is easy – just pop off two body clips, disconnect the servo arms and swing out the radio tray! Hose down the chassis with Nitro Cleaner and the Nitro MT looks like new again. It doesn't get any easier than that!

Our powerful Nitro Star 15FE engine is one of the easiest-to-tune engines ever, with just one carb adjustment and many improvements made in the past several months for more power and strength! Need even more power? The Nitro MT accepts all popular .12 engines.

GO GET A NITRO MT!



NITRO STAR 15FE ENGINE

#551 Nitro RS4 MT Kit with Nitro MT-1 Truck Body

HPI RACING

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Raytek MiniTemp

Racer's Edge **Remote Temperature Probe**



If you're an experienced nitro racer or even a novice, you should know that engine temperature is vital to achieving maximum performance and to keeping your engine from premature failure. For anyone looking to measure temperature there are a few different techniques that can be employed. The first and least expensive is the spit test. With the spit test you basically dab some saliva in the top of the engine head and note what happens to the saliva. This technique yields the least accurate indication of temperature, but sometimes gets the job done. You can mount an on-board temperature gauge like MIP's onto your car. This gives you consistent measurement but cannot move from car to car quickly and easily. The third option is to use an infrared temperature gauge, but for years these have cost hundreds of dollars and hard to justify for most. Racers Edge is now distributing the Raytek MiniTemp temperature gun. The MiniTemp comes with a estimated street price under $100. But how well does it work? Is it consistent? Is it accurate? Does it eat batteries? All these questions are answered as we put this product under the scope.

What It's For

The MiniTemp is for measuring any nitro vehicle's engine temperature. Knowing engine temperature is a valuable tool for proper engine tuning and to avoid a tragic engine meltdown.

What It Is

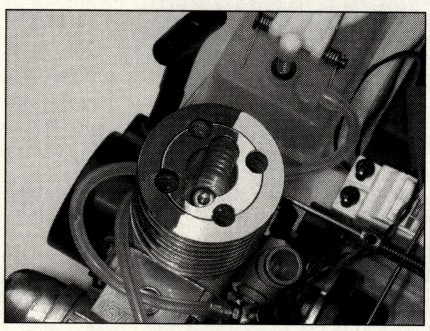
The Raytek MiniTemp is a handheld infrared temperature gun. The MiniTemp displays temperature on a backlit LCD. Temperature reading can be displayed in either Fahrenheit or Celsius. The MiniTemp measures between 0 to 500° F and claims an accuracy of ±3.5° F or ±2% whichever is greater. The MiniTemp runs off of a single 9V alkaline battery. The MiniTemp is available with or without a laser sight. The laser is used solely to indicate where measurement is being taken. As the MiniTemp gets farther away from the object it's measuring, the area that it measures is expands, and, therefore, it is harder to know the exact area being measured without the laser sight. For measuring nitro engine temperature, the measurement should be taken as close to the glow plug as possible. Therefore, the laser sight isn't needed.

Testing

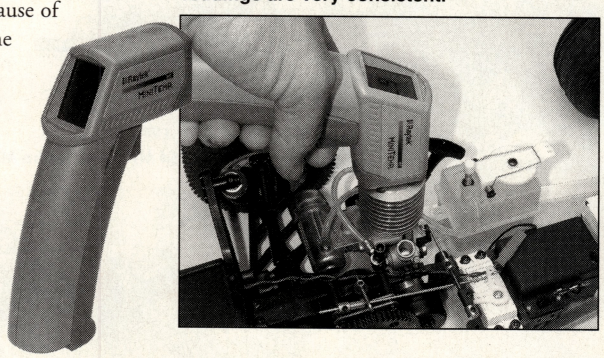
To test the MiniTemp I did some experiments in the lab and out on the field. In the lab I decided to boil a pot of water and measure the water. Water becomes steam at 212°F. When measuring the water's temperature I measured the water at am angle so that I could get a reading without having the MiniTemp in the path of the steam that was rising above the water. Steam could fog the sensor and give an inaccurate reading. While the water was boiling, the MiniTemp registered temperature between 208° and 218°F. Because of the possibility of measuring the temperature of the steam coming off of the water, this test seemed fairly accurate. My next text was to take my own temperature. After I started to unbutton my pants I figured I could probably get just as good a reading by pointing the MiniTemp under my tongue. Consistently and repeatedly the MiniTemp gave me a reading of 98°F. With my two accuracy bench tests, I give the MiniTemp a passing grade.

My next test was a real world test. Days before I got my hands on the MiniTemp we had gotten one of Kyosho's new Ready Set Nitro Ultimas in for testing. After breaking in the engine, I warmed the engine up after a couple minutes and started taking measurements. I took measurements with the MiniTemp directly above the glow plug with the gauge just a few fractions of an inch above the surface of the engine head. The engine on the Ready Set only has one needle setting. I used the gauge to tune the engine to about 210°F according to the gun. The engine ran its best at about 210°F. Each time I took a measurement I repeatedly pulled the trigger on the MiniTemp to get at least ten different readouts. With each time I took measure-

Below: Through testing, the color of the surface being measured seemed to have only a small effect on the gun's reading.



Below: When the gun is placed directly on the head and pointed toward the glow plug, the readings are very consistent.



Vital Info:
Distributed by Racers Edge
4099 West 5415 South
Kearns, UT 84118
1-800-622-7223

Hits:
- Consistent measurement.
- Accurate in our testing.
- Priced right.
- Easily fits in a toolbox or back pocket.

Misses:
- In some circumstance, emissivity jeopardizes accuracy.
- At close range it's difficult to pinpoint exactly where the temperature is being taken.



Last Word:
If you race nitro or want to make sure your nitro engine is always tuned correctly, being able to measure engine temperature is essential. In some circumstances emissivity might effect measurement, but overall it gets the job done at a very attractive

The Specifics:

Part #'s: MT-2 (w/o laser), MT-4 (w/laser)
ESP:$99, $132

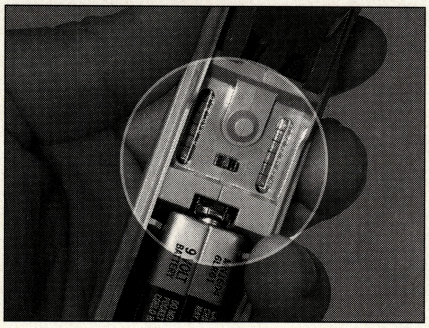
Manufactured in Asia from US-made parts.

Surgeon General's Warning: Temp probe for EXTERNAL use only.

ments the temperature indicated on the MiniTemp didn't fluctuate more than one or two degrees. Whether the reading the MiniTemp was absolutely accurate or not wasn't important. The fact that the readings were consistent was very important. Chalk up another passing grade for the MiniTemp.

My last test was to see what kind of effect emissivity (see How it Works sidebar) had on the MiniTemp when measuring an engine head. The head of the Ready Set is gold anodized, which is about as reflective as a head surface gets next to a polished or chromed head. As the MiniTemp's directions indicated, I used a black permanent ink marker to completely black out one half of the engine's head. After half the engine was flat black I ran the truck, brought it up to temperature then began measuring. When placing the MiniTemp right up against the black side of the head (Pink Floyd rejected this title) the measurement was about ten degrees cooler than measuring the gold side of the head. When measuring the temperature at the top of the head I would get a measurement of around 180°F while measuring the black side I would get a reading around 170°F. When I measured the temperature directly at the glow plug I would get an more realistic reading of 210°F. What does this mean? Basically if you measure the temperature of the engine at the glow plug with the MiniTemp as close to the head as possible you'll reduce the effect that emissivity might have on an accurate reading. Raytek does offer temperature probes that have a setting that allows you to compensate for more emissivity, but these guns sell for much, much more.

The MiniTemp will give you readings in either Fahrenheit or Celsius readings depending on your preference thanks to the this toggle switch.



HOW IT WORKS

Infrared is an invisible portion of the light spectrum. Any object warmer than absolute zero emits energy somewhere in the infrared range.

The MiniTemp, and other infrared thermometers, detect the amount of infrared energy an object emits and converts it into a temperature reading. On a flat black surface, temperature guns give a very, very accurate reading. But on shiny or polished metal surfaces something called emissivity must be taken into account.

Emissivity is the ratio of radiation emitted by a surface to the radiation emitted by a black body at the same temperature. Shiny, polished surfaces will reflect energy from the surrounding environment and might give the gun an inaccurate measurement.



Her temp. readings went completely off the scale.

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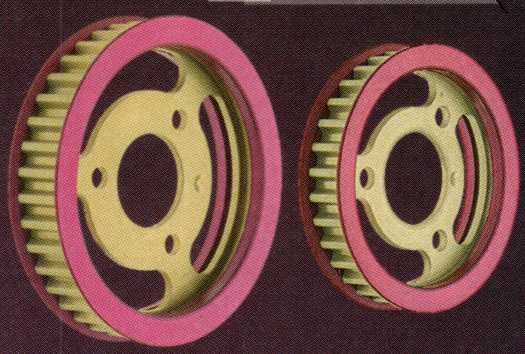
PERFORMANCE

HPI RS4 Nitro Aluminum Brake Kit



New, variable braking system. Lightweight aluminum. RRP 1575

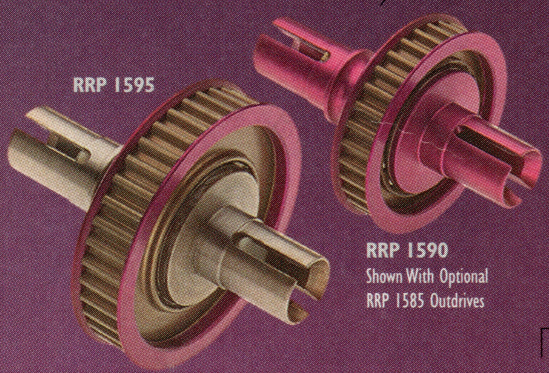
HPI RS4 Front One Way Diff Pulleys



Precision machined, hard anodized aluminum one way diff pulleys.
RRP 1540 fits HPI Nitro sedans. RRP 1529 fits HPI electric sedans.

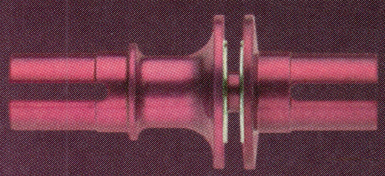
Performance from Precision

HPI RS4 Complete Ball Diff Units



Hardened steel outdrives, ground and polished thrust washers, 2 5x8mm ball bearings, and aluminum pulley.
RRP 1590 for RS4 Electric, and RRP 1595 for RS4 Nitro

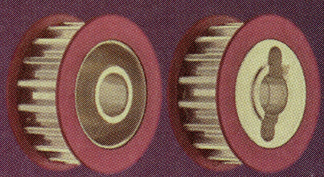
HPI RS4 / Pro / Pro2 / Nitro Lite Aluminum Outdrives



Purple anodized and 40% lighter than stock ball diff outdrives.
RRP 1585

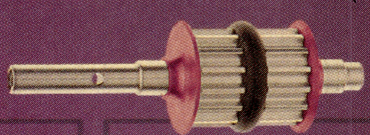
ENGINEERED

HPI RS4 Nitro Small Drive Pulleys



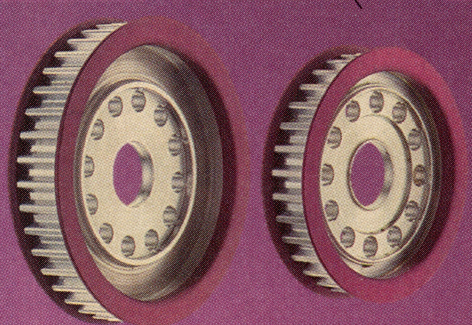
Drive pulleys sold in pairs. RRP 1538

HPI RS4 Top Shaft Pulley



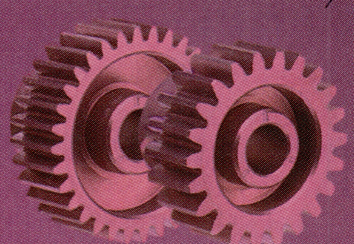
HPI RS4 Top Shaft Pulley: One piece pulley and shaft are precision cut and hard anodized. Purple anodized side flanges are pressed on.
RRP 1527

HPI RS4 Diff Pulleys



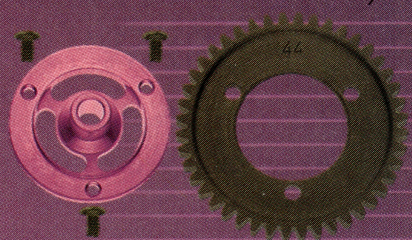
Precision machined, hard anodized aluminum diff pulleys. RRP 1539 fits HPI Nitro sedans. RRP 1528 fits HPI electric sedans.

HPI SuperLite Purple Aluminum Sedan Pinions



They're lightened, hard coated and precision cut.
Available in 48P in 16T thru 28T, and 64P in 24T thru 38T.
RRP 30XX (48P) and RRP 31XX (64P). Only $5.25

HPI RS4 Nitro Lightened Gear Adapter



This lightened gear adapter includes a machined nylon spur that is tougher than the stock gear and will last longer.
RRP 1535

An HPI RS4 Nitro 32 Pitch Conversion Kit is availble. RRP 1536

All performance accessories shown here were produced with precision CNC equipment. They're hard anodized where necessary, and color accents are added to help improve the looks of your machine. We spare no expense on the quality of the raw materials we use so that we can offer you only the finest in high performance drive train components. All RRP products are manufactured here in the USA.

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Reviewed: Tamiya Martini Alfa, Futaba 3PDF. How-to: Rebuild Mods, Clean Between Races, Take Jumps, Paint and Cut Bodies. IFMAR World Warm-up Coverage

3.2 September '97
Reviewed: Associated RC10GT, Yokomo YR-4 M2. How-to: Add Body Detail, Tighten Suspension. 10 Keys To Big Race Success. ROAR On-Road Nationals. T3 Pics.

3.3 October '97
Reviewed: Novak Pit Wizard, M.troniks Prodigi, Schumacher CAT SE, Tamiya TL01 Skyline. How-to: Use Swaybars to Tune Your Ride. Features: Motor Mysteries Revealed, They Call So Cal Home, A Close-Up Look At David Jun's Winning TA03. Also, B3 Pics, Worlds Results.

3.4 Nov-Dec '97
Reviewed: Associated T3, Trinity Switch Blade 12. How-to: Tune with Down and Up Travel, Mount Rubber Tires, Hop-up and Tune the HPI Nitro RS4. Features: All About Discharge Trays, '97 Off-Road Worlds Coverage.

3.5 January '98
50 New products for '98, Reviewed: Losi Street Weapon, Associated RC10L2. Inside Look at Kinwald's XX, Learn About Airbrushes. How-to: Rebuild Shocks, Tweak Touring Cars. NORRCA Off-Road Nats Results

3.6 Feb-Mar '98
Ultimate Touring Car Tire Guide, Reviewed: Associated B3, HPI Nitro Mini, Tamiya Nissan R390, Kyosho Lotus GT1. How-to: Reduce Your Cars Weight, Pack Light. Race Calendar

3.7 April '98
Reviewed: Losi XX 'CR' Kinwald Edition, Tech Voggerd T-10, Mugen Prime 12, Kyosho Super Sport 10 Learn How-to: Break-in gas engines, Turnmarshall, Convert your B2 to B3. Carpet Oval Nats coverage. Midnight 2 tested.

3.9 June-July '98
Reviewed: HPI Mini RS4, Losi XXT 'CR' Graphite Plus, Tamiya M-02L Porsches', Tekin G-10 Learn How-to: Use Caster, 24 Radio Glitch Fixes Features: '98 Winter Champs Coverage, Allen Driver Buyers' Guide. Evaluations: Xipp Power Jig, GM Discharge Box, Traxxas Free Wheel.

4.2 Sept-Oct '98
Reviewed: Associated L3 Oval, FSR Bullet Pro, TT VSpec. How-to: Cut 4WD tires, Stock Comm Cutting, Better Batteries. Features: MaxTec's Aftershock, ROAR On-Road Nats.

4.3 November '98
Tested: Schumacher Nitro 21 Xtreme, Tech Racing Voggered GT, JR Racing R-1 Radio, Tenth Tech. Streetwise Rally. How-to: Prep Stock Motors, Clean Tires. Features: ROAR Modified & Stock National Coverage.

4.4 December '98
Tested: HPI Nitro RS4 Racer, Kyosho Quad Rider ATV, Tamiya M-03 Rover Mini. Learn How-To: Start your own club, 10 Moto-tool R/C Uses. IFMAR On-Road Worlds Reports. Hook-Up: T3 & Street Weapon Guide to Pinion Gears. X-rattings: Team Cobra Probe 4000, Hitec CG-330 Charger, PSE Hood Tool

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Tested: Losi NXT GP, Kawada SV-10, HPI RS4 Mini Pro, Tamiya SVT Lightning, GM GMVIS Commander. Learn How-To: Read Dyno Sheets, Build Your First Car. Tamiya TCS Nationals Coverage. What's New for '99

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Tested: FSR Nitro Bullet V12, HPI RS4 Rally, Fox Team Losi R/C Racer. Learn How-To: 11 Tips to Better Decals, Use Camber to its Fullest Hook-UP: Associated B3 and Tamiya TA-03F Pro. First Takes: HPI Super Nitro RS4, Traxxas Nitro 4Tec, Tamiya Nitro TG-10, Losi IWC Street Weapon.

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Tested: Yokomo YR4 M2 Pro, Traxxas Nitro 4-TEC, HPI Super Nitro RS4, Schumacher SST '99 Pro, Novak Millenium. Learn How-To: Choose and Use Nitro Fuel, Repair Broken Servos. Hook Up: Losi Double-XT. X-Ratings: Trinity Paradox, Take-Off Sedan Tires, INDI 16X2 Nitro, Parma Faskolor Paint. First Takes: Kyosho TF3-R Spider '99, Duratrax Maximum ST, HPI RS4 Pro 2.

4.9 June '99
Tested: Tamiya Wild Dagger, Kyosho '99 Spider, Kyosho MP-6 Int., Tamiya TA03R TRF, Lynx 3D Radio. Learn How-To: Mounting Electronics, Get a job in R/C, Anodize Titanium. Silver State Challenge race coverage. Losi Double-X and HPI RS4 RTR Hook-Ups .And More!

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Tested: Losi Triple-X, Traxxas Nitro 4-Tec Pro, Tamiya McLaren MP4/13. How-To: Charge Ni-MH, Hook-up your HPI RS4 Pro2. Race Coverage: ROAR Off-Road gas and Modified electric Nationals, Reedy Touring Car Champs. Feature: R/C and the Internet, Drag racing basics.

5.3 December '99
Tested: Kyosho F-150 Landmax, Traxxas Stampede, New Era Drag. How-To: Sedan Tuning, Using Multi-stage foam. Features: ROAR On-Road Nationals, Tire Glue Buyers' Guide.

5.4 January '00
Tested: Associated TC3, HPI Nitro RS4 2, Kyosho MP-6 Sports, Tamiya Wild Willy 2, Tecnago 1/5-scale. How-To: Balance wheels, do everything better, Practice like a pro. Features: New for Y2K, Hook-Up Yokomo MR4 TC.

5.5 February '00
Tested:Thunder Tiger EB-4, Tamiya M-04L, Traxxas T-MAXX, Schumacher SST Rally, INDI 16X2 Pro V2.5, Motor Saver Filters. Features: Budget AM Radio Buyers Guide, Histor of Xtreme, Losi Triple-X Hook-Up, The Science of R/C, U.S. Indoor Champs. How-To: Get your Nitro Race Ready, Buy Ssed on the web.

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Tested: Losi XX-4 Worlds,Yokomo MR-4TC Pro, Associated GT RTR, DuraTrax Axis. Learn How-To: Rebuild Gas Engines, Sell Your Gear On The Net. Xtreme's Bible of R/C Terms. Industry Insider: Ernie Provetti. And More.

5.7 April '00
Tested: Kyosho TF-4 Type R sedan, Tamiya Mad Bison, Losi Triple-XT, Schumacher Axis. Learn How-To: Set Throttle and Brake Linkage, Dyno Tune Your Stock Motor. Features: Hook-Up Your TC3, Reedy Race Coverage, How Graphite Worx

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Tested: HPI Nitro MT, Mugen MTX-2, Kyosho EP Ultima, Yokomo MR-4 MT. Learn How-To: Reduce Drag and Resistance, Prep a new nitro engine. Features: Florida Winter Champs coverage, Battery Bar Buyers Guide, David Katz Interview

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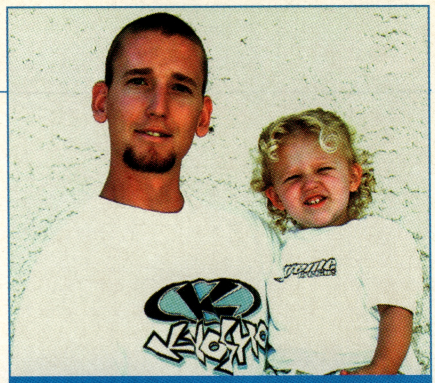
Jeremy Kortz



STATS

Age: 23
Residence: Ventura, CA
Favorite class: 2WD Buggy
Sponsors: Kyosho, Peak, Lunsford, MIP, RRP, Hardcore, GS, Promotion T-shirts, JR Racing, RPM, Novak, Medial Pro, Blue Thunder
Favorite Music Group: Korn
Favorite Movie: The Matrix
Favorite Babe: My wife, then Pamela Anderson – she's been very naughty!

How many National Championships do you hold?
Ten total. Most of them are ROAR and NORRCA championships in off-road.
How did you get into R/C?
My dad got me into it when I was nine years old. He picked up a Marui Big Bear at a local hobby shop.
How did you get into racing?
My first race was at a track called Hot Trax in Huntington Beach. At the time the fast guys there were Chris Moore, Jay Halsey – guys like that. We went there one time to see what it was like to race the Big Bear. I saw an RC10 for the first time. I saved up my allowance and bought a used Associated RC10 and started racing weeknights.
What has been your best racing experience?
That had to be the '94 Reedy Race of Champions. It was my first real big serious race with guys like Masami and other guys from around the world, not just American drivers. I happened to win the overall in Invitational and the 4WD class my first time ever running 4WD. At that time, the Reedy Race was the biggest race I had ever been in and I won it.
What's been your worst experience?
Going to Florida for the very first time. I think it was in '92 or '93. I thought my sh*t didn't stink. I went there expecting to beat everybody and ended up getting blown out of the water.
With all those National titles and high placements at big races, what happened? You disappeared for a couple of years?
At the time I was under contract with Team Losi and I wasn't happy. When Brian Kinwald came over to the team, I threw a hissy fit and I wanted out of my contract. I was 16 years old, I was making pretty good money, and I had no idea how good I had it. I basically became very self destructive. One night at SoCal, an argument on the track turned into a fist-fight on the drivers' stand with Sohrab Tavakoli. The guys with Losi were really unhappy with that, for which I don't blame them. Since I wanted out of my contract, that was pretty much it; we came to an agreement and I was out of racing. Four years went by and I was completely out of racing.
Do you regret the whole mess?
Of course. I just didn't realize what I had and where I was. Brain and I were right there the whole time. I think if I would have swallowed my pride and hadn't blown up, we'd be on the same level today. I was 16 years old at the time; I didn't know.
Why did you get back into racing?
A bunch of years had passed, I got married, had a little girl, and thought to myself, "You can't be the Motocross superstar you want to be." I just broke my collar bone on my bike and that was getting old. One day I decided to give R/C racing a shot – this time with a completely different frame of mind. I went out there and started racing again as a privateer with help from my dad. Team Losi helped me out a little bit since we make their T-shirts for them. Little by little, I started getting noticed again and got some help here and there. Then Kyosho spotted me and offered me a chance to race their electric stuff. I gave their gas stuff a try and the next thing I know I'm one of the fastest guys in gas right now.
What did you get out of the time you spent out of R/C? You had a pretty bad reputation. Are you the same Jeremy you were five years ago?
One thing I learned was that, when you're under contract you don't sell parts that you're supposed to be using for racing. My sponsorship was just for parts from Losi and I figured I could make some extra bucks by selling parts at the track. Gil Losi, Jr told me they wanted to pay me a monthly salary and wanted me to stop selling parts. I didn't stop selling parts and didn't realize the position I put myself in. I looked bad to everybody. Now I'm getting a second chance and I'm very grateful. My attitude's no longer me, me, me. I want to try and help other people when I'm at the track and not let my sponsors down. Those are the guys that are putting their neck out for me. I don't want to let them down. I want to do the best I can and not be the cocky kid I used to be. I'll let my driving do the talking instead of me off of the track.
What are your goals in racing?
I've got the 1/8-scale Worlds coming up later this year in Vegas. Recently at the warm-up race, I was the best finishing American at the race. Right now my goal is to finish in the top ten or top three. I don't think I'll have any problem finishing in the top ten, but I'm really shooting for the top three.
Well there you go again. You're getting cocky again.
No, I've really put a lot of time into my 1/8-scale, I'm real confident with my MP-6.
Yourself aside, who do you think has the best shot at winning the Worlds this year?
I'd have to say Mark Pavidis. At the warm up it blew my mind how fast he was. He just had some bad luck and broke in the main.
What do you do outside of racing?
I ride my motorcycle, work, and hang out with the family. Basically just do the father thing. I practice twice a week right now at Hot Rod Hobbies and at the Ventura Roadrunners.
What kind of bike do you ride?
A Honda CR 250.
How many bad crashes?
A lot. Recently I tried to go over a 40-foot double jump and ate it. I broke my collar bone on the landing. The bike was fine, but I was broken. I've also broken both wrists and my tailbone.
Anything you'd like to add?
Thank you for the opportunity to clear the air and put the past behind me.

Jeremy's daughter's name is Nikki. Will racing run in the family?

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Thanks to the innovative 4-stroke technology found on the O.S. FS-26S-C, more and more on-road racers are enjoying the benefits of increased low-end torque, better fuel economy, and a lower, quieter, more realistic sound than the high-pitched "whine" of two-strokes. And now you can add the option of a recoil starter. If better engine performance and a more life-like racing experience appeal to you, the FS-26S-C power plant is just what you're looking for.

Displacement: 0.269 cu in (4.4cc)
Bore: 0.728 in (18.5mm)
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Practical rpm: 2000-22,000
Output: 0.5 ps @ 17,000 rpm
Weight w/o recoil starter: 8.5 oz (243g)
Weight w/recoil starter: 10.8 oz (308g)
Includes: #F glow plug
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FS-26S-CX

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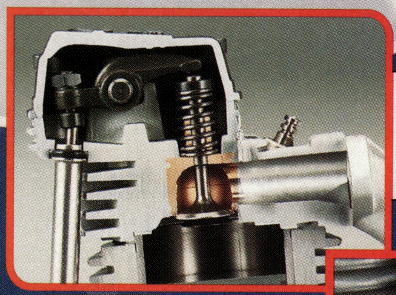
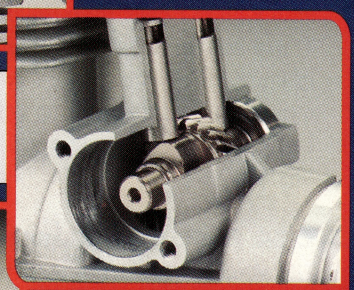


The valve springs have been reinforced to make them stiffer, reducing the effects of "floating" at high rpm.



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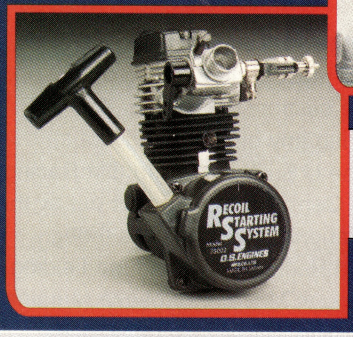
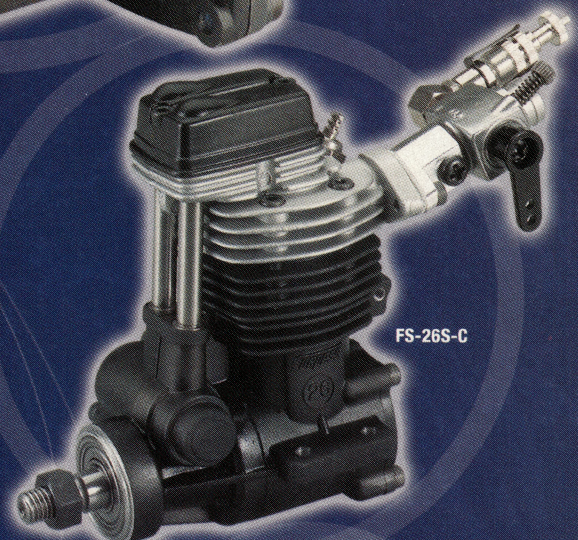
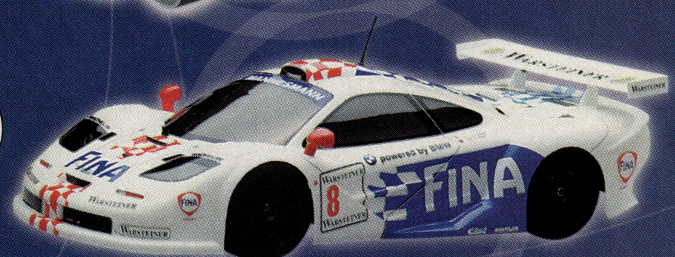


The new FS-26S-CX features the convenience of a easy-operating recoil starter.



FS-26S-C



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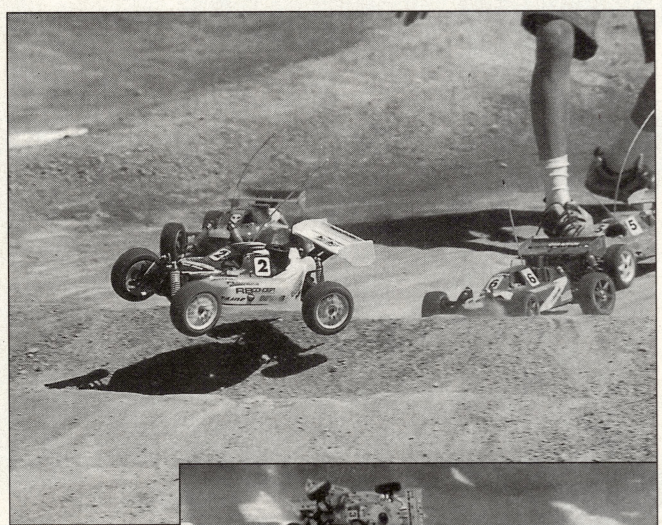
World's Best, Gamble in Vegas

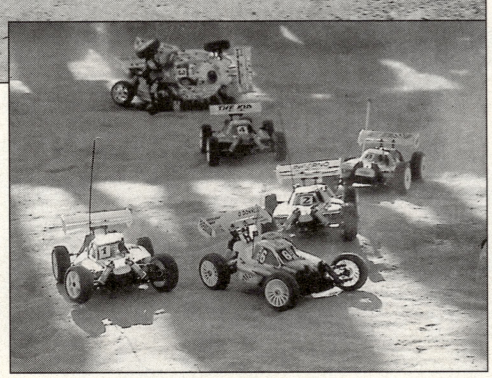
1/8-Scale Worlds Warm Up

In early May the worlds best 1/8-scale nitro drivers headed for Vegas. Along with gambling and some drinking, the drivers headed over to Western R/C for the warm up race to this year's IFMAR 1/8-scale world championships later this year. The Worlds will be held on a temporary race track that will be constructed in the parking lot of the Silverton Hotel & Casino, but for the warm-up the next best thing was Western R/C. Western R/C is host to the annual Silver State Nitro Challenge and is about three miles from Silverton.

The sixty-minute A-main consisted of five American drivers; Jeremy Kortz, Mark Pavidis, Chris Moore, Greg Degani, and Richard Saxton. The foreign contingent consisted of Alex Lafranchi, Raul Peris, Greg Waller, Sabastian Leonard, and Yannick Aigion. With the field split so, it's apparent that the American's don't have as much of an advantage as we thought.

In the A-main Mark Pavidis was very fast but broke after only eleven minutes. Richard Saxton had some engine problems needing fuel more often than most of the other drivers. Chris Moore, Greg Degani, and Jeremy Kortz all did well, but were at least four laps off the pace set by Alex Lafranchi. Alex won the race by completing 132 laps in one hour, seventeen seconds. The tire of choice for many was Pro-Line's new Crime Fighter. But, thanks to a very rough track and lots of horsepower the tires would wear down midway into the race. Only two drivers did not finish the A-main. As far as the manufacturers race goes the field consisted of three Thunder Tiger EB-4's (winner), four Mugen MBX-4RR's, and three Kyosho MP-6's. This is the one and only warm-up race for the Worlds in October. As you'd expect we'll have wall to wall coverage along with web updates when the time comes.





Wouldn't you know it, a Lafranchi won the race.

Sanyo 3000s Legal for the Worlds?

Despite a unanimous vote by the ROAR Executive Committee against the move, IFMAR has decided to allow Sanyo's new 3000 Ni-MH cells to be legal for competition at the IFMAR On-Road Worlds later this year. ROAR opposed allowing the cells because the new cells have yet to go on-sale here in the States and are not ROAR legal. This move puts U.S. drivers at a disadvantage since they will have had less time with the cells than drivers from other global markets. There still remains some controversy. It was ROAR's understanding that "Postal" votes, which this vote was, must be unanimous along with the votes from the other blocks. If there's any change in this decision we'll keep you posted.



GM Racing Suspends Race Team

GM Racing has suspended most of their racing operation. It's not known how long the suspension will last, but GM Racing will not be sponsoring any big name drivers for the immediate future here in the U.S. Recently the GM Racing USA's affiliate company in Germany was bought out by the large German concern, Graupner. It appears as though Graupner is revaluating GM Racing's commitment fielding a big name race team although Masami Hirosaka remains to be sponsored by GM Racing. Should circumstances change we'll be sure to keep you up to speed.

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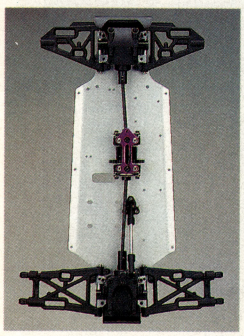
●3 Differential Shaft Drive 4WD ●4 Bevel Gears ●Steel Conical Gear ●Steel Spur Gear ●Differential Case (Nylon) ●Separate Al.Suspension Mount ●F/R Lower Arm ●Front Universal Joint ●F/R Anti-Roll Bar ●F/R Tension Rod ●Double Disk Brake ●F/R Damper w/Dust Rubber ●F/R Damper Spring ●A70-75(T6) F/R Damper Stay ●Al.Engine Mount ●A70-75(T6) 1/8 Inch Chassis ●3-pcs Clutch & Flywheel ●Fuel Tank w/Filter ●Fuel Tank Guard ●Fuel Filter Holder ●Fuel Pipe Holder ●Air Filter ●Box type Receiver Case ●Stone Guard ●Battery Holder for 6V5N-600mAh Receiver Battery ●Adjustable Wing Stay ●Nylon Wing ●Light-weight Spoke Wheel ●Ball-raced

● Dimension ●

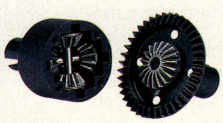
Length	: 480mm	Tread(F/R)	: 266/266mm
Width	: 307mm	Gear Ratio	: 10.95:1
Height	: 182mm	Drive	: Shaft Drive 4WD
Wheel Base	: 326mm	Weight	: 3390g

Other items needed to operate this model:
2 Channel radio with servos, 3.5cc R/Exhaust Engine with muffler, tire & inner foam, starter, and fuel.



● Drive Train

Very efficient 4WD shaft driven system with excellent performance and high reliability. Chassis is made out of A70-75(T6)1/8inch. Aluminum. The front of the chassis has a 10-degree kick up.



● Differential

All new differential design. New high quality molded plastic differential housings with high durability and very easy maintenance. Each differential is a 4 bevel gear design with new heavy duty conical and spur gears.

● Suspension Mounts

All new front and rear machined Aluminum suspension mount, which are hard-anodized purple. These mounts are stock items in this kit.

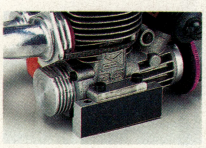


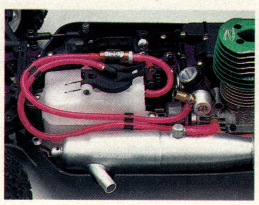
● Suspension Arms

All new design front and rear lower suspension arms. Full Bump Stop adjustability for both upward and downward travel. This is the first time this option is available on a stock off road kit. This feature makes for excellent performance for all track conditions.

● Engine Mount

All new machined Aluminum engine mounts hard-anodized purple. This is a stock feature in this kit.





● Fuel Tank

All new fuel tank cap design with an angled pressure fitting for better pressure line arrangement and for better sealing when the tank is closed. The tank also has a built in filter. An all-new molded splash guard and fuel line clips(4 pieces)all included with this kit.

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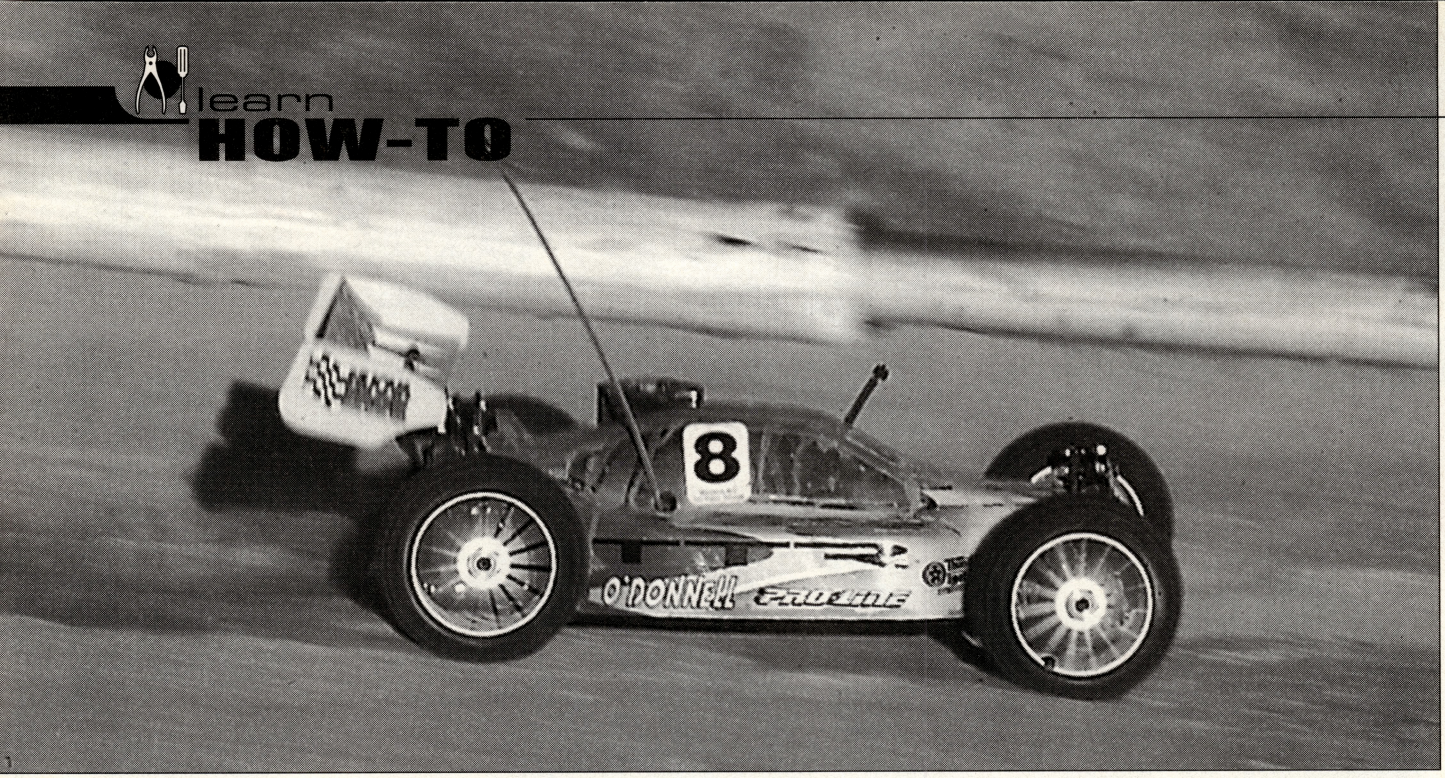


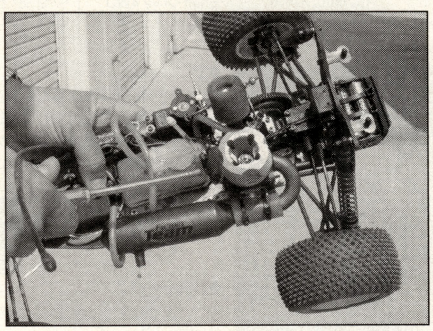
Cleaning and Maintaining Your Nitro Car . . .

by Regan LeBlanc

Proper maintenance is important in every aspect of life. If you eat junk food constantly and don't properly maintain your body, you'll pay for it later on. If you don't change your full-size car's oil on a regular basis, you'll regret it at the worst possible time (either on a date or between LA and Vegas). And, as a worst case example, if you don't brush your teeth everyday, you'll soon have no teeth to brush. The common thread in all of the analogies is without proper maintenance you're asking for disaster. Whether you race or not, proper maintenance is very important when it comes to nitro R/C cars. In this article I'm going to show you how to properly clean and maintain your nitro vehicle so that you can avoid disaster and keep your nitro sled in tip-top shape.

What You'll Need

- Large paint brush.
- Your sister's brand new tooth brush.
- Denatured alcohol in a spray bottl or Traxxas Nitro Wash.
- Some pipe cleaners.
- An air-compressor or a can of compressed air.
- Some shop rags.
- A can of WD-40.
- A dirty car or truck.



If an air compressor is handy, the first thing you should do after running your gas car is to blow the car off completely.

When to Clean

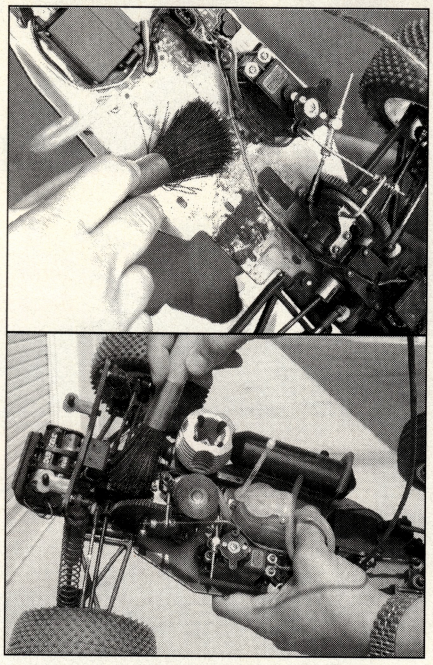
There are two times to clean your gas car: Between every run or race, and after every race day, or once a week if you don't race. Between runs or races you only need to do some simple cleaning. Between races use a brush and a rag to wipe off dirt that's accumulated. If an air-compressor is handy first blow the car off dry. Some guys squirt their vehicles with alcohol or silicone or WD-40 first, but that just makes gunk that can be blow into cracks and crevices. After blowing the vehicle off, brush it again, and blow off again. It's important to keep your car clean between races. If a part is broken or compromised, you won't spot the weak part if it's covered with dirt. If you perform simple cleaning often, you'll avoid possible catastrophe down the road.

Between race days do a simple cleaning as prescribed above, and then dig in for a thorough cleaning. First you need to remove the engine. When removing the engine, leave the air filter and all the fuel tubing in place. Remove the engine and pipe from the car so that you can clean the entire thing as one assembly. Once the engine and pipe are completely removed from the car, spray the engine down with denatured alcohol. Avoid spraying the air filter. Spray around the base of the filter. Paper filters will suck up the alcohol and you don't want to do that.

Cleaning the Chassis

I usually try to keep the chassis of the car as dry as possible. I only use denatured alcohol when it's necessary. After removing the engine,

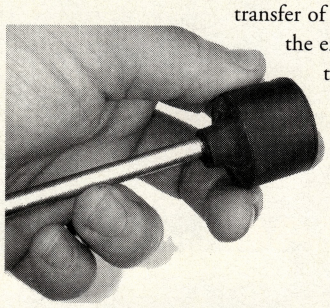
Wear an apron when working on your nitro vehicle or else you'll get dirty.



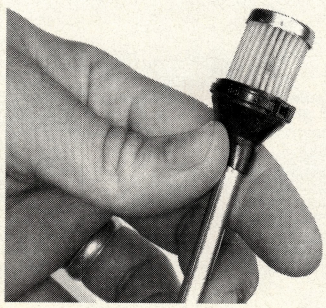
Top and Above: With or without the engine and fuel tank installed, a good heavy-duty brush is very useful in keeping your car tidy.

remove the tank, a brush and an air compressor should do the job. If you have some oily dirt stuck to the chassis try to wipe it off with a rag. If it doesn't want to come off, use a flat head screwdriver to scrape the scum off, but try not to scratch the chassis. Once most of the dirt is off you can flood the chassis with denatured alcohol.

Once you have the engine, pipe, and tank out of the chassis, it's a good time to inspect things. Make sure the engine mounts are completely clean. You don't want any dirt building up between the surfaces that might hinder the transfer of heat from the engine to the chassis.



With either a foam or paper filter, it's a good idea to back flush the filter with air to keep it clean.



Take a good look at the left rear of the vehicle, or the portion of the car where the exhaust is being blown onto. You'll need to spend a little extra time cleaning this part of the car or truck. Aside from this area of the vehicle you should clean the chassis of the car just as you would any vehicle. Scrape any hard-packed dirt off. Use a brush or air compressor to blow off any dirt or dust and inspect all the vital areas of the vehicle at this point. In the smaller tight spots on the vehicle, use pipe cleaners to reach everywhere you can.

Cleaning Filters

If you use a paper filters with pre-filters, like the Associated or Losi-style filters, you should replace the pre-filter often. If that's the case you shouldn't need to worry about the paper element that often. The only time you'll need to replace the paper filter prematurely is if you flood the engine and get fuel into the filter itself. Even if the filter dries out, it won't be the same. Unless you wet the paper filter with fuel you should replace paper filters about once a month or when you see dirt building up in the creases of the filter.

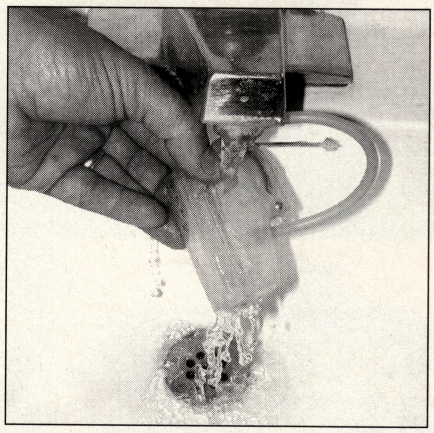
To clean a foam filter, back flush it with an air compressor or a can of compressed air. Take the filter off of the car then spray the air compressor nozzle through the bottom of the filter holder so that the air is pushing debris outward and not deeper into the filter. Once you've done that, spray the filter off with denatured alcohol to flush any debris left in the filter. After the filter is dry, re-oil it with filter oil. If the filter foam isn't very dense you can us Associated filter oil. If the foam is very dense like some of the Japanese white foam that's out there, use a thinner filter oil like PJ-1 or K&N motorcycle filter oil.

Cleaning the Fuel Tank

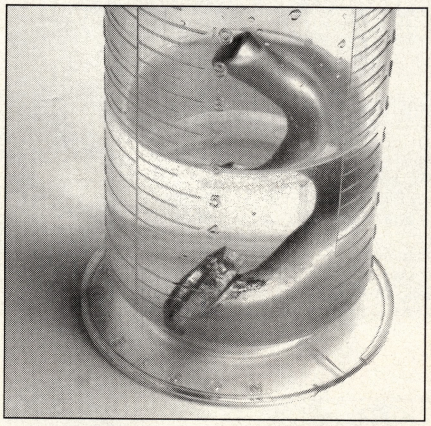
If you need to clean the outside of a fuel tank, run a piece a fuel tubing from the pressure fitting to the fuel outlet. Once the tubing is in place and the tank top is sealed, run the entire tank under some warm water in the sink. Use a towel to dry the majority of the water off and then let the tank air dry the rest of the way. If you need to clean the inside of the tank, plug the two outlets with fuel tubing and pour some fuel inside the tank, seal the tank, then shake vigorously for a minute or so and dump the fuel. If you see any dirt or oil accumulations inside the tank, repeat the process until the tank is completely clean.

Cleaning Off the Varnish

If you've got baked-on varnish on the outside of the engine or the exhaust manifold, you can remove it by spraying the area with denatured alcohol and rubbing the varnish off with a towel or wire brush. If that doesn't work, try soaking the part in denatured alcohol overnight, or as a last resort whip out the Dremel tool and attach a wire brush. This will definitely clean the varnish off, just be sure to wear proper eye protection.



To clean the outside of your fuel tank, simply run the tank under some warm water. Be sure to connect the pressure fitting to the fuel pickup outlet with fuel tubing to seal the inside of the tank from water.



The safest and easiest way to clean varnish off of an engine or engine component is to allow the piece to soak in denatured alcohol.

Clutch Cleaning

Between race days, you should always thoroughly clean your clutch. When the engine's removed from the truck, remove the clutchbell and the clutch bearings. Once the clutchbell is off, wipe down the inside of it with a rag and some alcohol. Next take a Scotch Brite™ pad and wipe down the inside of the clutchbell to scrape off any glaze that's accumulated on the inside of the clutchbell. Also use the Scotch Brite™ pad to scrape the glaze off of the portion of the clutch shoes that contact the clutchbell. You only need to scuff the shoes up a little. When fuel works its way into the clutch it causes the glaze to form quicker.

1/10 SCALE

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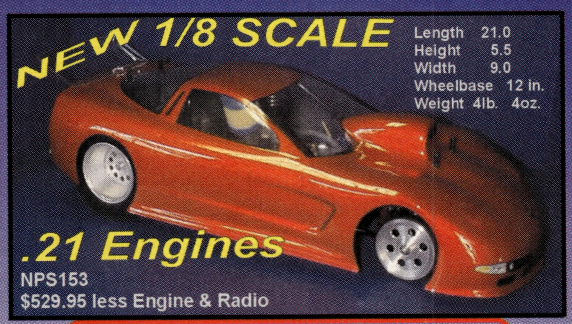

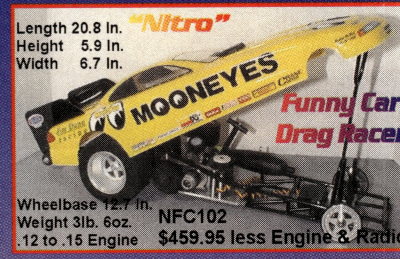

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NTF151 1/8 Scale Top Fuel (for21)	$559.95
NPS152 1/8 Scale Pro Stock (for21)	$529.95
TRX103 Traxxas NitroRustler Chassis	$39.95
NTF210 SS(steel)Brake w/Fibre Pads	$ 9.95



1/10 SCALE UPGRADES



Upper Steel Tube Chassis for OFNA Monster Blazer $169.95



AGT103 Bi-Level Chassis $79.50
AGT106 for 21 Engine $109.50



AGT101 Rear Brace $21.95
AGT102 Front Brace Tubes $ 7.95

Upper Steel Tube Chassis for USA1 $169.95 Chassis only





Steel Tube Chassis Only $239.95



Upper Steel Tube Chassis for T-MAXX $169.95 Chassis only

CNC Aluminum Upgrades

TRM320	Front Skid Plate	$23.95
TRM321	Rear Skid Plate	$19.95
TRM322	Front Bumper pr	$18.95
TRM323	Rear Bumper pr.	$18.95
TRM324	Front Bumper Supports	pr. $24.95
TRM325	Rear Bumper Supports	pr. $24.95
TRM326	Lower Braces	pr. $69.95
TRM102	Rear Sway Bar. (Requires TRM325)	$39.95
TRM329	Steering Draglink	$9.95

Many More CNC Aluminum Upgrades Soon

1/4 SCALE

Kits Starting at $995.00 Including Gasoline Engine

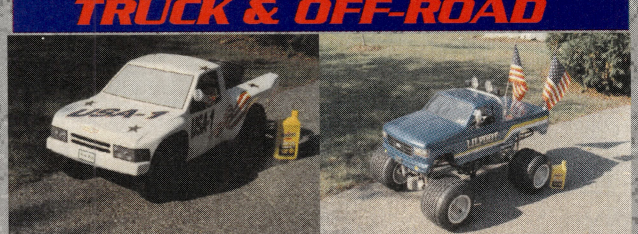
ROAD



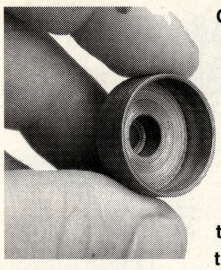
DRAG



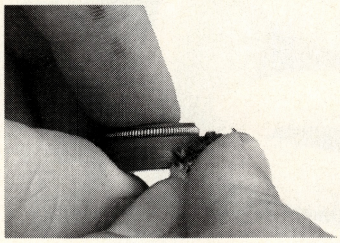
TRUCK & OFF-ROAD

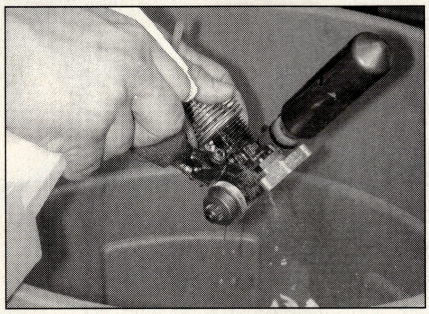


www.NEMScaleCars.com

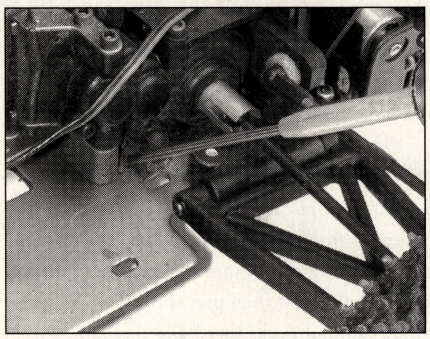


Clean both the outside of the clutch shoes and the inside of the clutchbell. Removing the glaze that accumulates will keep your clutch acting consistent from one race to the next.





When washing down the engine, pipe, and manifold be sure not to wet the fuel filter.



Sometimes you'll need a flathead screwdriver to scrape off some of the baked-on dirt that might accumulate in some of the odd spots.

Before you reassemble the clutch, clean, re-oil, and inspect the clutch bearings. Make sure that they're free of slop and don't show any signs of premature failure.

Extremely Muddy Conditions

If you've just finished running your car in the rain or in a very muddy race, shower the car off. Remove the engine and the electronics from the car. Then either hose the car off with your lawn hose of throw it in the shower and clean the car off that way. Spray the car down until all the dirt you can see is gone. Shake the car off and dry it with a towel. Then, grab a can of WD-40 and spray it everywhere. Work the WD-40 into all of the suspension hinges, shock shafts, bearings, axles, steering linkage, gear box – everywhere. The WD-40 will work its way into the bearings and hinge pins. Afterwards, dry the car off with a towel and then repeat if you think you need to. I know this sounds a bit extreme, but think about it. If the car was that muddy to begin with, it's necessary to get lubrication all over the car to prevent rust and wear. Showering the car with water and then following up with WD-40 is much safer than running the car in wet conditions then allowing things to dry. Motocross racers clean their bikes off the same way – maybe not in the shower, but with lots of water.

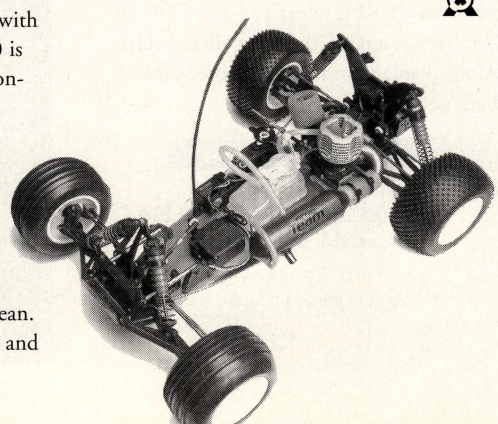


Prevention

There are basically two areas that you can address that will help keep your gas car clean. Make sure that you don't overfill the tank and cause fuel to get all over the chassis. Also make sure that the exhaust stinger isn't directing exhaust into the chassis. Also, if you're going to be running on a real muddy track, spray down your chassis and other parts of the vehicle with WD-40. This will help keep mud from sticking to the chassis and other areas of the vehicle. If the conditions are dusty, don't do the WD-40 trick. The dust will stick to the WD-40 like a magnet.

The Last Word

There you have it. You now know how to thoroughly clean your gas car or truck. Remember, in order to get the most out of your nitro R/C car, it's extremely important to keep things clean and working properly. The last thing you want is your buddies to write "Clean Me" with their fingers over your car's chassis.

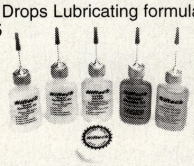


Niftech

Niftech High-tech R/C Motor Cleaner
Toughest high pressure, fastest drying motor spray available for off-road and on-road. Safe on plastics- 20 oz. can.
#4500 Retail $5.95



Space-Age lubricants with low-drag co-efficient
Increases RPM For wheels, Micro Bearing Oil #1030 $4.95 Retail
Bushing Motors. New! Super-synthetic oil for bushings #4505 BU $4.95
Bearing Motors New! Super-synthetic oil for bearings #4505 BE $4.95
Motor Brushes
New! Hyper Drops Lubricating formula #4510 $7.95



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High micro finish notched for positive action. Worlds smoothest and lightest diff rings. Comes with 12 class 7 balls and pins!
Rocket Ring #2002R $14.95 pair
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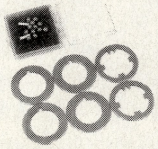
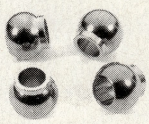
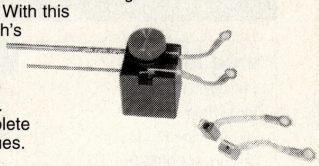
Standard #2002, Hyperdrive #2002 #2002R $10.95 pair
Rocket Ring Diff Lube 2002DL is highly recommended for unbeatable performance. $4.95
100 1/8 in. Chrome steel diff balls #2003 $8.95



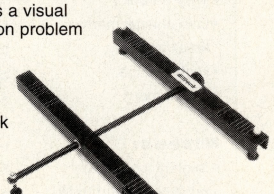
Precision Bronze Pivot Balls
Replaces stock plastic balls in Associated Dynamic Strut front ends also HPI, Hyperdrive, TRC, Trinity cars. Smoother action, superior handling, long lasting.
Four balls #1003-01 $14.95
Insertion tool #3200 $4.95



Motor Brush Drill Jig
Precision motor brush drill jig allows you to turn any standard or laydown brush into a modified "super brush:" drill a large speed cavity in the exact center of the brush face; drill an extremely small vent hole (0.042 in.) in the center of the brush face. This hole can be drilled through the whole brush to allow cooling. The jig is hardened for long wear. It also comes with two drills. With this tool and Niftech's Competition Brushes, you'll be in the winner's circle. Send for complete set of catalogues. #3019 $39.95



Precision Tweak Board
World famous adjusting tool. Capable of tweaking 1/12, 1/10 and 1/8 scale cars; offers 3 to 5 grams of sensitivity. The lightweight aluminum precision tweak board can be disassembled with one thumbscrew for easy storage; gives a visual method of evaluation problem areas in your suspension. Unlike other methods, it is completely visual, take the guesswork out of suspension adjustment.
#3002 $74.95



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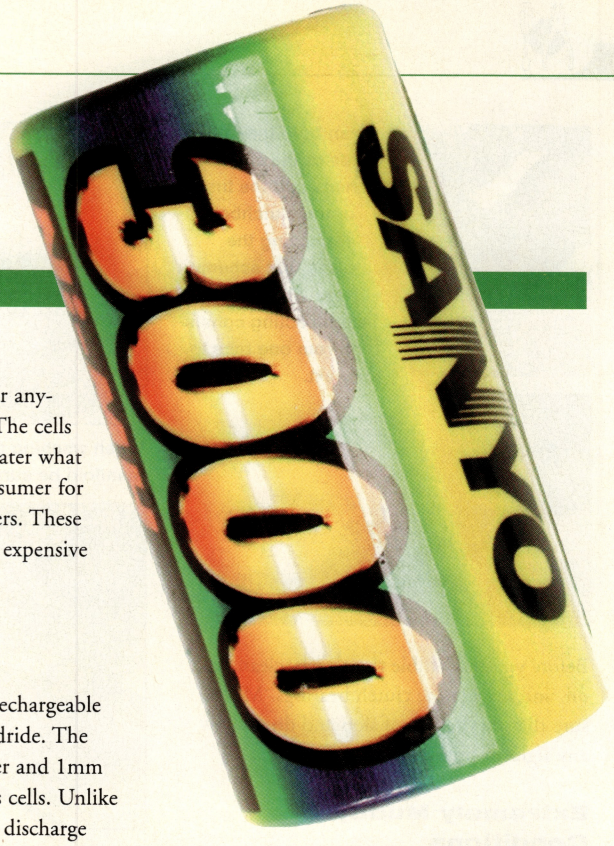
Sanyo RC3000H

Trinity 3000 Pro Ni - MH



Last summer the R/C world was introduced to Nickel Metal-Hydride batteries thanks to Panasonic and their 3000 NiMH cells. These new cells shook up the industry with new charge procedures and run times much longer than anything on the market. Now at races it's not out of place to see drivers using motor winds as low as 7-turns. The long run time of these new cells makes running those super low winds possible. Overall these new cells have had a big impact on modified racing, but little effect on stock racing because of their lower average discharge voltage.

Since Panasonic released their new cell you knew it wouldn't be too long before Sanyo had a cell of their own. For years Sanyo has enjoyed huge foothold on the R/C racing market. Sanyo looks to reclaim that advantage with the release of their newest offering; the RC300OH. For testing we managed to get a few packs from Trinity (Sanyo's exclusive USA importer for the RC3000H.) for testing along with some Panasonic 3000's for comparison, lets see how it goes.

What They Are For

The new Sanyo RC3000H is for anybody with an electric R/C car. The cells will deliver long run time no mater what the application is. The best consumer for these batteries are modified racers. These new cells are only slightly more expensive than previous Ni-Cad cells and Panasonic's 3000.

What They Are

The RC3000H cell is a sub-C rechargeable cell made from nickel metal-hydride. The new cells are almost 1mm longer and 1mm larger in diameter than previous cells. Unlike nickel cadmium cells that build discharge memory and must be stored completely discharged, nickel metal-hydride cells do not. In fact its best to keep your Ni-MH cells with about a 40% charge. Also, unlike Ni-Cad cells, Ni-MH do not require recycling. According to Sanyo's specs we should find that the RC3000H's have a slightly higher average voltage than the Panasonic cells with the same run time.

Bench Testing

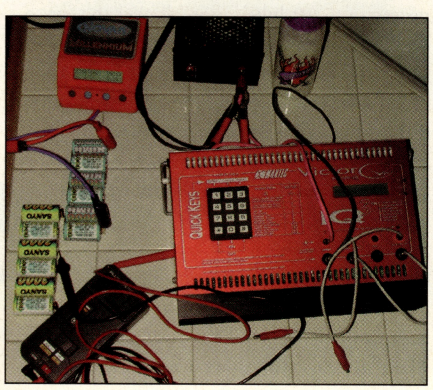
Before I started testing the new batteries I had to build up packs. I grabbed my favorite battery building jig, the Speed Jig from Deans. And was disappointed to find that the 1mm difference in length would not allow me to use the jig. I had to grab a piece of sand paper and sanded down one of the inside edges of the jig. Only needing 1mm it was pretty easy to get a smooth even finish. After modifying my jig I was ready to build. The new cells build just like any other battery. I used my Dremel tool to rough up the ends of each cell to procure soldering. Once that was done I wet each cell with solder and gave Trinity's battery bars a try with Deans Silver Solder. After a half an hour I had all three packs built and ready to go.

Out of the box the cells come with a slight charge. Throughout my testing procedure I used a Novak Millennium charger with the voltage threshold at the lowest setting. I tested the cells at different charge rates anywhere between 3 and 7 amps. For discharge results I used a Victor Super IQ³ battery conditioner. To verify voltage accuracy I periodically verified voltage readings with a Fluke voltage meter.

The Millennium did a good job of charging the Sanyo cells at 5 amps it took about 2300 seconds which, if you do the math is about 40 minutes.

I discharged each pack at 20 amps. Each pack was cycled about 12 times. From there I took a good long look at the numbers. When charged at 5 amps the average voltage supplied per pack was 6.72 Volts which is 1.12 per cell. The numbers supplied were slightly

My test area was very scientific, my kitchen counter. I bench tested the cells over the weekend at home.



Vital Info:
Distributed by:
Trinity Products
36 Meridian Road
Edison, NJ 08820
732-635-1600
www.teamtrinity.com

Hits:
- Very durable.
- Can charge many times in a day.
- High voltage.
- No memory.

Misses:
- Slightly increased price compared to Ni-Cads and Panasonic 3000s.
- Slightly larger than current cells.



Last Word:
Nickel metal-hydride cells are here to stay and are the future of R/C. Sanyo pushes the bar a little higher when it comes to voltage at the expense of some run time. If you want higher performance it will cost you a bit, but it's worth it.

The Specifics:
Part #'s: Various.
Suggested Retail Prices:$85- $140

Manufactured in Japan

Don't let your wife get a hold of these new cells or you might be out on the street.

higher than numbers I found with some comparably new Panasonic 3000s. This confirmed the number data printed on each cell. Through the testing I didn't allow the cells much time between charges. Once a pack had cooled down from discharge I cycled it again. Only a handful of times did I get a lower reading when following this procedure. I confirmed this fact with Jim Deiter at Trinity. He told me that there appeared to be no ill effects from running the cells through as many as six cycles in a day. I averaged about five cycles a day when I tested the cells. When I charged the cells at 3 amps there wasn't much difference in the discharge data. When I went up on the charge voltage I did notice a difference. I charged the cells at 7 amps and noticed a sizable average jump in discharge voltage. When charged at 7 amps the average discharge voltage per pack was 6.82 Volts or 1.136 Volts per cell. There's a tip for those of you looking for that extra punch. The longer term effects of charging at a higher voltage is not yet known. I suspect that it might shorten the useful life of the cells, but if you want the voltage that's how you get it.

When it came to run time the Sanyo cells were very consistent. I averaged 8 minutes and 34 seconds to reach a cutoff voltage of 5.1 (0.85 per cell) Volts per pack.

Track Testing

The true test of the new cells is on the track, I ran the Sanyo's in every car I could find, a truck, a buggy, sedan, 4WD, you name it. With a stock motor the cells felt good. Not quite as punchy as a pack of RC2000 Ni-Cads, but very close. Especially when charged at 7 amps. With a P2K stock motor I was able to run for about seven and a half minutes in my Triple-X. When using modified motors the cells were perfect. I ran as low as a 9 turn motor in my TC3 and was able to get almost five and a half minutes of hard running with the same gearing that I had used with my RC2000s. Basically dumping should never be a problem no mater what the race application. During the modified runs the cells did get very hot, but not any hotter than a comparable Ni-Cad.

Compared to Panasonic 3000s

During my bench testing I only cycled two packs of Panasonic cells, so my data isn't absolutely scientific. But, I was able to draw some conclusions that I'm fairly confident in. It appears that the Sanyo 3000's provided a slightly higher average voltage but didn't deliver quite as long a run time than the Panasonics. The difference in voltage was about .01-.03 volts difference per cell and run time was about thirty seconds to a minute shorter per pack. The big difference between the Panasonic cells and Sanyo cells is the price. This high performance has its price. When the Sanyo cells hit the market this summer they will average about about $3 to $10 higher in price than Panasonic cells on the suggested retail level. That should translate into only a few dollars difference at the hobby shop.

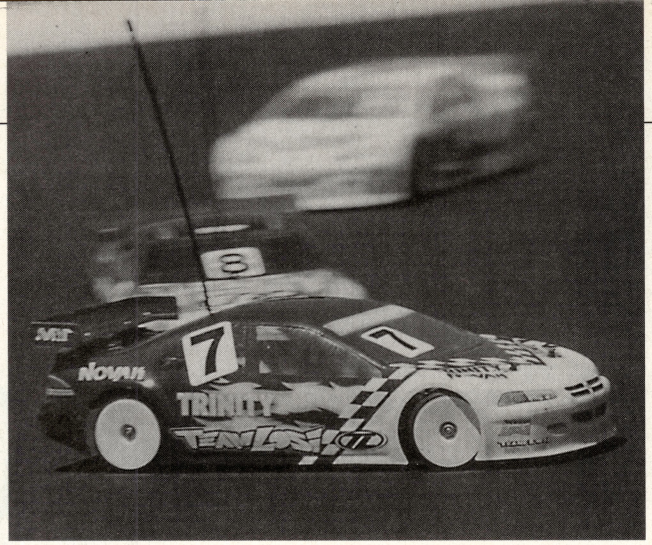


The Last Word

For racers the Sanyo cells have an advantage. Their higher average voltage will give you the extra punch you can't find from any other Ni-MH cells on the market. As far as the shorter run time than Panasonics, so what. You're not going to dump with these packs. The size difference is a little annoying. The cells fit all my chassis' without any problem, but I was a little dismayed when I went to build my packs. The only down side to these cells is the slight increase in price, but we're only talking a few bucks. As far as the durability factor goes, these cells were great. Charge after charge the Sanyo cells took it and delivered. The battery landscape is constantly changing, these new cells look to improve that landscape.



Andy takes no responsibility for the caption opposite this one.

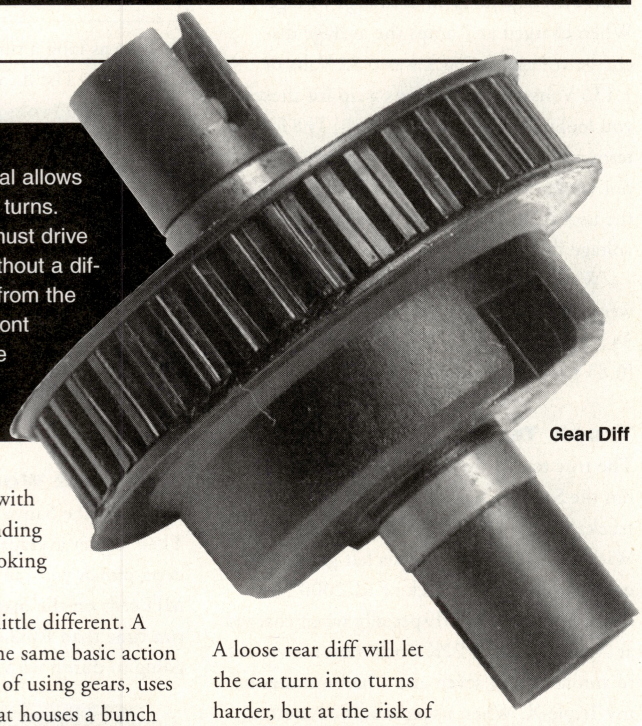


Touring Car Differentials

Turn like the best of 'em...

The Basic Idea...

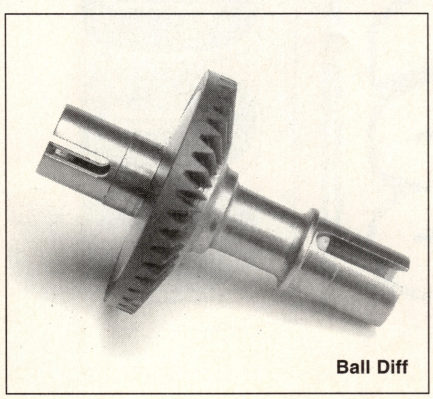
In an on-road touring car a differential is an essential item. A differential allows the car's wheels to provide drive to the ground through tight and large turns. When a car goes around a turn the tires on the outer side of the car must drive through a larger turn radius than the tires on the inside of the turn. Without a differential the car would want to go straight and resist the turning input from the front tires. To illustrate this fact try picking up your touring car by the front tires and run the rear wheels around a table. Make lots of turns. Notice how the tires can move at different rates independent of each other? That's the differential at work.



Gear Diff

Gear Diff Versus Ball Diff

There are two basic types of differentials used in today's touring car. The first and most economical is a geared differential. Inside a gear housing are four beveled gears, that when built correctly can provide all the performance necessary to get you through the turns. Gear differentials have some advantages. They can handle a tremendous amount of torque and power without slipping. Geared diffs also require very little maintenance. Basically you build it and run it. Geared diffs also have some disadvantages. Sometimes you want a slower or faster acting differential. With a gear diff you must first seal the housing, then fill the diff with different weight oils depending on the diff speed you're looking for.

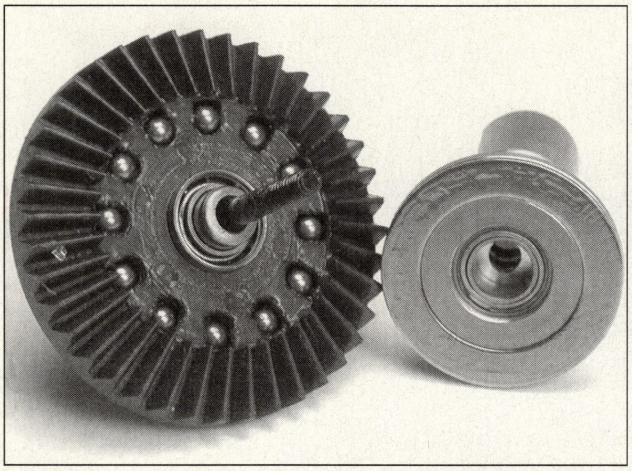


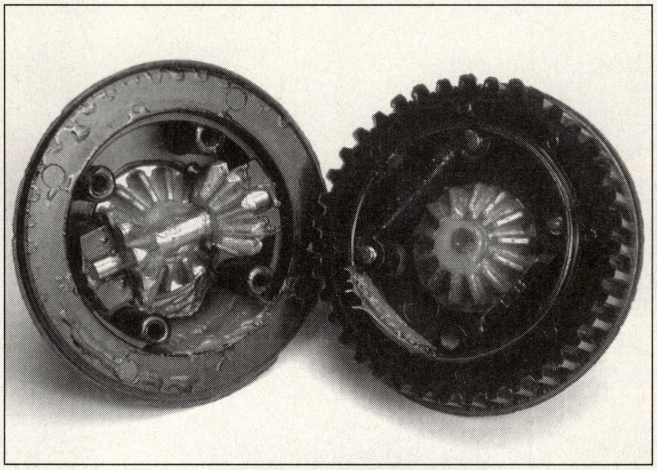
Ball Diff

Ball differentials are a little different. A ball differential provides the same basic action as a gear diff. But, instead of using gears, uses a single center diff gear that houses a bunch of small steel balls. The balls are sandwiched by two steel rings. The movement of the balls allows the two diff rings, and their connected outdrives, to move in opposite directions like a gear diff. Ball differentials allow for easy adjustability. Ball diffs can be loosened or tightened depending on the handling characteristics you desire. Ball diffs do require more routine maintenance than gear diffs and can loosen and slip under very high load.

Front and rear

Adjusting the rear differential is a minor tweaking tool when it comes to getting your car around the track as fast as possible. Rear diffs effect how fast a car can pivot around turns. The looser the rear diff the harder the car will rotate around the center of the turn. A loose rear diff will let the car turn into turns harder, but at the risk of lighting the diff. Lighting the diff is when you're on the brakes hard and the inside rear tire lifts off the ground. If this happens that tire will begin to rotate backwards because of the differential action. If this happens you'll loose a lot of braking force and when the tire comes back down to earth the car will do some weird things. The only time you'd want to run your rear diff very loose is when you can't seem to get your car to turn hard any other way. Very tight turns may necessitate a loose rear differential. Running with a tighter diff will make the car feel more predictable around turns, but may not allow you to get around the track as fast as you might with a looser diff. The best way to set your diff is to tighten it according to you car's instructions than backing it off little by little until the dif-





ferential action is nice and smooth and the diff doesn't slip on acceleration.

Front

A tight front diff will allow your car to turn harder into the beginning of a turn, will scrub some steering in the center of the turn, and will give you more steering to accelerate hard out of the turn. That is because a tighter front diff gives more power to the outside wheel. Typically it's a good idea to run your front diff looser than the rear diff. Running your diff on the loose side will make the car more predictable. When it comes to running the front diff loose you must also realize that under braking your front diff is under just as much load as the rear diff is during acceleration. If your diff slips under hard braking you run the risk of scorching the diff. Since under acceleration more load is being put on the rear diff you can run the front diff looser without much risk of scorching from acceleration. For the most predictable, driver friendly setting first tighten your front diff according to the instructions then hold the spur gear and one tire. Try to slip the front diff. Tighten the front diff so that it's just a little too tight to slip.

One-Ways

On big fast tracks, one-ways work well. On a typical tight track with lots of turns you need brakes. When you need brakes, a one-way will be a disadvantage. During practice you might feel faster with a one-way on some tracks. But, under race conditions you might be much slower with a one-way. During a race you sometimes need to drive as hard as you can into then brake just as hard to get around the turn first. A one-way won't let you do that. Use a one-way on a long track with sweeping turns. A one-way will work well on a track that doesn't dictate that you be on the brakes a lot.

Rebuilding

When rebuilding a ball diff you need to clean everything thoroughly. Use pipe cleaners to clean the ball holes. You should always replace the diff balls. The diff rings don't need to be replaced each time, they can simply be turned over so that you can get two rebuilds with one pair of diff rings. Thrust bearings are pretty durable. You can simply clean the thrust bearings for most rebuilds and replace once every four or five rebuilds. When choosing a diff grease I typically use Team Losi's stock brown grease. It doesn't need rebuilding as often and doesn't feel quite as gritty as silicone grease. When you get ready to rebuild cake in as much grease as you can into the diff. The more grease you can pack in the better. Grease will slowly migrating through the balls and clean them. When you tighten the diff refer to your car's instruction manual. Rebuilding a gear diff is very similar. Tear the gear diff apart, clean each gear, regrease and reassemble. Once your diff is rebuilt you can go ahead and break the diff in.

Breaking In

Breaking in a ball differential is very important. The first run on a ball diff burnishes the diff rings. With a tight differential there's a tremendous amount of pressure on the diff balls. The first few rotations on a diff presses the steel rings inward and actually burnishes a tiny groove into the diff rings. Once this groove is set there's more surface area for the diff to use in action. To brake in the diff, tighten it. If you're breaking in the rear diff, hold down the left rear tire and apply a little throttle for about five seconds, then repeat holding the right rear tire. Repeat the process about three times each side then feel the diff. You'll probably need to tighten the diff a little to get it just right. Repeat the process with the front diff. Refer to your car's instruction manual for any specific details unique to your car.

Slip is a Bad Thing

Most diff wear occurs when the diff slips. Slipping is when center diff gear looses traction with the two diff rings. When a diff slips the balls will become pitted as will the washers, and the grease becomes contaminated because of the metal being shed by the rings and balls. For this reason always error towards a tight diff when making adjustments. You can always loosen the differential to get the steering you're looking for.

Now you have the tools essential to tune your touring car's differentials for track conditions. I've shared with your plenty of touring car differential information, but some cars are unique. Always keep your car's instruction manual handy for setting particulars that might be unique to your car.



Thrust Bearing

You should examine your car's differential action often.

REEDY touring car CHAMPIONSHIP

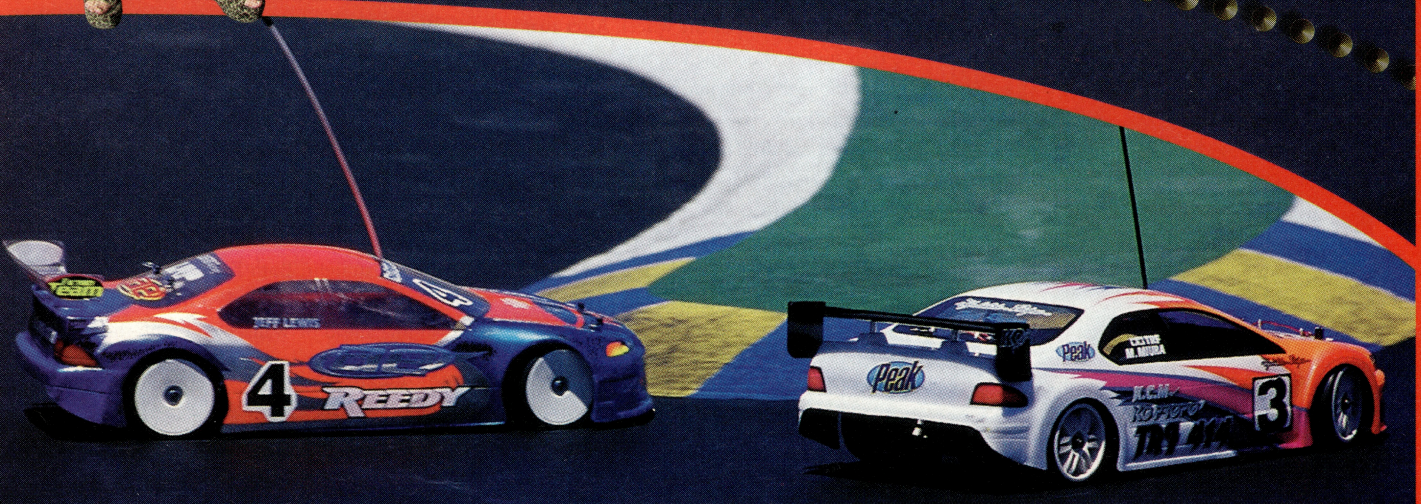
Barry's blonde hair brought him some luck.





Years ago, the first Reedy Race of Champions came about as a birthday party for Mike Reedy. The top drivers from around the world would gather and follow a completely unique race format that would ensure competitive racing all weekend long rather than just in the Mains. Since then the Reedy Race of Champions has spawned two other races, the Reedy Truck Championship and the Reedy Touring Car Championship. This Memorial Day weekend, top drivers from around the world gathered in Ripon, CA to have it out on the asphalt. This year the Reedy TC Race took on significant importance because of the TC Worlds being held later this year. Because of all the international drivers on hand, this year's Reedy TC Race felt like a Worlds warmup race. So who went home happy and optimistic, looking towards Japan and the Worlds, and who went hope looking to figure out what went wrong? Read on and find out.

Written by Mike Velez
Photos by Elliot Crabtree



No trophy girl, but we found Cheyenne.



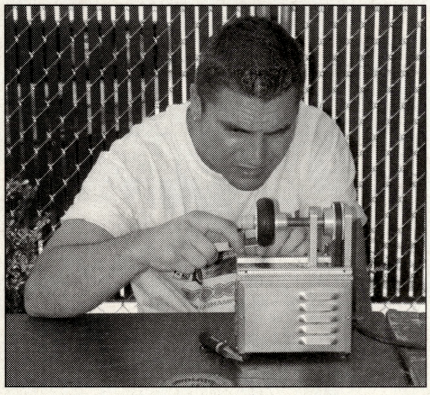
Race Track

Ripon R/C Speedway was once again the host of the Reedy TC race. Ripon is located just outside of Modesto, CA and about eighty miles east of San Francisco. The track is a beautiful, smooth, asphalt track with raised berms and a painted infield. The track is rather tight and technical. Overall, the track has a triangular shape. The back of the track features a long straightaway with a hard right turn onto the straightaway and a sweeping turn coming off of the straightaway. From there, the track has a variety of turn styles including a keyhole, some chicanes, hairpins, and more. The track is situated in the parking lot of Dan's Auto Body; Dan Tanis is the proprietor of both and a real good guy. Dan went all out. There was plenty of shaded pit area for all the racers to stay out of the hot midday sun.

Format

There were three different classes competing this weekend. Two classes were open to anyone who entered early enough, an Open Modified and an Open Stock Class. These two classes were limited to a total number of 160 entries and filled up fast. The third class was the Invitational Class, open to drivers by invite only including the winner of the previous year's Modified open class. This year's field included Masami Hirosaka, Brian Kinwald, Barry Baker, Teemu Lieno, Mark Pavidis, and Josh Cyrul, to name a few.

The Invitational Class uses a format unique to all Reedy races. Drivers compete in a total of eight races each in eight separate rounds. For each race in each round, racers were awarded points based on their finish. First place received one point, second place received two points and so on. After two days, drivers added the points total of their best six races to come up with an overall points total. The driver with the lowest total would be crowned the overall winner. The Stock and Modified classes use a conventional race format with four rounds of qualifying and a triple A-main. Stock drivers all use a Reedy Rage Type-R motor as a handout.



Chris Tosolini scuffed his tires before each first run.

Tires

For the first time all participants, invitational and open, used a controlled tire. The spec tire was supplied by Pro-Line. Pro-Line's HS-13 controlled tire was speced with an "R" on the sidewall. Drivers could purchase up to four complete sets of tires from the on-sight hobby shop. After purchasing the tires, drivers needed to mount them to wheels then apply tech stickers to the inside of the wheel. After that, the tech sticker was signed by a race official. Overall the reaction from the spec tire mandate was positive. It was strange to see Pro-Line-sponsored drivers like Mark Pavidis and Scott Hughes running up to the hobby shop to buy a set of tires. The tire insert of choice was Pro-Line Jacco firm molded foam. The track hobby shop sold out of 330 pairs of inserts in less than an hour. Once those were gone, the drivers had to make due with what they brought or recycle their old inserts. For modified drivers the HS-13's were at their best on the hot midday asphalt. For stock drivers, the tires seemed to work their best in the early morning and late afternoon. That was evidenced by qualifying times. All weekend long drivers needed to take into consider ation tire rationing and strategy.

Qualifying

Three rounds of qualifying took place on Saturday and one round was completed Sunday morning. All the while the invitational guys were battling out in rounds of racing evenly spread out over the two days.

The A Mains

Open Modified Touring

Brent Wallace won the first leg of the Modified A-main by jumping out in to the lead early and holding on to it. Brent man aged to hold Jacob Pritchard off through out the entire race. When the second round rolled around, it was a different story. Jacob got into the lead early and wouldn't let go. Brent and James Arluck battled it for second place, but when the final buzzer sounded Brent had picked up second after Pritchard. When it came down to the third and final leg Pritchard and Wallace both had one first and second place finish, which meant it would be a battle between the two. When third leg started, Pritchard got into the lead early. At the start of the race there was a huge pile up which effected all of the cars behind fourth spot. That let all of the leaders get into their own little battle. Through the rest of the race Pritchard held off Wallace. At some points during the race, Wallace was just a few inches away from Pritchard. At the very end of the race, Wallace went hard into the turn at the end of the straight. Both Brent and Jacob tangled up, but Pritchard worked his way to the finish line ahead of Wallace and took the overall win.

Open Stock Touring

The first race in the open stock class was won by James Arluck. James had to battle his way

Chris doesn't know that this isn't carpet.

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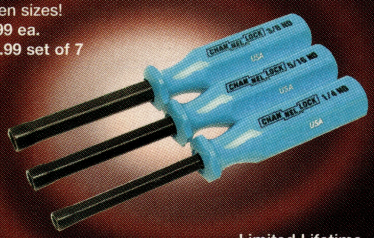

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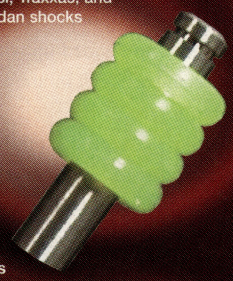

RE1350
$2.25 / 8 pieces

Front & Rear Arm Braces
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&
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Front: 7028B Blue
7028P Purple....$11.99

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$10.29 each
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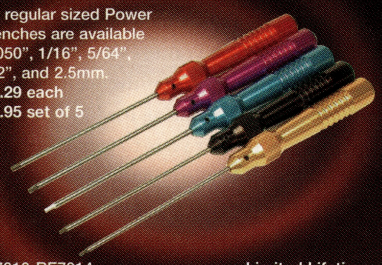

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RE0037B-RE0037V

$10.50 each

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Finger drill bits for drilling pistons are what all of the team drivers use to get the edge.
Available from #54 to #59.



$1.75 each
$8.50 set of Six

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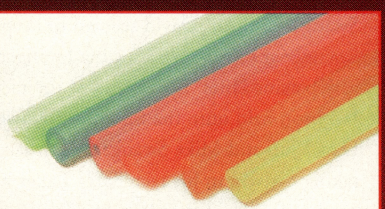

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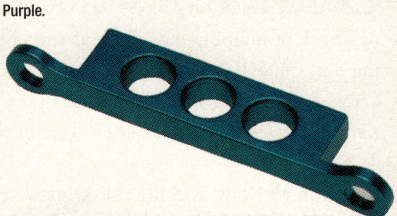

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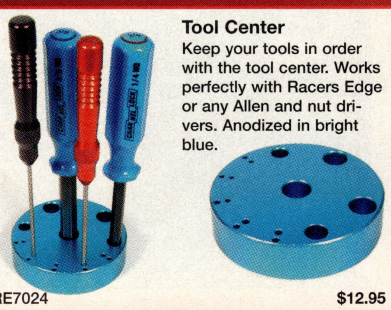
Keep your tools in order with the tool center. Works perfectly with Racers Edge or any Allen and nut drivers. Anodized in bright blue.



RE7024

$12.95

through Marshall Keener and Joey Orlanes to take over the first place spot. In the second round, Joey Orlanes decided to take the win followed by James Arluck and Jason Moberly. The third round was interesting. Joey Orlanes, James Arluck, and Brad Long were all in the hunt. A win by any of them would result in the overall win. In the third and final race, Orlanes worked through some traffic to get into the lead and stay there. Orlanes lead all the way through to the end of the race and picked up the race and overall win.

Invitational

Day One

In the first round, things went down just as you'd expect them to. Kinwald, Baker, and Masami all picked up race wins along with Atsushi Hara. In the second round, a completely new set of drivers picked up wins; David Jun, Mike Swauger, Jimmy Jacobson and Shinnosuke Adachi all won their races. As the day wore on, Baker, Jun, and Kinwald also picked up additional round wins. When the day was over, Barry Baker was sitting in first with a perfect 3 point day. Jimmy Jacobson, Brian Kinwald, David Jun, and Mike Swauger were all sitting with 5 points and tied for second.



Tamiya fielded a complete team with drivers from the U.S. And Japan. Tamiya's TA-04 Proto had a sucesful run with both Jimmy Jacobson and David Jun finishing in the Invitational top ten.

Day Two

When the morning sun rose Sunday, all eyes were on Baker and whether or not he could back up the previous day's performance with a strong first outing. Baker didn't disappoint. In the first round, Barry decisively won his first race. All weekend long Baker had this uncanny knack of jumping into the lead and checking out. Once Baker had a lead it was "Game Over" for the rest of the field. During the sixth round, Baker and Jacobson were in the same race. A win by Baker in this race would virtually put his overall win on ice. But midway through the race Baker and Mike Blackstock both went wide coming onto the long straightaway. Barry got the short end of the exchange and popped off a front turnbuckle. Jacobson ended up with the win in that race and was still in after winning his fifth round race.

The seventh round came and went with little change in the arrangement of the field. When the final round hit the stage was set for some excitement. Jimmy Jacobson was in the third race of that final round. Jacobson enjoyed the poll-position for that round alongside Tamiya/Orion teammate David Jun. When the race started Jimmy took a hold of the lead followed by Jun in second and Mike Swauger in third. David seemed to keep Swauger at bay by not allowing Swauger any easy passing lanes. By the end of the race Jacobson held onto the first spot followed by David Jun and Mike Swauger. With Jacobson taking the win in his race Barry Baker would need to finish third or better to insure the overall win.

In the final race of the day, Baker had a pretty friendly field ahead of him. Conventional wisdom tells us that the fellow Trinity and Yokomo sponsored drivers would allow Baker to scoot by if the situation demanded it. Baker started the race from the third row and got an amazing start off the line. By the first set of turns Barry was in the third spot behind Masami and Pavidis. At that point it was apparent that Baker had tons of horsepower and wasn't afraid to use it. In a gutsy move, Baker made a pass on Pavidis just after driving neck and neck with Pavidis around the outside of the sweeping turn just after the straightaway. That move took an outrageous amount of power and Barry had it. Barry did manage to pass Pavidis. At that point, it was time to engrave the trophy. Barry later on passed Masami, picked up the race win, and won the overall victory. Jimmy Jacobson finished second overall and Shinnosuke Adachi finished in third.

Conclusion

For a second year in a row, Ripon R/C Speedway threw a first class race at a first class facility. There was plenty of exciting racing in all three classes. Jacob Pritchard will surely be on hand next year to compete with the big boys. I'm positive we'll see controlled tires being used at race events like this for years to come. Overall, the controlled tire situation helped to keep the cost of competing in check. International flare was in full effect thanks to racers from Japan, Germany, Finland, England, Hong Kong, and Canada. Even with all those drivers from foreign lands attending, it was US native Barry Baker who was rewarded for lots of hardwork and determination with a second win in a row. There was plenty of suspense thanks to Jimmy Jacobson making a late push for the title. Given the fierce competition and the timing, drivers had a chance to size up the competition with the Worlds not too far away.

Notes:

• Barry Baker and Shinnosuke Adachi made the trek from Southern California for two weeks in a row before this race.

•• A number of drivers made their debuts with new cars or motor sponsors. Mike Blackstock ran Trinity power, Chris Tosolini ran a Yokomo chassis

Brandon McNally and his father made the trek and managed to finish twelfth overall in the Invitational class.



The weekend's great weather as well as great racing brought out many spectators to Ripon R/C Raceway.



It looks as if Tamiya will be making a major push in racing this year.

Stock Winners



Invitational Winners



Modified Winners



Invitational

F	Pts	Name	Chassis	Motor/Battery
1	6	Barry Baker	Yokomo	Trinity
2	8	Jimmy Jacobson	Tamiya	Orion
3	11	Shinnosuke Adachi	Yokomo	Reedy
4	12	Mike Swauger	Xpress	Orion
5	13	Chris Tosolini	Yokomo	Fantom
6	13	David Jun	Tamiya	Orion
7	15	Mark Pavidis	Associated	Reedy
8	15	Teemu Leino	Schumacher	Orion
9	17	Atsushi Hara	Yokomo	Reedy/Yokomo
10	17	Masami Hirosaka	Yokomo	Reedy/Yokomo

Stock Open

Finish	Qual	Name	Car	Motor	Battery	ESC	Radio	Body
1	1	Joey Orlanes	Yokomo MR-4	Reedy	Orion	Novak	Airtroinics	Andy's Stratus
2	2	James Arluck	Yokomo MR-4	Reedy	Fantom	LRP	Futaba	Andy's Stratus
3	5	Brad Long	Assc TC3	Reedy	Peak	LRP	Airtronics	Andy's Stratus
4	4	Marshall Keener	Assc TC3	Reedy	World Class	Novak	JR Racing	Protoform Strat
5	3	Jason Moberly	Yokomo MR-4	Reedy	GM Racing	GM	Hitec	Andy's Accord
6	9	Rick Herrmann	Schum Axis	Reedy	Fantom	Novak	Futaba	Protoform Strat
7	6	Joshua Utley	Assc TC3	Reedy	Gonzo	Novak	Futaba	Protofo Stratus
8	8	Scott Haake	Assc TC3	Reedy	Reedy	LRP	Airtronics	Protoform Strat
9	7	Rodney Kiss	Yokomo MR-4	Reedy	Peak	Novak	Airtronics	Dodge Stratus
10	10	Don Vinkemulder	Schum Axis	Reedy	Trinity	Novak	Airtronics	Protoform Strat

Mod Open

Finish	Qual	Name	Car	Battery	Motor	ESC	Radio	Body
1	1	Jacob Pritchard	Yokomo MR-4	Reedy	Reedy7 x2	GM	Airtronics	Andy's Stratus
2	3	Brent Wallace	Yokomo MR-4	SMC	Fantom 8x3	Novak	Futaba	Andy's Stratus
3	5	Gil Losi Jr	Losi Street Weapon	Trinity	Trinity 8x2	Novak	Airtronics	Losi Stratus
4	2	Mike Mcmahon	Xpress	Orion	Orion 8x2	GM Racing	KoPropo	Protoform Strat
5	6	James Arluck	Yokomo MR-4	Fantom	Fantom 8x3	LRP	Airtronics	Andy's Stratus
6	7	Jason Moblerly	Yokomo MR-4	GM	GM 8x2	GM Racing	Hitec	Andy's Accord
7	10	Jon Ringer	Yokomo MR-4	Trinity	Reedy 9x2	LRP	Airtronics	Andy's Stratus
8	9	Rick Herrmann	Schum Axis	Fantom	Peak 8x2	Novak	Airtronics	Protoform Strat
9	4	Raymond Flores	Tamiya TA04 Proto	Orion	Orion 8x2	Novak	Airtronics	Andy's Stratus
10	8	Joey Orlanes	Yokomo MR-4	Trinity	Orion 9x2	Novak	Airtronics	Andy's Stratus

This race should have been called the Stratus IROC race.

Do the math.



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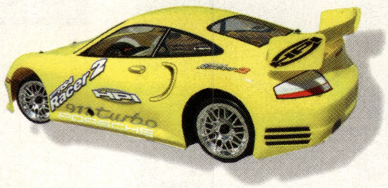

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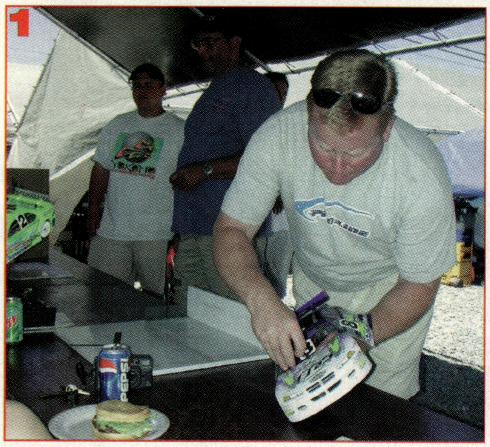
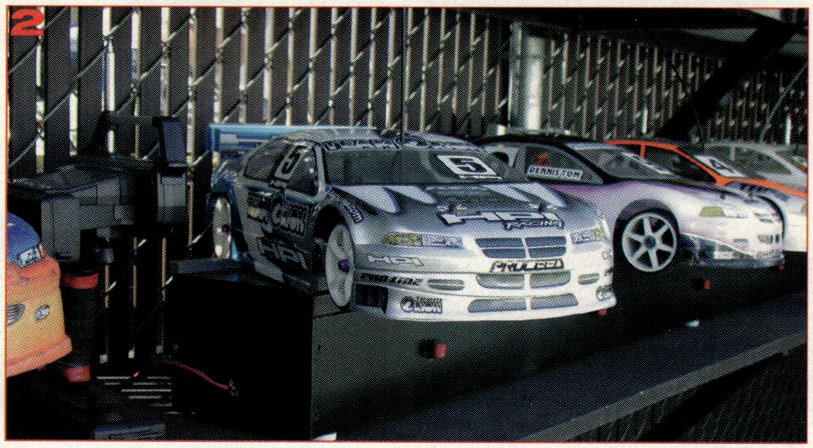
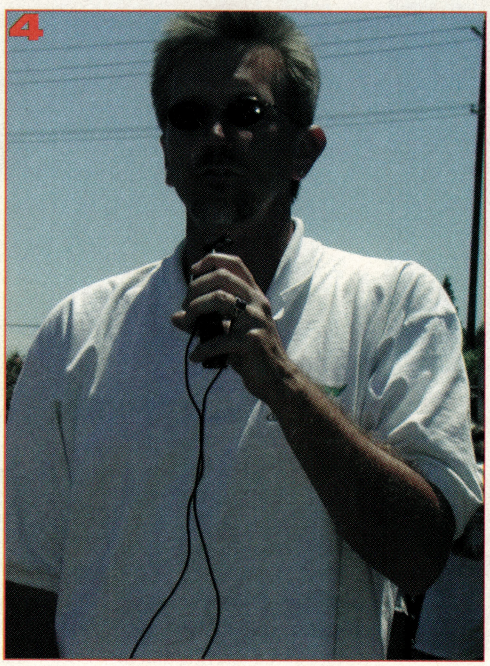
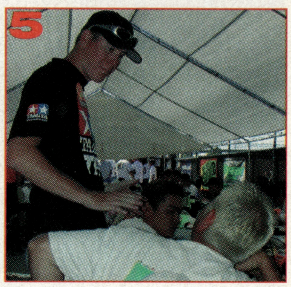


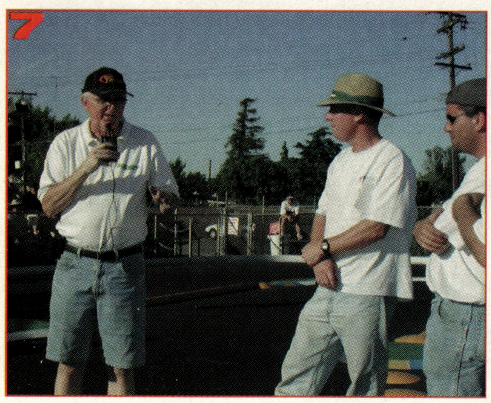














Around the Track...

1. Tim Clark readies Scott Hughes' TC3 for the final run.

2. Ripon has cooling stations to cool your car after each run.

3. Mike Reedy and fellow motor man, Sean Cochran ready motors for the Mains.

4. Associated's Gary Owen sang the National anthem at the start of the A-Mains.

5. "Here Barry, as a token of my appreciation, take this head."

6. Richard Trujillo is just happy to be in Ripon.

7. Mike Reedy thanked everyone for making the trip and gave everybody a great show.

8. Who's your daddy?

The original Nitro RS4 has been copied by a number of different companies.

Team Losi Triple-X Truck



Since its release earlier this year, the Team Losi Triple-XT has had a major impact on the racing world. Winning in Florida its first time out, the Triple-XT's performance is impressive. We sat down with Todd Hodge of Team Losi to provide you with this Hook-Up Tuning Guide. You'll notice that we're using a different format this month. The new format is more concise and to the point. You should be able to find the tuning aid that you're looking for without all the clutter.

When ever you tune your truck to a particular track make sure that you're running with the right tires first.

The Triple-XT tunes much like the Triple-X buggy.

If You're Looking For...

Steering

Turn-in Steering

Turn-in steering can be described as the amount of steering when your truck initially turns into a turn. When ever you adjust for more or less turn-in steering you'll typically give up some exit steering. If your driving style is aggressive going into turns you'll want more turn-in steering.

• For high speed turn-in steering move the front inside camber mount from the center hole to the outside hole.

Exit Steering

As you would expect, exit steering is the amount steering the truck will possess from the middle to the end of a turn. If your truck goes into a turn hard, but pushes coming out of the turn your truck is lacking exit steering. If the truck pushes going into the turn, but hugs the turn once you're past the apex (the point in a turn where it is at its greatest angle) you've got plenty of exit steering.

• For more steering when exiting turns at high speeds try moving the front inside camber mounting location to the outer hole.

Low Speed Steering

Low speed steering is the amount of steering your truck has through the slow, tight technical sections of a track. At low speeds your truck shouldn't push at all off power. If you're looking for more low speed steering it's typically when the truck is on power.

• Move the front shocks to the inside hole on the front suspension arms. Moving the shocks to the inside holes will scrub high-speed steering.

High Speed Steering/Stability

High speed steering/stability is how stable or controllable the truck is at high speeds.

• Move the front shocks to the outside holes on the front suspension arms. You'll loose some low speed steering, but gain high-speed.

Off-Power Steering

Off-power steering is how the truck reacts to steering input when you're not on the throttle. This could be entering turns, under slight braking, or while rolling through very technical track sections.

• Move the front inside camber mounting location from the center hole to the inside hole.

• On the front hub carriers move the camber mounting ball-stud from the center "B" hole to the outside "C" hole.

Driveability

More Precise Feeling

Some drivers prefer their trucks to have a very precise feeling. Meaning that the truck is very reactive to all of the track conditions. If you've got the skills or like a point and shoot driving style a very precise truck might give you the best chance of getting around the track in the least amount of time.

• Move the front shocks to the outer hole on the shock tower.

• Move the front inside camber mounting location from the center hole to the inside hole.

• Remove the two washers under the front inner ball-studs connecting to the camber rods.

• On the front hub carriers move the camber mounting ball-stud from the center "B" hole to the outside "C" hole.

• Move the spacer that's normally above the front spindles to below the front spindles. This will lower the hub carriers in relation to the front axles.

• Mount the steering tie-rods to the outside mounts on the steering bellcranks.

• Shorten the truck's wheelbase by moving the rear axles in the most forward position.

More Forgiving Feeling

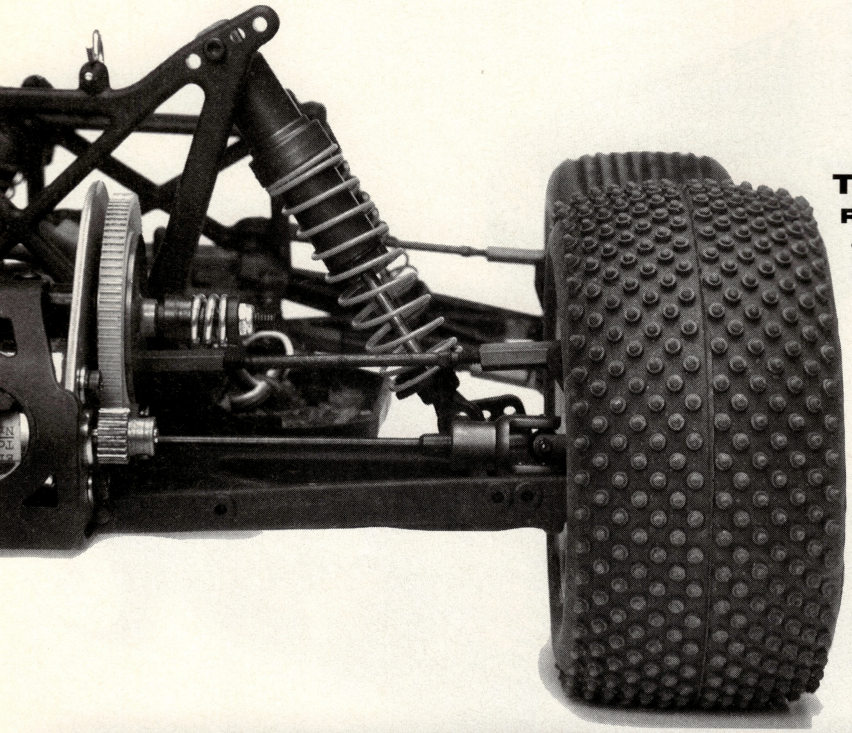
If your truck seems too sensitive to the track conditions or to your steering input you want a more forgiving truck. A more forgiving truck is much easier to get around the track at a descent click. If you're not the best driver, a more forgiving, easier to drive, truck might give you the best shot at getting that record lap time.

• Move the front shocks to the inside hole on the shock tower. The truck will be more stable and less susceptible if the truck gets out of hand.

• Place a total of four washers under the front inner ball-studs connecting to the camber rods.

• Move the steering tie-rods from the outside mounts on the bellcranks to the inside mounting holes.

• Move the rear hub carriers so that the rear axles are in the most rearward position.



Terrain Handling

Rough Tracks

- On a very rough track move the steering turnbuckles to the inside holes on the steering bellcranks.
- To loosen up the suspension and allow it to work more try an oil weight that is 2.5 to 5 wt lower than what you're currently using.
- Soften the suspension by going with springs that are one rate softer.
- Move the rear camber links from the 2 hole on the bulkhead and the B hole on the carrier to the 1 hole on the bulkhead and the A hole on the carrier. This will change the camber rate change through bumps giving you more traction.

Smooth Tracks

- Revert back to the original kit stock setup.

Top Ten Hop-Ups

10

1. The Right Tires

Depending on particular track conditions it's extremely important that you have the right tires.

2. Titanium Ball Studs

On the front bulkhead especially, you should replace the stock steel ball studs with titanium ball studs from Team Losi, Lunsford or Robinson Racing. Under heavy loads the stock ball studs may bend.

3. Ball Bearing Steering

Get the quickest, smoothest steering by replacing the stock steering bushings with ball bearings. The bearings will allow your truck's steering to pivot more quickly than with bushings.

4. Springs, Pistons, and Shock Oil

A great tuning aid to have is a variety of springs, pistons, and shock oils. If possible, you should try to tune for the effect you're looking for by changing the pistons, springs, or oil first before actually changing geometric settings.

5. Lightened Top Shaft

This is an especially good upgrade if you're running in stock class. A lightened top shaft allows the transmission to spin up more quickly than with the stock steel shaft. For modified racing the difference in performance isn't as noticeable, but does have a small effect on performance.

6. Threaded Shock Bodies

Threaded shock bodies allow you to make more precise adjustments to your truck's ride height.

7. Titanium Turnbuckles

Because of the length of truck turnbuckles, more of a load is placed on truck turnbuckles than on buggies. Replacing the stock steel turnbuckles with titanium replacements from Lunsford, Factory Team, or Trinity will help you avoid a bent or broken turnbuckle catastrophe during your TQ run.

8. Molded Gear Cover

The stock Lexan gear cover that comes with the truck isn't the most durable in the world. You can add durability and some color with a molded gear cover from RPM. The gear cover has plenty of room for the double-disk slipper.

9. Hardened Shock Shafts

You can lengthen the time between necessary shock rebuilds by replacing the stock shafts with hardened shafts from Losi or MIP.

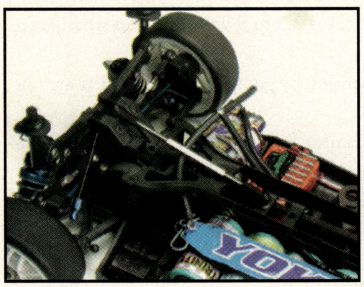
10. MIP CVDs

Add some good looks and ultra-smooth performance by replacing the stock universals with MIP CVDs. If you race stock, opt for the aluminum ones.

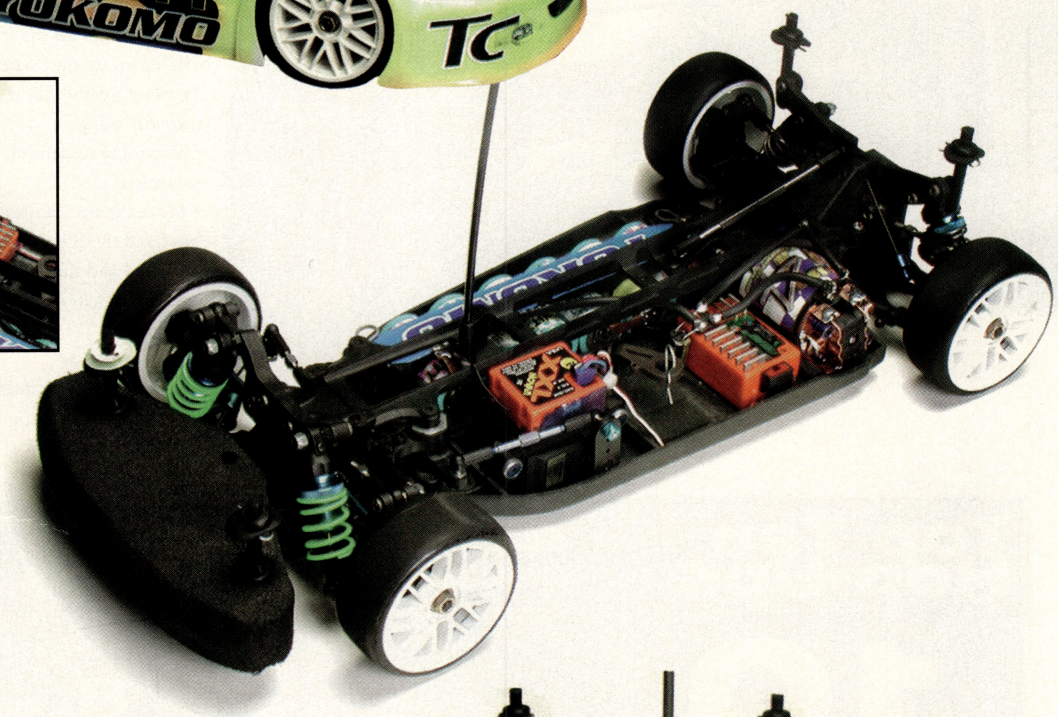
Among all the things Todd does at Losi, R&D testing is a big part of his job.

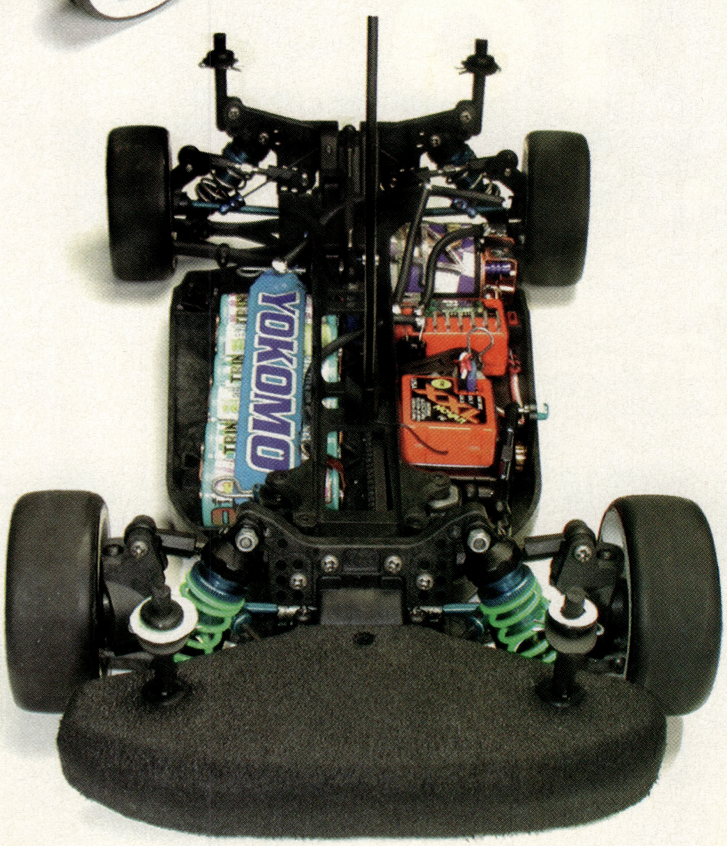
Barry Baker's Winning MR-4TC Pro





Barry installed a tie-rod brace between the top plate and the rear bulkhead.





Barry's MR-4 TC Pro Setup

Front

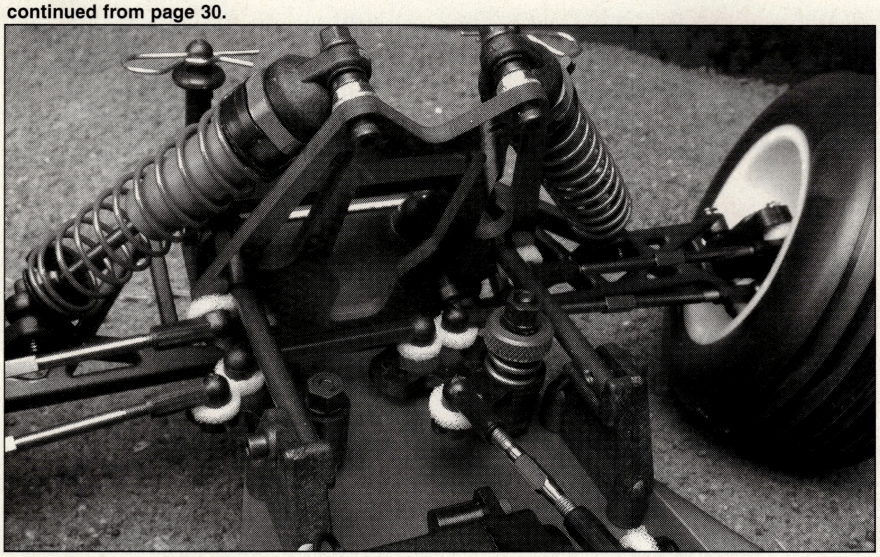
Shocks: #3 Yokomo pistons with 40wt Trinity oil, Yokomo green springs and 60.5mm length.
Shock Placement: Middle Inside on top, outside on arm.
Camber Placement: Middle inside on bulkhead.
Camber: 0º
Toe: 0º to 1º toe-in.
Other Front End Notes: Swaybar installed, One-way installed.

Rear

Shocks:#3 Yokomo pistons with 40wt Trinity oil, Yokomo silver springs and 60.0mm length.
Shock Placement: Top row middle on tower, outisde on arm.
Camber Placement: Top ro inside on bulkhead, outside on hub carrier.
Camber: +1º
Motor: Trinity D4 7x2
Batteries: Trinity Panasonic P-3000
Gearing: 25/104 Kimbrough 64-pitch.
Swaybar: No

Was it the car and the horsepower, or was it the blond hair?

continued from page 30.



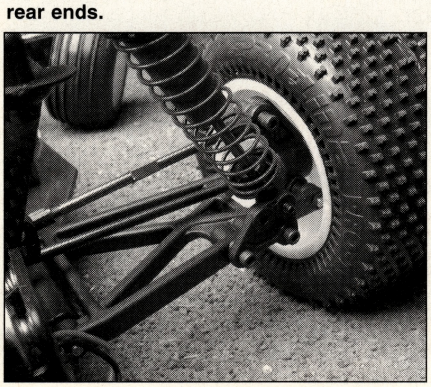
The new flat chassis uses fiber-reinforced stand-offs to support the front end of the truck.

pension struck a perfect balance between compression and bounce over every obstacle it encountered.

Braking

Two-stroke engines are unlike electric motors in that they exhibit almost no engine braking. Going fast with a gas truck is more about maintaining momentum without scrubbing off too much speed when you have to get on the brakes. The included fiber disc brake will literally stand the truck on its nose if you dial that much brake in. Mike set the linkage with a touch of drag brake, which seemed perfect for the track. The small disc did its job perfectly, slowing the truck down without locking up the rear wheels. The GT never felt unpredictable, allowing me to drive it harder into the turns. Even when the brakes were applied too hard, the truck maintained its line without unsettling the suspension. Nosedive was almost non-existent thanks to the slightly firmer blue front springs.

There are a number of different shock mounting locations on both the front and rear ends.



Low-Speed Turns

The FTGT showed remarkable poise in the corners. It felt dead-neutral even when I started driving it harder, pitching it into the turns. If the corner was entered too fast, a quick tap on the brake followed by some extra steering input got it back on line. My favorite part of the track was a short chute that lead into a tight 180-degree left-hander. I was able to really throw the truck into this corner. The truck seemed to enjoy the abusive driving and always rewarded me with textbook lines.

High-Speed Turns

The GT continued its theme of neutrality in the faster corners. The truck simply did whatever I asked of it without stepping out of line or over-reacting. The dirt at our test site was loamy with a bit of fluff on top. The step pins really changed the attitude of the truck. High-speed turns were more of a controlled slide, emphasis on controlled. Time after time, I threw the GT into the corners, and it would react with a photo-op 4-wheel drift. A few times I had to countersteer if the truck was off-line, but the GT composed itself quickly with panache.

Damage, Inc.

Although my time with the Factory Team GT was short, the GT has proven itself bullet-proof over the years. With its included hop-ups, the new kit should only further the GT's reputation for strength and reliability. The graphite shock towers, thick aluminum chassis and other improved components should keep you ahead of the pack in even the toughest wheel-to-wheel racing. Gas trucks are strong, and they have to be because longer races and big horsepower are the norm. Engine tuning problems probably side-line more racers than actual breakage.

Trackside Tuning

Everything on the GT is fairly accessible. The engine can be removed quickly, by unscrewing four fasteners and disconnecting the throttle linkage. As *Xtreme* contributor Regan LeBlanc suggests, if you need to make any adjustments save yourself the headache and pull the engine. It might seem to make more sense to wrench on it while its in the truck, but working in tight quarters really sucks. The rest of the drive train can be reached without removing major components. The clutch bell will come off by pulling a large E-clip, and the entire slipper assembly/spur gear can be removed without taking off the right rear A-arm.

Maintenance

While I usually preach about cleanliness, keeping a gas truck free of filth is pretty much an urban legend. Regardless, it can help to brush off any loose dirt in between rounds. Make sure you always run the GT with an air filter. They do fall off from time to time, but running an engine with no filtration is way below average. Shocks on nitro-powered vehicles tend to get dirtier, so pay extra attention to them. The brake should last the life of the vehicle, but give it good visual inspection after every race day. Throttle/brake linkage is not immune to damage. Stuck throttles can really put a damper on your race day, so make every attempt to use a throttle-return spring. Don't forget about the 4 AA batteries powering your receiver pack. Runaway cars, while entertaining, can cause serious injury. For a complete nitro car cleaning guide, see Regan LeBlanc's column elsewhere in this issue.

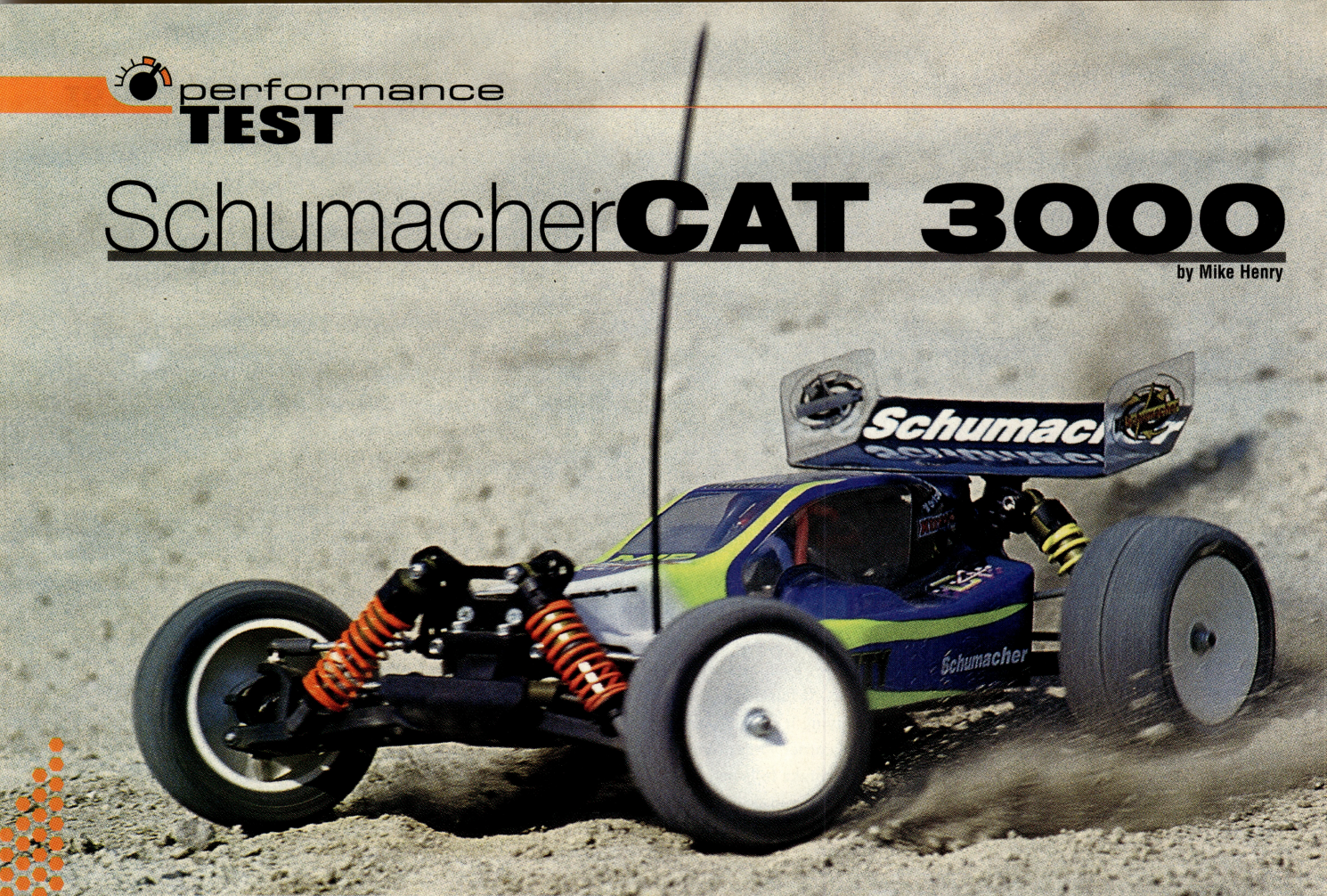
Conclusion

The Factory Team GT is the real deal. It includes everything the serious racer needs to campaign the race race circuit for a long time. The Team Kit version of the RC10GT has been around for a few years, and still proves itself on a local and national level every week. The Factory Team kit takes the GT the final step (for now). Similar in concept to the Factory Team B3, the newest version of the truck is the ultimate GT. Included in the kit is every useful hop-up AE offers. Does it work? Hell yes. Aside from having to throw away the stock clutch, it's difficult to find much fault with this truck. Considering all that comes with the FTGT it's a good very good value. Journalists are not racers, but the truck made me look like one. So get off the couch, stock up on thread-lock, and make a bee line for your local hobby shop. You will not be disappointed.

Congrats to Mike Henry. You're the first *Xtreme* writer to use the word Panache.

Schumacher CAT 3000

by Mike Henry



Some people thrive on being different. Case in point – Schumacher. This modest English company has been turning out world class R/C cars for quite some time, and for the most part, each model is distinctly different from its contemporaries. By taking the path less traveled, Schumacher has not only succeeded at building winning cars, but also created a market segment for racers who refuse to follow the status quo.

One look at the radical new Cat 3000 shows Schumacher's dedication to engineering cars that are not only unique, but actually work. At first glance, the Cat 3000 appears to be simply another 4WD buggy. But once you get beyond the fact that all 4 wheels turn when you hit the gas, the "Big Cat" separates itself from the standard 4WD mold. The car does not use a conventional tub for its chassis, but rather a double-deck carbon composite layout. The Cat is truly a mid-motor design, and the drive line is a touch off center, a detail necessary to achieve Schumacher's desired symmetry. These features only begin to scratch the surface of how different the Cat 3000 is when juxtaposed with "the other 4WD buggies," Losi's XX-4 and Yokomo MR-4 BC. Schumacher cars are a staple in the Euro's racing diet, but remain elusive to most of us "Yanks." How will the Cat perform on American soil?



Hits:
- Capable of winning right out of the box.
- Responds well to setup changes.
- European quality materials.

Misses:
- Maintenance can be tedious.
- Spur adapter not included in kit.

Instructions	3
Parts Quality/Fit	4
Durability	4
Tunability	4
Overall Performance	4
Value	3

Can you find the Austin Powers reference in this article?

Chassis

The Cat uses a double-deck chassis cut from Schumacher's "S1" material, very similar to its touring car counterpart, the Axis. (American intelligence believes S1 is code for black fiberglass mixed with a bit of graphite.) The car uses a saddle-pack layout to keep the lateral center of gravity as close to the center of the chassis as possible. As expected with a car as long as the Cat, there is some chassis flex, but a lot of team drivers prefer a little flex over absolute rigidity. The suspension arms are molded from Schumacher's composite material. Cutouts are provided for the batteries and plastic straps hold the cells in place.



Steering

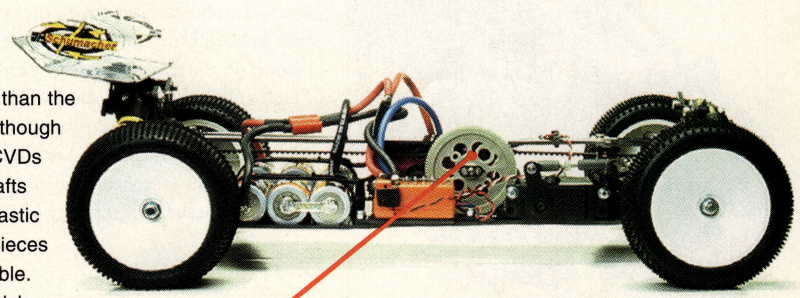
The Cat uses a standard dual bellcrank and drag link system for steering. The steering posts rotate in bronze bushings and the result is quite precise. The drag link is non-adjustable, but this only simplifies assembly and setup. An adjustable servo saver is included. The steering servo is placed sideways in the chassis and is easily accessible – a simple design that minimizes linkage.

Suspension

Schumacher uses their hard-coated, volume-compensating dampers on the Cat. These units utilize the company's dial-o-matic variable pistons. Racers can adjust each piston from one to four holes simply by rotating the inner piston, and without disassembling the entire shock. If it didn't work so well, you might dismiss it as a gimmick. Both shock towers are made from the same S1 material as the chassis. There are a myriad of camber link and shock mounting holes provided on the shock towers and the suspension arms. Shiny steel turnbuckles allow for quick adjustments of camber and toe.

Drive Train

The Big Cat uses only two belts to transfer power to the wheels. Lightened alloy ball differentials are located at each end of the car. Each unit uses nine diff balls, rather than the typical eight. The car does not employ a slipper clutch, although Schumacher does offer one as an option. Genuine MIP CVDs are used in the rear, and Schumacher's own UJ drive shafts are used to power the front wheels. The Cat also uses plastic "blades" at the business end of each drive shaft. These pieces almost eliminate wear on the outdrives, and are replaceable. A trick, purple, alloy motor mount houses the layshaft, which turns the huge 95-tooth spur and the "clicker." The clicker allows the front wheels to free-wheel under braking, which helps to eliminate a 4WD car's tendency to push entering a turn. An adjustable belt tensioner is also mounted on the motor plate.



In England, the word "smashing" has a completely different meaning than here.

The Specifics

Item Info
Part #: KO19X
MSRP: $449
Estimated Street Price: $299

Vehicle Type
Electric-powered 4WD Racing Buggy

Chassis Type
Type: Flat double-deck
Material: Fiberglass/Graphite Schumacher S1

Wheels and Tires
Associated white dish wheels with Pro-Line M2 Rear Bow Ties, Pro-Line M2 Front Edge tires.

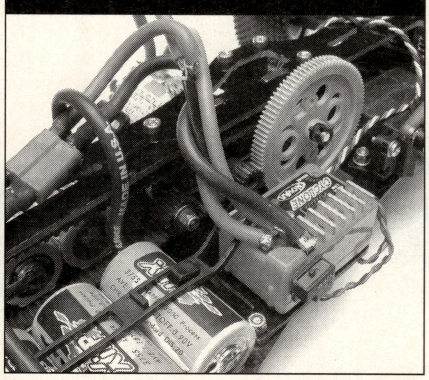
Transmission
Type: Drive-to-diff pulley
Diff: Adjustable ball
Drive Shafts: MIP CVDs, Schumacher universals
Slipper: none
Bearings: Yes
One-Way: Yes, clicker

Suspension Design
Type: Independent, molded composite lower arms and adjustable upper control links with steel turnbuckles.
Damping: Coil-over, oil-filled shocks, aluminum anodized, coated shock bodies, molded shock caps and pistons, steel shafts, and O-ring seals.

Other Items You'll Need
2-channel radio with a servo, motor, ESC, 6-cell saddle pack.

Our Test Gear
Futaba 3PS FM radio with Receiver, Futaba servo, Novak Cyclone ESC, Trinity D4 12 Triple motor, Xipp RC2000 batteries, paint by Billy Barr (cr133r@hotmail.com)

Main Competition
Team Losi XX4 and XX4 World Edition, Yokomo MX-4, Yokomo MR-4 BC



With the pinion and spur both exposed as they are, tape down any wires that might come in contact with the gearing.

Schumacher Glossary

Those crazy Brits use some terms in their instruction manual that leave some room for interpretation. As for meanings, here's what we could come up with:

Aerial Mount *n.* Alternative use for airplane restrooms, usually involving 2 or more people.

Ball Grippa *n.* Term native to Australia; Injury suffered by saltwater crocodile hunters.

Bronze Bush *n.* I'm not even going there.

Drive Dog *v.* The end result of a blind date gone bad.

Shock Rod *n.* Term native to Baltimore; Euphemism for an STD.

Steel Bush *n.* The unreleased video companion to the "Buns of Steel" & "Abs of Steel" workout tapes.

Wheels, Tires, and Body

The Cat 3000 comes shod with very useable kit rubber. Schumacher's version of the Pro-Line Holeshot (I shall call them "Mini Blocks") are mounted on extra-wide wheels in the rear. Up front the car rolls on Mini Pins, which look similar to Losi IFMAR Pins. Both sets of tires are silver compound. Smooth dish wheels replace the old school 3-spoke hoops. Some racers have complained in the past about Schumacher's 3-spoke wheels. They were allegedly weak and prone to breaking off at the center of the wheel. The switch to the new smooth rims is a welcome one. The Cat comes with a sleek, low-profile Lexan body and wing. The underside of the car's chassis is protected by an undertray that is attached via four screws. The body fastens itself to the car with genuine Velcro strips that run the length of both Lexan pieces.

Testing

Acceleration

Like all 4WD buggies, the Cat accelerates "right now." There's no slipper to absorb horsepower, so you might want to use a light trigger finger with your 8- and 9-turn motors. The car features a total of 6 degrees of rear toe-in, and this really helps to keep the car stable when you're on the throttle. During testing, the car was rock-solid everywhere on the track. Not even once did the rear end step out, even when I stood on the gas exiting low-speed corners. The highlight of testing came after landing the big triple at Hobbytown. The suspension fully compressed on touchdown and slowly began to bring the front wheels off the ground for a textbook wheelie. No shortage of traction here.

Top-End Speed

The Cat was blazing fast on the longer sections of the track. This may be partially due to fact that the car uses only 2 belts, or possibly because of its lighter weight. Whatever the reason, the car reached the end of the straight sections fast enough that I found myself on the brakes more than usual. The Cat also has a taller internal ratio than other 4WD cars, (2:1) which may lend to its high terminal velocity. I know for a fact the car was down a few "winds" from my competitors, but still managed to outrun them.

Jumping

According to Schumacher USA, the front kit springs might be a bit soft for the big air found on most American tracks. Swapping the stiffer XX-4 springs up front really helped the car over the jumps. The track used for testing featured a little bit of everything – a huge tabletop, the epic aforementioned triple, and two off-camber rollers that will eat up lesser cars. The Cat was simply unflappable. The mid-motor chassis really maintained a neutral attitude while the car was in the air. With the added traction of 4WD, the car allowed me to tighten up my lines and still have plenty of traction to clear anything in front of it.

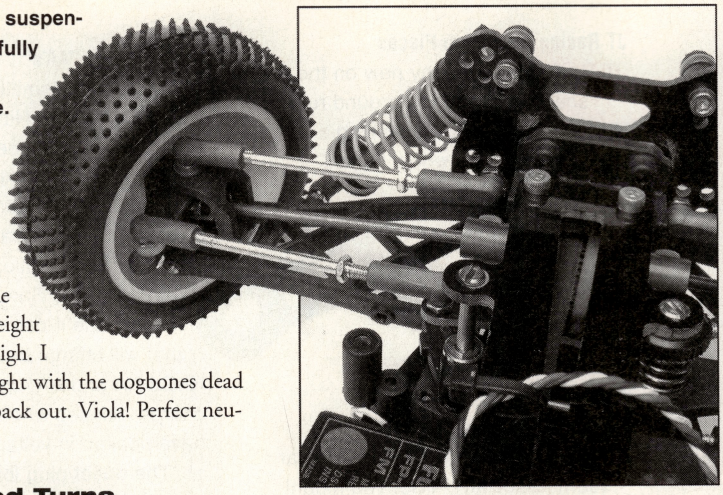
Braking

If you're running a modified motor, at some point you're going to have to use the brakes. After a few runs to acclimate myself with the car, I began to develop a rhythm for slowing the car down. At the end of the back straight is big roller that will toss your car, no matter how you hit it, then a tight 180-degree left hander. (Track designers are an evil bunch.) I let the car coast, hit the roller, then got on the brakes hard and set up for the turn. It was that easy, and as long as I hit my apex, the car seemed to drive itself.

Low-Speed Turns

By watching cars through the really tight stuff, you can truly gain a sense of who's ripping off fast lap times. If you're not brushing the occasional tube, you're taking the turns too wide. The Big Cat takes to the slower turns just as well as any 4WD buggy. The clicker works as advertised and dials the low-speed push out of

Direct your complaints on the Steel Bush thing to Andrew Mock, C/O *Xtreme R/C.*



The CAT 3000's suspension system is fully adjustable and easily accesible.

the car. Set up for the turn, crank the wheel and track out to the next section. Initially, I had the car's front ride height set a touch too high. I reset the ride height with the dogbones dead level, and went back out. Viola! Perfect neutrality.

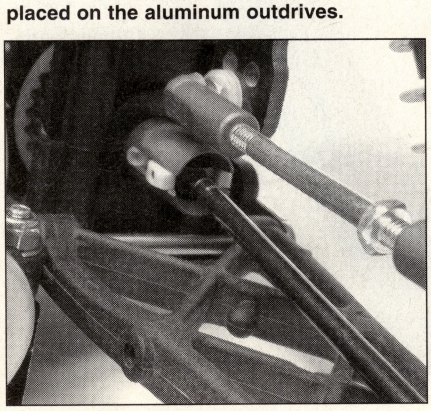
High-Speed Turns

Having driven 4WD buggies in the past, I was expecting the Cat to have a nasty off-throttle push coming off of the fast sections. I was also suspect of Schumacher's kit tire combination; Mini Pins up front and Mini Blocks in the rear didn't make a whole lot of sense at first glance. I was relieved of any concerns after one or two laps. The Cat really liked being thrown around, and always rewarded me with fast predictable lap times. Even on the silver compound kit tires, the car remained neutral, time after time. When all 4 tires did lose grip, the Cat slid into a controllable 4-wheel drift.

Damage Control

I put the Cat through two grueling nights of racing, and it escaped 100% unscathed. There are a few areas to watch, however. Since the car does not use a slipper, gear mesh becomes absolutely critical. Set the gear mesh tight, just loose enough that you can rock the spur gear visibly. The undertray does a fine job of protecting the bottom of the chassis, but make sure there are no sharp edges on the tray itself. Use a Moto-tool to smooth any rough edges before you set the car down. Also, file down the edge at the front of the chassis where it meets the front bulkhead.

The sliders mounted to the dog bone end of the universals help to spread the load placed on the aluminum outdrives.



Trackside Tuning

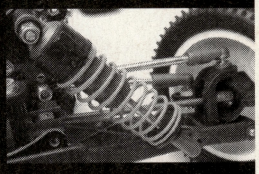
Wrenching on the Cat 3000 might take some getting used to, but any racer should adapt after a few tear-downs. The variable piston shocks allow quick suspension tuning, although most serious racers opt for the conventional one-piece pistons. The included turnbuckles are stout, but no wrench found within the kit actually fits them. (They're 5.5mm if you're wondering.) The white fiberglass wrench in the kit can be filed down and used, but a proper wrench would be nice. The speed control is mounted on a removable piece of S1, and to get to the motor screws, the unit has to be unscrewed from the chassis. The battery straps work well, but are so tight, you might lose a fingernail or two fastening them. Even with all of these quirks, the Cat can be torn-down to a bare chassis just as quickly as any other 4WD buggy; in fact much faster than most, as the drive train is open. (No more between-round meltdowns if you need to change the spur.)

Maintenance

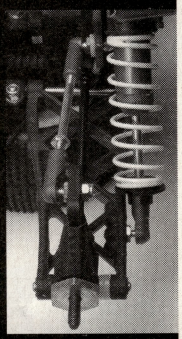
Maintenance on the Big Cat is fairly routine, if you heed one simple warning: Keep the car clean. If you race in dusty conditions, you might do yourself a favor and make friends with an air compressor owner. At the very least, invest a few dollars in a large paint brush and do your best to keep debris out of the drive train. Periodically inspect the pulleys for dirt and crud that might build up. Check the spur for tiny rocks after every heat, and keep that gear mesh tight. The one hop-up that is recommended is the universal spur adapter (U2252Y). This alloy unit allows the use of Schumacher, Kimbrough, and Robinson 48-pitch spurs. Schumacher's "blades" really work, and almost eliminate wear on the outdrives, but pop off the ball grippas (ball ends) and take a look while you've got the car apart. The kit includes four spares, and it only takes a minute to replace them. Did I mention to keep the car clean?

Setup Tips

It's no secret that Schumacher cars are built to win races in Europe. With this in mind, I called Schumacher USA to get a good baseline setup that would work better on more aggressive American tracks. Listed below are changes I made that differ from the book setup:



- **Front shocks:** 35 weight oil, 2-hole pistons, Losi 2.9 rate orange springs. Upper shock mount in hole #1 on the tower, lower shock mount in hole #1 on the arm.



- **Rear shocks:** 35 weight oil, 2-hole pistons, kit yellow springs. Upper shock mount in hole #5 on the tower, lower shock mount in hole #3 on the arm.

- **Wheelbase:** short, greater rear traction.

It should also be noted that I used Losi certified shock oil for testing. The folks at Schumacher HQ suggested 45-weight oil to start, but Schumacher aficionados swear that the English oil is much thinner than its viscosity suggests. Using my highly scientific "how it feels on the work bench" method, 35-weight oil felt pretty darn good.

Conclusion

The Cat 3000 works. With a few setup changes, the car absolutely rocks. It was good enough to put me in the winner's circle on my first outing! Granted I was the only 4WD racing that night. There are no real secrets to this car being fast. Schumacher simply did their homework, and after putting their own spin on the 4WD formula, engineered a winning design. As far as price goes, the Cat 3000 is on the high end of the scale when you take into consideration the number of hop-ups not included. There are a slew of hop-ups available for the car, if you're a big fan of eye-candy, and while most hobby stores don't usually stock Schumacher parts, you can order parts directly. Will the American racers buy into it? That remains to be seen, but in my eyes, the car is already a success.

Hot Bodies Stratus

By far the most susceful touring car racing body style has got to be the Dodge Stratus. Hot Bodies has joined the long list of manufactuerers with a Stratus offering of their own. The Hot Bodies Stratus not only features sleek, low-profile styling but also comes with window masks, pre-cut decals, and a high downforce rear wing. The body is designed to fit all 190mm touring car chassis. Look for it in hobby shops and on tracks everywhwere.
Part #: 10715; price: $23.



JT Racing Aluminum Pieces

JT Racing, a company new on the scene is hitting the ground running by unleashing a whole bunch



of different machined pieces for a number of different cars. Pictured here is a very trick transponder mount for the popular Team Associated TC3. The mount attaches to JT's aluminum servo mounts and features the JT insignia milled into the mount. Look for these and other new parts online at www.jtracingproducts.com.
Part #: JT3936TM; price: $21.95.

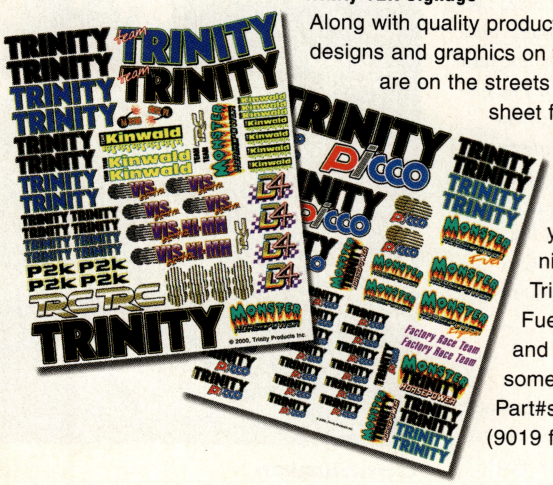
Sanyo Ni-MH "AA's"

Power your transmitter for years with Sanyo's new Nickel Metal Hydride AA cells. The new cells are rated at 1600mAh at 1.2 volts. That makes them perfect replacements for Alkaline batteries in virtually any application. Along with the new cells Sanyo's got a handy little 4-cell wall charger that will charge both Ni-MH and Ni-Cd AA and AAA cells. The wall charger senses when the cells have peaked in voltage and shuts off. The outlet plug folds in for easy traveling. (Distributed by Trinity Products.)
Part#s and prices: (GSNC4AAHI), $29.99; (GESCL4WS/4AAHI), $39.99.



Trinity Y2K Signage

Along with quality products, Trinity always has clean looking designs and graphics on their decal sheets. Two new sheets are on the streets with new graphics for Y2K. One sheet features mostly electric signage including D4, P2K, VIS Ni-MH, TRC, Kinwald, and Da Bomb logos. The other sheet is just for you guys that crave the smell of nitro. The nitro signage features Trinity Picco, Monster Horsepower Fuel, Monster Horsepower Engines, and Factory Race Team logos. Get some.
Part#s and prices: (9017 for logos), (9019 for picco), $5.99ea.



Duratrax "Do-It-All" Engine Tuning Tool

Whether you're a ballz out nitro racer with grease and grime permanently imbedded under your finger nails or a complete novice on your way home with your nitro RTR, having the right tools is paramount for success. Duratrax' new Do-It-All engine tuning tool is basically a long screw driver with a small 3.2mm tip that's perfect for adjusting high- and low-speed needles and idle screw adjustments. The shaft of the tool is 120mm long so that you can reach through to most engines without having to remove the car body. The handle molded and has plenty of area to grasp. The tip is magnetized, although we can't figure out why, but hey, that's cool.
Part#: DTXR0185; price: $5.99.



Kyosho Fantom 2001 1/8-Scale 4WD Nitro On-Roader

After dominating the 1/8-scale off-road World Championships for so many years, Kyosho has decided to set their sights on asphalt competition as well. Kyosho has pulled out all the stops on this new effort, the Fantom 2001. The Fantom 2001 is built on top of a 5mm thick aluminum main chassis and carbon fiber upper plate. Full ball bearings, a 2-speed transmission, and Teflon® coated shocks help to make this chassis worthy of any winner's circle.
Part#: KYOC0700; MSRP: $699.



All prices listed are the manufacturer's retail.

We're sick of writing; our fingers and brains are tired. Help us please. Get off your duff and write us a letter. Whether you want to tell us what great guys we are or you want to tell us how much we suck, send us a letter. You can even ask a question or two. If we know the answer, we'll probably publish your letter. If we don't know the answer, we might ridicule you for asking a stupid question.

xmail@xtremerc.com
or
X-Mail,14175 Telephone Ave., Ste. O,
Chino, CA 91710

No, You Can't Plug Your Site Here!

I was just reading through your "Real R/C Magazine" and noticed that someone in the X-mail section started their email out with "Hello Gods of R/C" and since I own the R/C Domain www.RCGOD.com I thought I would send you an X-mail. Your readers can check out RCGOD.com, which is a HUGE R/C web site dedicated to just about all aspects of R/C. It even features a section on Tricks to win more R/C AUCTIONS and not break the bank! It has over 100 R/C Pix and features over 20 models with setups ranging from vintage to new. The list goes on and on. I must add, your R/C magazine OWNZ!
Eric Provada
Houston, Texas

Sorry Eric, we don't allow shameless website promotion in Xtrastuff. So don't ask. I hope OWNZ is a good thing.

Picture This

Quite awhile ago you started a series of Clod build-up articles. Since the first one came out I haven't noticed any more. Did you just stop doing it or am I going blind? In other words, do you plan on continuing the series or should I put away the porno mags for the sake of my sight?

One last thing. My friend (female) is a major hottie. You keep saying that you want us to send pics of our women, but you only give away an extension to the mag. Not that that is a bad thing. I love the mag and all, but I already have a three-year subscription. What can you offer to have me take some "real good" pics of her to send in? With or without.....um..... the cars.

I know you guys are perverts. Don't worry, so are most of your readers.

Keep up the excellent work and don't let the man get you down.
Later,
Chris M. Filtz

The person that did those articles is no longer an employee. We're currently working on some Juggernaut 2 stuff, some T-Maxx stuff and possibly, possibly some Clod stuff down the road.

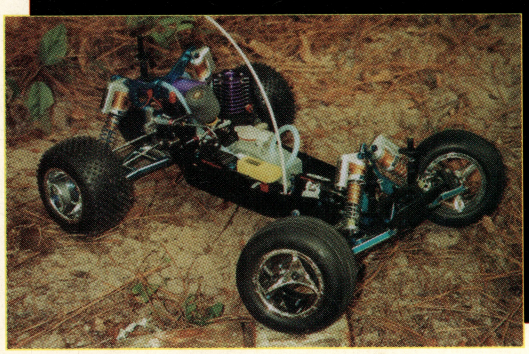
You'll have to hand over all your adult site passwords. You can send them to the address above. As for some "real good" ☞

Racer's Rides



Nice Ride

Check out Stuart Snyder's (of Galveston, TX) RC10GT. It's his first kit and already he's gone all the way in the hop-up department. Stuart's outfitted his GT with gear from MIP (pipe, clutch, CVDs, Temp-Gauge), Lunsford (turnbuckles), Dynamite (bearings), Kimbrough (spur gear), HG (machined arms),Progressive Suspension (shock reservoirs), GPM (shock towers), Pro Line (tires), RPM (wheels), and more.





Dear Xtreme,

My name is Tom Azbill from Las Vegas, NV. The car in the photographs is an HPI RS-4 Nitro Racer with a 2-speed tranny and titanium turn buckles. The engine is an O.S. CV-12 with an O'Donnell head and connecting rod, a lightweight MIP flywheel and a boost bottle. The Spawn Corvette body was painted by Joel Hillhouse (dntnodck@cs.com). The Spawn paint job was his first R/C endeavor. He's never painted "backwards" before. But, as you can see, he got the hang of it.
Thanks,
Tom Azbill



Hot trophy girls make me wanna SPAWN.

pics, how about some new Xtreme R/C Cars T-shirts?

**Thanks for the quick reply.
As soon as I get my JPS Clod done I'll take some pics of it with Jessica and send them in. Maybe a free kit or car from an article for the first guy to prove he actually has what it takes to get the hotties around him. BTW, I'll take a XXL T-shirt. And Jess says she wants one too so she can wear it in more pics for a later car. She'll need a small size. And who was the trophy girl in the Cactus Classic article? Jess said she looked like a ho; I say she looked like fun. You guys are the best once again.**

**You and *Maxim* should team up and take over the world. And *Playboy* too. Mike and Hef just kickin' it by the pool, chasin' playmates with R/Cs. Coolest.
On the flip side,
Chris M. Filtz**

Got an Idea

**I have been in the hobby for 15 years now and have designs for two cars that I think will revolutionize the industry. But I have to find a company who will take my idea from the blueprint stage and make it into a prototype and perhaps later on into a full blown production R/C Car. Could you point me the way and forward any contacts you may know of who would be interested in a product such as this?
Thanks.
Bertol Wong (bertolwong@yahoo.com)**

Hi Bertol, we'll pass this along and see if you get any interest. Good Luck.

Need More Steering

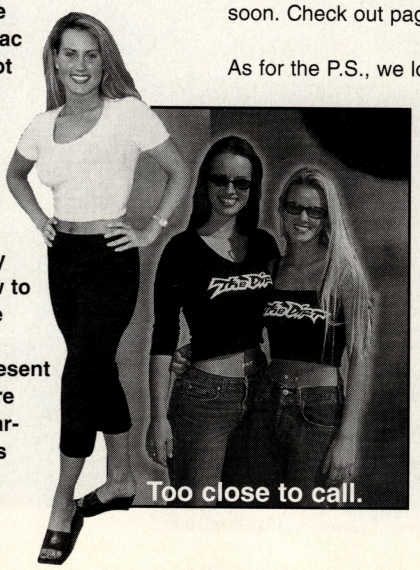
**My name is James and I'm a big fan of R/C and *Xtreme* . I have a big problem with my HPI RS-4 Sport. Every time I use my car it under-steers. I slow down as much as I can, I put the sway bars on, and I tried to change my driving style but nothing worked. Can you tell me why my car handling this way? Is it because I didn't change to aluminum shocks and ball bearings. Is that why my car doesn't turn well? What do I need in order for my car to be good as the PROs? I hope you can help. Keep up the good work!
James Cho
Rockville, Maryland**

First off you don't need bearings and aluminum shocks to make your car turn. Neither of those items will help your car turn. Although, bearings would be a nice addition to your kit. Out of the box, your car shouldn't push like you describe it. The first thing I would do is make sure that your car is up to kit specs. Look over the car and make sure nothing is out of whack. Refer to your car's instruction manual to check stock settings. The next thing you should do is get a new set of tires. Try softer compound tires in the front only. If you're running on a smooth, clean surface, try a soft compound slick. If the surface is dusty, try a soft compound treaded tire. The next thing you should do is make sure that you're getting full steering. Your wheels should turn from lock to lock. After checking all things that I've mentioned you should be able to make it around the turns. Good Luck.

Time For Takes

As the Pimp in the Box always says, less of us and more of you is always a good thing. But if you have a take, don't suck. Let's see how this goes:

**#1. A point system for racing is a great idea. I used to belong to the ABA (ROAR for BMX) when I raced BMX. They dropped away when the ABA gave local racers a chance to compete for real goals. If NORRCA and ROAR don't want to do it, let's do it ourselves.
#2. Time for a new ride. I want to go Nitro, but which truck to buy. I have a T3 and really love it. Here are my three choices: RC10GT, T-Maxx or Nitro RS4 MT. RTR or not, doesn't matter to me. Any suggestions?
#3. Too much power??!!.....please.....
#4. How about an official *Xtreme* Trophy Girl of the Year contest. Let the readers vote and make her your official trophy girl. My vote is stuck between the Dirt-y girls and Tara Wagner.
#5. Jugg 2....never saw an Edsel 2...maybe they have it right this time.
#6. What's up with the folks over at Associated? Any thing coming to answer Team Losi on the XXX models? (I recently saw a couple big-name Team Associated racers pile into a old green Pontiac P.O.S in the parking lot at AE in Costa Mesa. This was not the image I had of what these dudes would be driving. What's up with that?)
#7. Matt Francis.....my new hero...knows how to put the smooth on the trophy chicks.
#8. Gear?....can't represent without it....stickers are cool, but we need wearables....shirts and hats would be cool.**


Too close to call.

**That's all for now, keep up the good work and until next time.
War Shaq, screw the stinkin' genius.
Late
John Rylands**

P.S. Kind of cool to get two issues in one month. How about bringing forth the two missing issues? Remember, the calendar has 12 months not 10.

Rack him, as for your points, here's what I think.
1. I agree. Hopefully we can continue to push this agenda to some end that will result in what the people what. Whether it be from ROAR, NORRCA, or some new organization.
2. Each of the three kits you mentioned have very different purposes. The RC10GT would be for racing more than anything, the T-MAXX is a monster that goes anywhere. Its size and power impresses the chicks, and neighbors. The Nitro RS4 MT falls somewhere in between.
3. I didn't write the article.
4. Good idea. I'd have to say the Dirt Girls are in the lead right now, although Tara was very NIIICCCCCEEEE. We'll have to come up with some kind of vote on the web. As soon as we get something going we'll let everybody cast their votes.
5. We'll see. We've got a review of the Juggernaut 2 in next month's issue.
6. I don't think there are plans for any type of replacement for the B3 in the near future. But, is one needed? Associated managed to field six cars in the A-main at the Worlds, win the Winter Champs, etc. Obviously the B3 chassis remains competitive. As for the Pontiac, ease off there, the guy that owns that piece of machinery is a pretty nice guy. It's not the most glamorous of cars, but it got them to lunch and back.
7. The boy is smooth.
8. The gear is here, well almost. We've got shirts, the hats, and other stuff are coming soon. Check out page 52.

As for the P.S., we look at it as quality versus quantity. Would you rather read ten issues of *Xtreme* or twelve issues of those other guys? We're looking to go monthly sometime in the next year or so. If there's any official announcement, we'll fill you guys in.

Dear loyal readers, keep the letters comin'.

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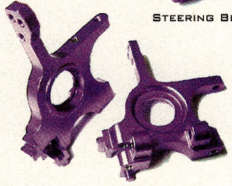
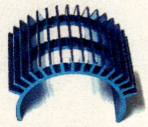


FRONT GEAR BOX FOR HPI



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T3592	Blue Rear Hub for MR4TC	$25.99
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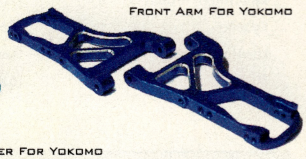

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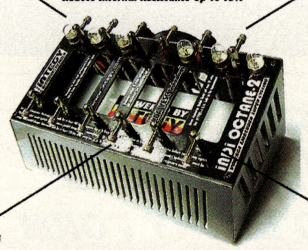

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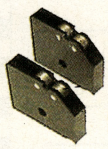

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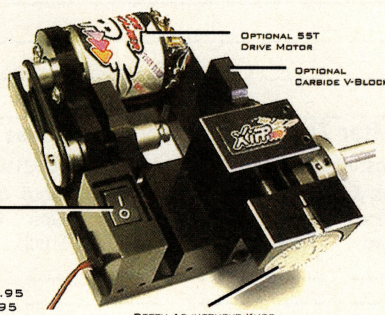

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2nd Place	Steve Vitaliti
3rd Place	Jason Kalter
Best of Show	Ruel Laurenciana
Top Qualifier	Steve Vitaliti

Touring GT2

1st Place	Brian Cianfrone
2nd Place	Angelo Koutras
3rd Place	Anthony Vitaliti
Best of Show	Art Schmidt
Top Qualifier	Angelo Koutras

Formula-1

1st Place	Bill Hamlin
2nd Place	Aleks Ivanovic
3rd Place	Greg Gloten
Best of Show	Darren Lighty
Top Qualifier	Aleks Ivanovic

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1st Place	Alan Mok
2nd Place	John Brown
3rd Place	Brian Cianfrone
Best of Show	Anthony Vitaliti
Top Qualifier	John Brown

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3rd Place	Mark Thompson
Best of Show	Darren Lighty
Top Qualifier	Todd Marshall

Le Mans Exhibition

1st Place	Sanford Bradby
2nd Place	Julian Campbell
3rd Place	Todd Marshall
Best of Show	Todd Marshall
Top Qualifier	Sanford Bradby

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Complete Form Below and Mail to: Tamiya America, Inc., Attn: Customer Service, 2 Orion, Aliso Viejo, CA 92656 ***OR*** *Call 1-800-TAMIYA-A,* ***OR*** *Fax 1-949-362-6852. Hurry! Registration for Race #73 Closes July 27 and Race #74 Closes August 17.*

Next Qualifiers

Please Check One:

☐ TCS Race #73
July 30, 2000
Hobby Works
Laurel, MD

OR

☐ TCS Race #74
August 20, 2000
Galaxy Hobby
Lynnwood, WA

Name _____ Age _____

Address _____

City _____ State _____ Zip _____

Phone (____) _____

Frequencies (1) _____ (2) _____ (3) _____

Minimum of 2 frequencies required.

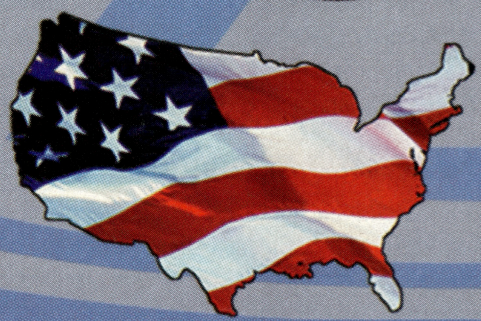
Circle Class(es): You can compete in a maximum of 2 classes.



Super Touring GT1 | Touring GT2 | Formula-1 | M-Chassis | TL01 Spec Exhibition | Le Mans Exhibition

XXX TECH GOE

XXX NT



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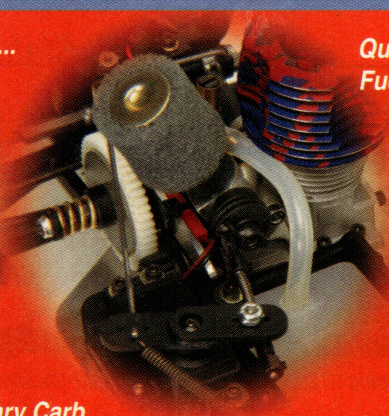
Use a Slide...

...or Rotary Carb



Quick-fill Fuel Tank



Molded Receiver Box



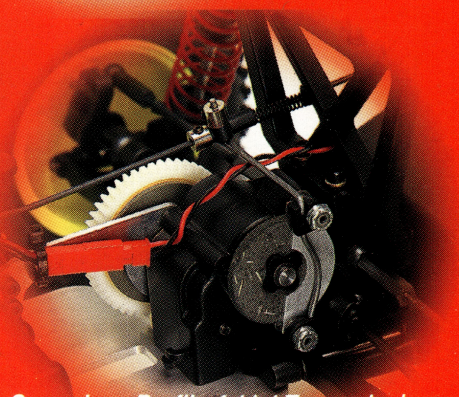
XXX Suspens Package

NITRO!

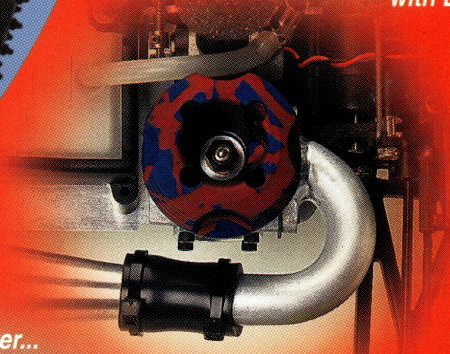




Rugged Battery Box
& Bumper

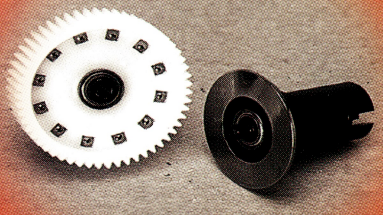


New Super Low Profile 4.11:1 Transmission
with Disc Brake



New large diameter...

Competition Exhaust
fits pull-start &
Std Motors



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VXR2416	6 Cell VIS PLUS Race Pack	$94.99
VXT2416A	6 Cell VIS PLUS Team Stick	$124.99
VXT2416S	6 Cell VIS PLUS Team Saddle	$129.99
VXT2416X	6 Cell VIS PLUS Team Side X Side	$129.99
VXR2416A	6 Cell VIS PLUS Race Stick	$104.99
VXR2416S	6 Cell VIS PLUS Race Saddle	$109.99
VXR2416X	6 Cell VIS PLUS Race Side X Side	$109.99
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VIS PLUS TEAM SPEC

Loose matched cells. These have the highest voltage and run times. Excellent for national level competition in stock and modified.

VIS PLUS RACE SPEC

Loose matched cells. The same run time as Team but with lower voltage. Excellent for local level modified and stock racing.

ASSEMBLED VIS PLUS TEAM SPEC

Same cells as Team Spec but already assembled into battery packs. Side x side and saddle assembled with our watt bars for lower resistance.

ASSEMBLED VIS PLUS RACE SPEC

Same cells as Race Spec but already assembled. Stick pack uses gold plated connectors for low resistance.

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6 cell assembled stick packs. Cells have been VIS EX-TRA processed to increase voltage. Gold plated connectors for low resistance.

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SNT3006	6 Cell VIS Plus Team Pack	$114.99
SNR3004	4 Cell VIS PLUS Race Pack	$64.99
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SNT3006A	6 Cell VIS PLUS Team Stick	$124.99
SNT3006S	6 Cell VIS PLUS Team Saddle	$129.99
SNT3006X	6 Cell VIS PLUS Team Side X Side	$129.99
SNR3006A	6 Cell VIS PLUS Race Stick	$104.99
SNR3006S	6 Cell VIS PLUS Race Saddle	$109.99
SNR3006X	6 Cell VIS PLUS Race Side X Side	$109.99
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VIS ex-tra

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R-Minus Gold Battery Connectors

RC5021, $2.99 (2 M, 2 F) does 1 speedo & 1 battery

RC5021B, $14.99, (2 M, 20 F) does 1 speedo & 10 batteries

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