Check Out All That's New For This Year!

2001

Xtreme R/C Cars

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NITRO OFF ROAD
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Nitro Fuel FAQ
T-MAXX News

The World Champ Comes To America!
Yokomo's New **MR-4TC WORLDS REPLICA**

January 2001
USA $3.99 CANADA $5.99
Issue 6.4

Factory Team B3

Fully Loaded, Ready to Rip!

Team Associated's RC10B3 buggy proved once again to be the "best on earth" by winning the 1999 IFMAR 2WD Offroad World Championship... the RC10's sixth IFMAR World Championship, and Team Associated's sixteenth World Championship. To commemorate this unequalled track record, Team Associated introduces the ultimate "factory ride"... the RC10B3 "Factory Team" Edition.

Fully loaded with all the most-asked for options, the Factory Team Edition B3 comes complete with all the features you'd expect from the reigning IFMAR 2WD Offroad World Champion. Both the Factory Team and the new updated Team B3 kits feature Pro-Line's lo-profile Deja-Vu Tu body, wide-body wheels, and racing compound tires.

The top offroad 2WD buggy in the world today, it's Team Associated's RC10B3 "Factory Team" Edition.



Over $100 Worth of UPGRADES!

Factory Team B3 #9043

FEATURES:

- Sealed Ball Bearings
- Factory Blue Titanium Turnbuckles
- Factory Blue Chassis Plate, Motor Mount and Front Kickup
- Full Graphite Chassis, Shock Towers, Suspension Arms... and more.

Send for your FREE RC10B3 Catalog

RC10B3 Team Kit #9032

FEATURES:

NEW UPDATED!

- Sealed Ball bearings
- New Lo-Profile Deja-Vu Body
- Hard-Anodized, Teflon-coated Shocks
- Pro-Line Tires, One-piece Wheels

Factory Team B3 #9043

Motor, Batteries, Speed Control and 2-channel radio gear not included

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ad#1070

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Over A Wider Range Of Winds
For Better Performance

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Quicker Spool Up Than Standard
Double Winds For Touring Cars



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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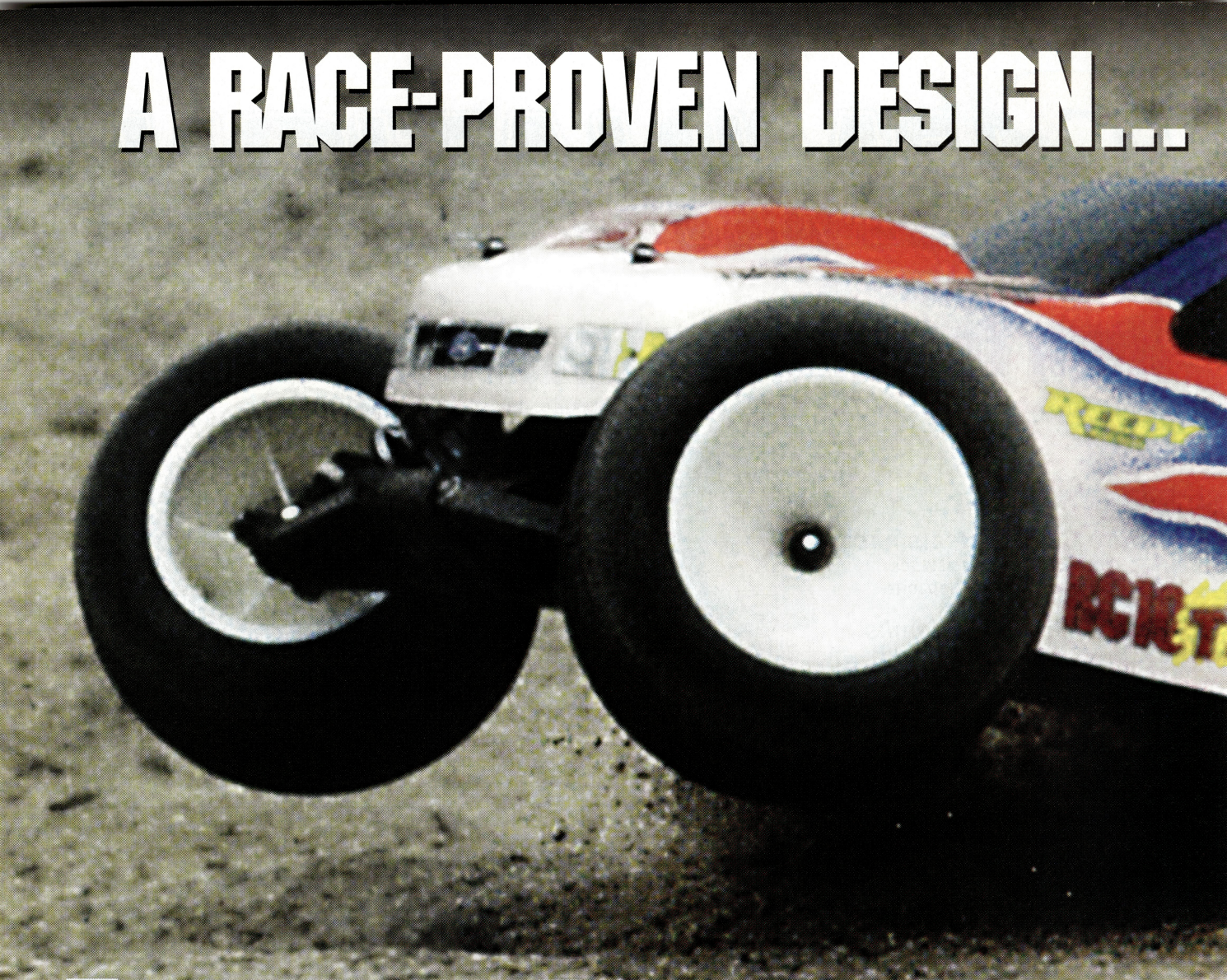
A RACE-PROVEN DESIGN...



Factory Assembled

Since its introduction, Team Associated's RC10T3 truck has been the dominant force in electric truck racing, winning three consecutive NORRCA World Cups, the 1998 ROAR National Championship, and too many other national and regional races to count. Now the Team introduces the RC10T3 "Factory Assembled" for those who want the performance of a true racing truck in a track-ready package. Fully upgradeable, shares most components with our RC10T3 kits, and includes genuine LRP Speed Control, 20-Turn motor, and 2-channel wheel radio installed!

THE RC10T3 RTR Features...



T3 Ready to Run shown equipped with Reedy 6-Cell Battery Pack, NOT included.

TRACK-READY IN MINUTES!

T3 RTR



• Pre-painted body...
Three different color schemes available!
(Custom painted body shown in photos... actual pre-painted bodies may vary slightly)

• High-quality two-channel wheel radio system installed
May include Hitec (shown) or equivalent system

RC10T3: Three-Time NORRCA World Cup Champion!



RC10 T3 RTR

TEAM ASSOCIATED · 3585 Cadillac Ave. Costa Mesa, CA 92626
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Twin Bell Cranks Supported By Steel Shafts And Ball Bearings Assure Ultra-Precise Steering

Front And Rear Ball Difs



Servo NOT Included

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"...we felt it was imperative to provide a chassis with as much setting potential as possible."



— Masayuki Miura, Tamiya Design Team

The New TA04 Represents A Quantum Leap Forward In High-Performance, 4WD Electric, On-Road Racing Chassis Design. Nothing Was Spared To Deliver Maximum Performance And Tuning Versatility.

4WD

TCS QUALIFIED!

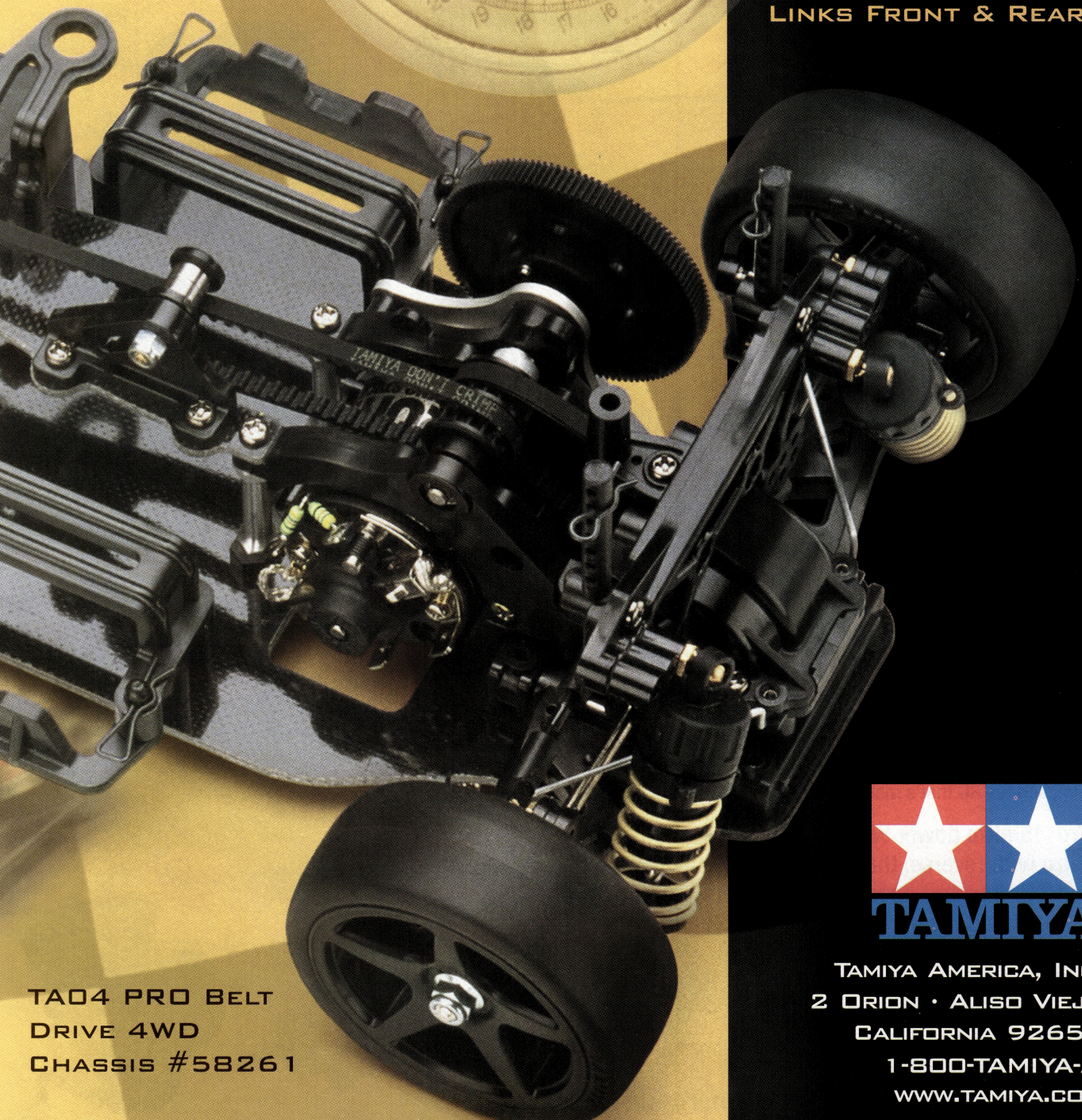
TA04

TA04

3 Upper and 2 Lower Mounting Positions For Rear Shocks. 5 Different Mounting Positions Available For Rear Upper Links.

Zero "Play" In Suspension Arms

Adjustable Upper Links Front & Rear



TA04 PRO Belt Drive 4WD Chassis #58261

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TRAXXAS®

Tough Nitro T-Maxx



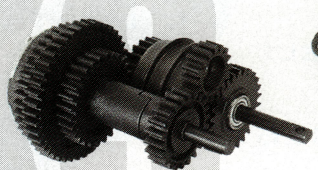


When T-Maxx was unleashed, the monster truck world was turned upside down. Never before had anyone seen a Nitro truck with two speeds and reverse that shifted from a 3-channel transmitter! 3½ inches of seemingly endless suspension travel is dampened by 8 oil-filled shocks. This big, mean, drive-over-anything monster has become the benchmark for all others to follow. It's tough, serious RC that's made for the way you like to play.



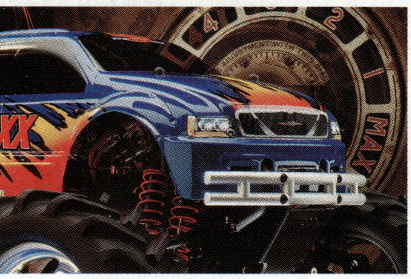
- Pro .15 nitro power with EZ-Start one button starting
- Nitro with reverse, that's shifted from the transmitter
- Autoshifting two-speed transmission works in forward and reverse. 30+ MPH in high gear!
- Fully assembled and Ready-To-Run®
- Full-time four wheel drive
- Hardened steel differential gears
- 30 precision ball bearings
- Four inches of ground clearance
- Oversized disc brake provides powerful 4-wheel braking







New Electric E-Maxx!



When it comes to gut-wrenching, wheelie popping monster torque, nothing comes close to E-Maxx, not even T-Maxx. Twin Titan™ 550 motors, trick 14.4 volt ESC power system, and shift on the fly 2-speed transmission all put the E-Maxx in a class by itself. If you want the best, most innovative electric monster truck there is, look no further. E-Maxx breaks the rules and beats them all!

- Big Block motors: Twin Titan™ 550 fan-cooled motors have 30% longer armatures than a 540.
- More power: The all new MOSFET VX-12 forward-reverse electronic speed control delivers a whopping 14.4+ volts to the motors from dual 6-cell battery packs*. That's twice the power of ordinary RC Models! Plus, it's backed by our limited lifetime electronics warranty

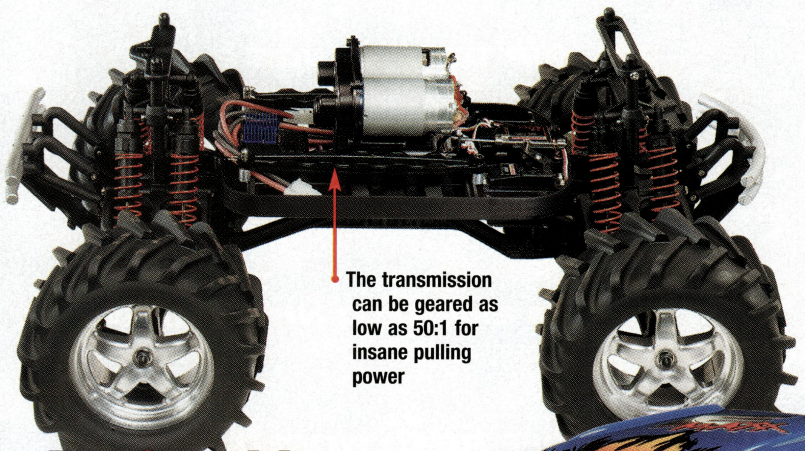
Shift on the Fly...

from your transmitter! Select low gear for monster climbing muscle, then power shift to high gear for unbeatable top speed.



- Incredible T-Maxx style suspension delivers 4 inches of maximum ground clearance and over 3½ inches of super plush suspension travel with 8 oil-filled shocks.
- Real quality! The E-Maxx includes over 30 precision ball bearings

*Batteries not included



The transmission can be geared as low as 50:1 for insane pulling power

ProGraphix™

- The awesome new E-Maxx includes a 6-color painted and trimmed body. Choose from 4 different base color schemes.



E-MAXX

RTR READY TO RUN

Visit our website for tons of pictures and video of the new E-Maxx

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Issue 6.4 • January 2001
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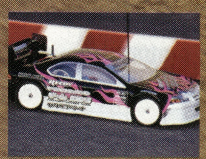
60 • Pro Parts "THE DADDY"
Left turn Clyde!



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Other stuff in this issue:

Obscure references to Clint Eastwood movies, chicks in bushes, babes in Red, some bikini girls we don't know but we'd like to, trash talking Euros, nuts of steel, and much, much more.

Cover Photos by: Elliot Crabtree



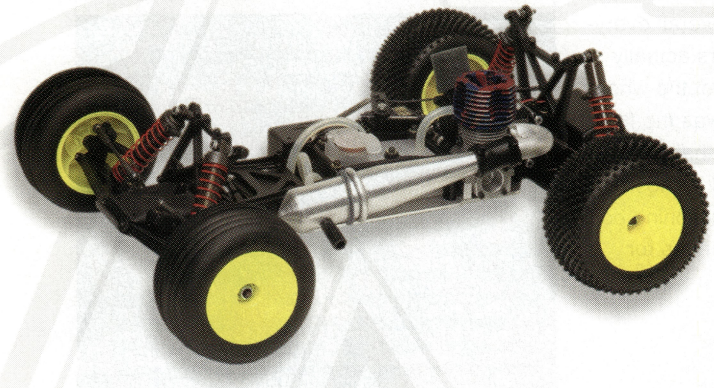
Tune in next month for the Dirt Girls in action.

XXX-TREME NITRO



'2000
NORRCA NATIONAL
CHAMPION

THE XXX-NT IS NITRO TRUCK RACING WITH A NEW ATTITUDE. BUILT OFF-ROAD TOUGH WITH DESIGN EXPERTISE AND MATERIALS TECHNOLOGY ONLY TEAM LOSI CAN PROVIDE. THE XXX-NT CAN HANDLE XXX-TREME TRACKS AND XXX-TREME HORSEPOWER LIKE THE NATIONAL CHAMPION IT IS.



TEAM LOSI

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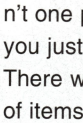
Happy New Year!

Can you believe it's 2001 already? I can't. Time flies. This year I had the pleasure of attended the National Model and Hobby Show in Chicago. I wasn't really stunned by anything ground breaking. There wasn't one product that you just had to see. There were a number of items definitely worth a few good looks but nothing stole the show. What did steal the show however was the huge number of new items on the horizon. I can't remember a time when there have been more new products and innovations making their way to market. With all those new items you'll find most of them in this month's Inside Line. RTR's are definitely huge this year. For the first time this holiday season I think more new kits will be purchased in the form of an RTR, rather than build it yourself kits. That could mean a record number of new entrants into the world of R/C after this year's holiday season is complete. Among the large number of new RTR's hitting the road there was also a large number of new kits aimed at racing and nitro racing. Racers rejoice.



Now to shift gears, last month I talked about getting more exposure for large races. Well as you'll read in this issue the 1/8-scale Worlds in Vegas took place with lots of positive reaction. Although some of the foreign complained about this and that, overall everyone had a good time. It was amazing how many racers actually brought their families along and made a vacation out of the whole experience. Of all the Worlds races I've been to this was the first that I really saw a vacation type atmosphere. And for that I think attendance was positively impacted as was the spirits of those who made the trip. Hopefully IFMAR, ROAR, and other sanctioning bodies will take this factor into account when choosing venues for large races.



Mike Velez
Publisher/Editor/Racer

Stacey, get well soon.

Xtreme R/C Cars

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NITRO RUSH

2WD STADIUM TRUCK RTR

PRE-ASSEMBLED

ASSEMBLED CHASSIS WITH ENGINE INSTALLED
— ONLY REQUIRES MINOR FINAL ASSEMBLY —



Includes yellow pre-painted and trimmed Rush truck body.



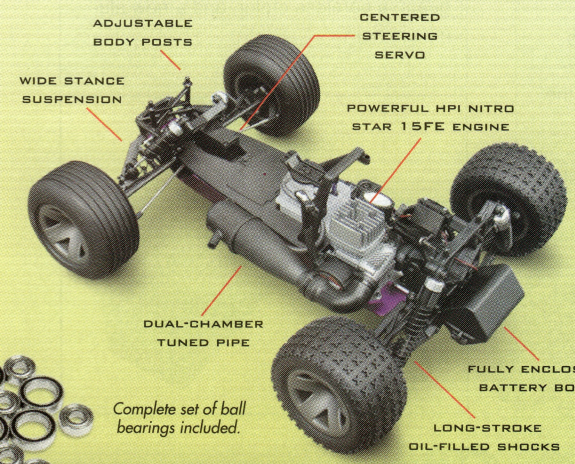
NEW! #560 RTR Nitro Rush (RS2 ST) (Includes radio system)
NEW! #564 Nitro Rush (RS2 ST) (Radio system not included)



Easy to apply pre-cut decals are included.



Included in the RTR Rush kit (#560) is our new TX-2 pistol grip AM radio with dual-rate steering.



Complete set of ball bearings included.

THE ALL-NEW NITRO RUSH

HPI Racing is proud to announce our all-new Nitro Rush trucks. The Nitro Rush is a 2WD nitro powered stadium truck that continues the HPI tradition of durable kits at competitive prices, excellent customer service and great aftermarket hop-up potential. The Nitro Rush is based on our all-new RS2 ST platform: tough trucks that offer high performance features, pre-assembled to get you racing quickly. The Rush is fast, yet easy to start and tune. It's simple, but uses the same suspension geometry as you'll find on competition trucks. If you've always wanted to try a quick and nimble 2WD nitro truck, try the all-new Nitro Rush. Pre-assembled with or without radio, the Nitro Rush is ready for action.

FEATURES

- Pre-assembled with or without radio
- Painted and trimmed body
- Decals die-cut for easy application
- Full ball bearing set
- Powerful, refined Nitro Star 15FE engine
- Dual-chamber tuned pipe
- Enclosed "laydown" gearbox
- Adjustable slipper clutch
- Sealed receiver and battery compartments
- Rear chassis upper and lower braces
- Vented disc brake



COUNTERSUNK ALUMINUM CHASSIS



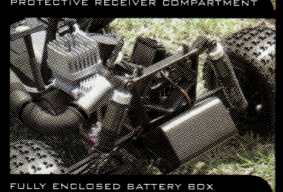
DUAL-CHAMBER TUNED PIPE



LONG-STROKE OIL-FILLED SHOCKS



PROTECTIVE RECEIVER COMPARTMENT



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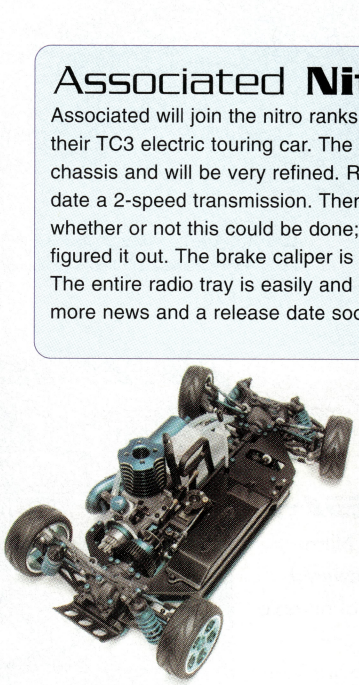
NITRO RS2 ST
BASED ON THE ALL-NEW RS2 ST CHASSIS

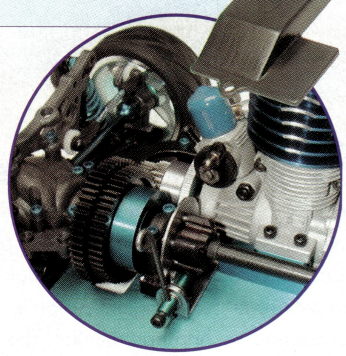
Straight from the National Model and Hobby Show....

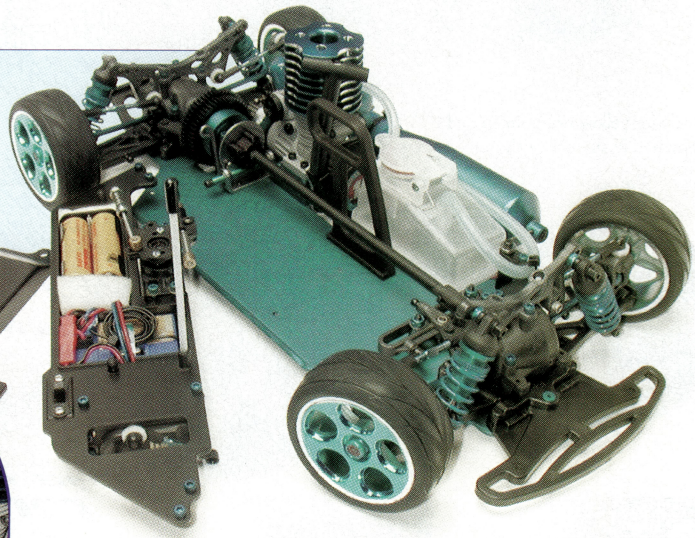
new products for 2001

Associated **Nitro TC3**

Associated will join the nitro ranks once again with a nitro version of their TC3 electric touring car. The new kit will have a thick aluminum chassis and will be very refined. Room has been made to accommodate a 2-speed transmission. There had been a big question as to whether or not this could be done; obviously Team Associated has figured it out. The brake caliper is mounted to the chassis itself. The entire radio tray is easily and quickly removable. Look for more news and a release date soon.

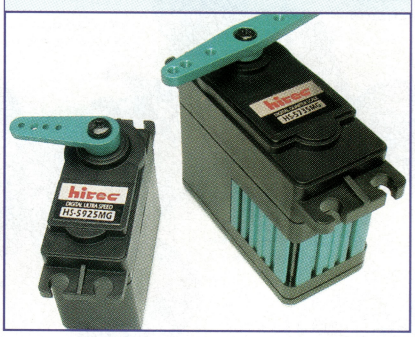






HiTec **Servos**

Hitec unveiled this new 1/5-scale servo, the HS-5735MG.This digital servo comes with a new aluminum servo horn, metal gears, and cooling heat sinks. Also new is the HS-5925MG, which features metal gears, a coreless motor, and a new aluminum horn.

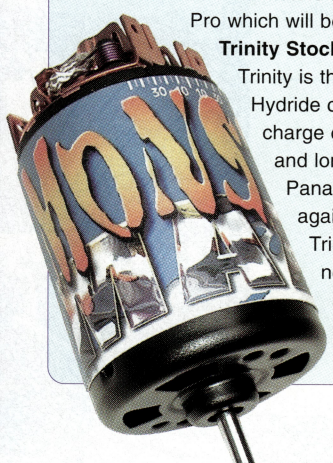


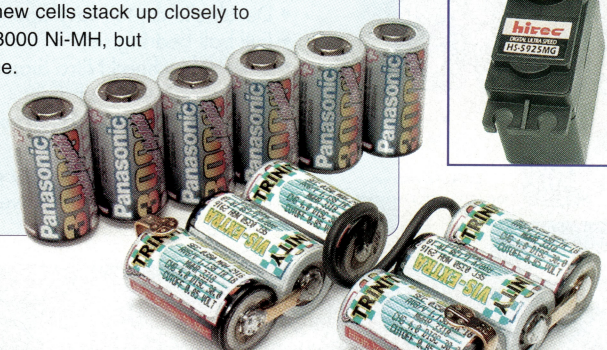
Trinity **Monster Maxx & New Cells**

Let Trinity power your new E-Maxx. Trinity is the first aftermarket company to introduce 550-size aftermarket motors for Traxxas' new behemoth. The new Monster Maxx motors will be available in three different winds from "Mild" to "Wild" to "Pro," take your pick. The Mild and Wild motors are machined wound and will carry a lower price tag than the Pro which will be hand wound.

Trinity Stock Metal-Hydride Cells

Trinity is the exclusive importer of Panasonic's new 3000 Stock Metal-Hydride cells. Trinity data shows the new cells having a similar discharge curve to Sanyo's 2400 Ni-Cad cells but with increased voltage and longer run time. The new cells stack up closely to Panasonic and Sanyo's 3000 Ni-MH, but again with higher voltage. Trinity will offer the new cells in both assembled and unassembled packs





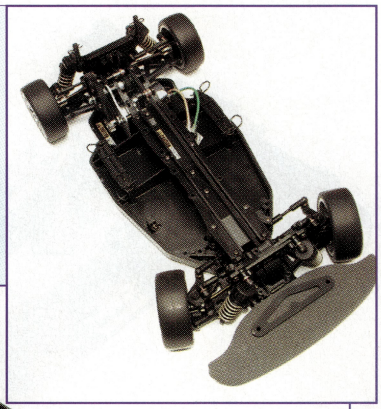
Things Chicago is famous for: Pizza, Harry Carry, Al Capone, Ferris Bueller.

Every year, the entire R/C car industry gets together in Rosemont, IL, just outside of Chicago. Aside from staying at the hotel bar much longer than they should, everybody shows off what's going to be new for the Holiday season and the new year. Let's take a look at everything the R/C car industry has to offer for the new year.

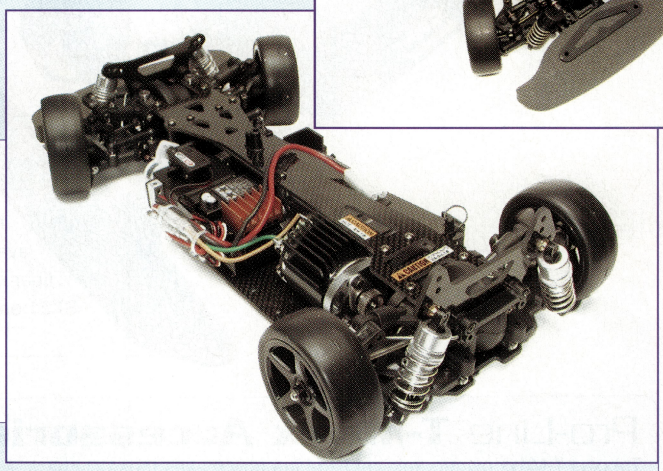
by Nathan Miller and Mike Velez

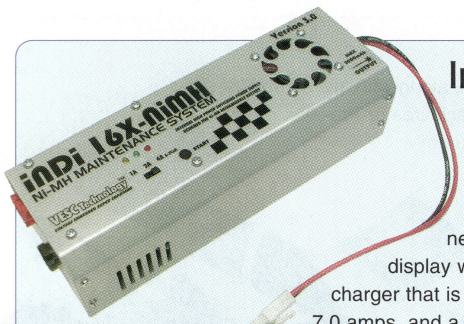
Tamiya **Ferrari & TB Evolution**

Tamiya let loose with a wide variety of new stuff. Racing enthusiasts will appreciate this new bottom plate/upper deck set-up for the TA04. This new chassis addresses a small inconvenience of the TA04 as it allows drivers the option to use saddle packs instead of sticks. Also on the racing front is the TB Evolution, a seriously modified version of the TB01 shaft driven car. This kit has graphite chassis components, aluminum, oil-filled dampers, sway bars, U-joint drive shafts, and a front one-way setup. A plastic tub version of the TA04 is also now available, sporting this hot Ferrari 380 body. F-1 fans looking for something different may want to look into the new F and M type shells.



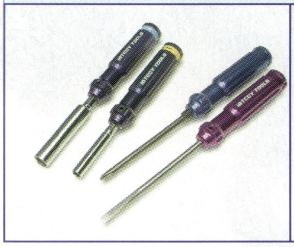


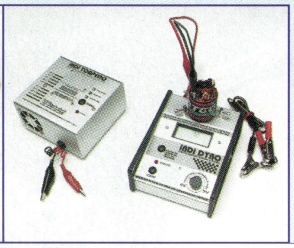




Integy **Tools, Chargers, Dynos**

Integy had a lot of new stuff on display. Here are some highlights from their new line of tools, They are offering a 4-piece set of standard and a 3-piece set of nut drivers. Also available is a set of Phillips screwdrivers. To help make precise settings on you touring car, there's also a new set-up board that allows you to measure caster, camber, and toe, front and rear. Also on display were two new chargers, the Indi 16X5, and 16X-NiMH. The 16X5 is a computerized AC/DC charger that is compatible with 4-8 cell NiCd and NiMH packs, and features adjustable charge rate from .1 to 7.0 amps, and a digital display that shows charge rate, input voltage, and discharge current (adjustable from .01 to 20 amps). The AC 16X-NiMH will handle 6-7 cells, charges at either 1,2,or 4 amps, and features simple push-button operation. Also for new for battery maintenance is the Torpedo, a battery-boosting device. This new product will punch your batteries in seven minutes, and will give your cells more run time and lower resistance. And yes, it is NiMH compatible. For those looking to test their motor, Integy also had on display this Indi dyno. This little box can measure voltage, current, RPM, and comm interference. Other capabilities include 0-7 volt motor break-in, and the ability to drive a slave motor. Lastly, we have this trick nitro bump starter. With its molded case, this starter is light, and can be set up to start in-line or parallel mounted motors. Cranking power for the starter comes from a pair of 540-sized motors.





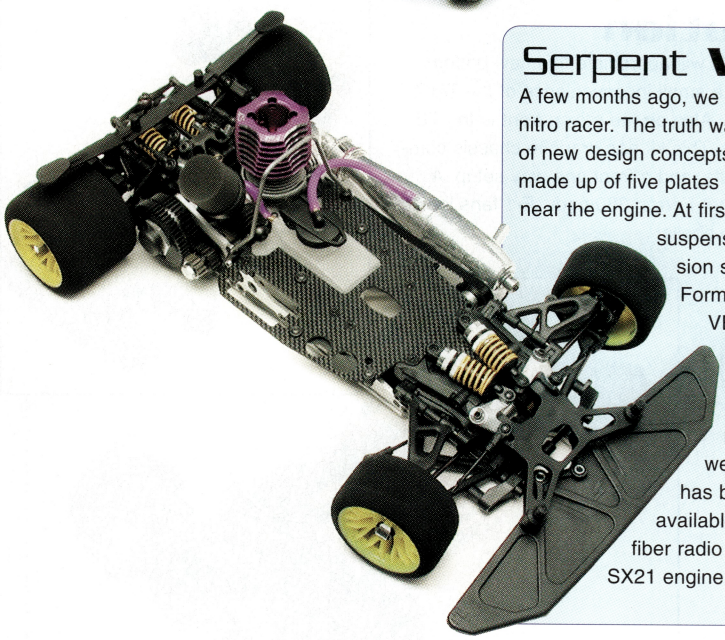
What do you think would be a good name for Losi's new car? email us.





HPI **Super Nitro Rally & Nitro Start-up Kit**

As you know, HPI has gone nitro in a big way – literally. HPI's newest nitro kit is a nitro rally version of their larger Super Nitro RS4 chassis. The new rally car comes with all-purpose rally tires; long-stroke, oil-filled shocks; 4WD shaft drive and disk brake system derived from the Nitro MT; complete ball bearings; purple-anodized, countersunk, aluminum chassis; front and rear geared differentials; and a Nitro Star 15FE engine. Making life simpler for nitro newcomers is the Nitro Start Up Set. In one box, you get fuel, a glow plug igniter with charger, a glow plug wrench, spray nitro cleaner, and a fuel bottle. This set is also available with a two-channel radio system.



Serpent **VETEQ**

A few months ago, we gave you a hint that Serpent was working on an all new 1/8-scale nitro racer. The truth was out there and now it's out. The new VETEQ employs a number of new design concepts. The VETEQ uses a monocoque-style chassis construction that's made up of five plates that integrate the motor mounts for maximum stiffness especially near the engine. At first sight, you notice that the VETEQ features an inboard mounted suspension system that uses rocker arms and pushrods. The new suspension system is the closes thing in R/C we've seen to an actual full-size Formula One car. You've heard of anti-dive? Well, the front of the VETEQ features an anti-lift assembly that helps keep the car level under hard acceleration. Weight distribution doesn't change whether the fuel tank's empty or full. Thanks to a low profile fuel tank that's evenly distributed along the center of the chassis and a receiver pack that mounts near the center of the chassis, the car's weight distribution is nearly perfect. Last, the overall profile of the car has been lowered greatly to lower the car's center of gravity. Once it's available later this year, the new car will come complete with a carbon fiber radio tray, 2-speed gearbox, Centax clutch, and an optional NovaMega SX21 engine.

Pro-Line **T-Maxx Accessories**

Traxxas T-Maxx owners rejoice! Pro-Line now makes these Outback Weld Wheels for your ride, along with this sharp Chevy Silverado 4-Door truck body. The wheels fit the T-Maxx and E-Maxx and mate perfectly with stock tires or Pro-Line's Maxx Masher 2000 tires. Also from Pro-Line are new Rally tires to help get you hooked up off road. For the touring car crowd, Protoform has several new sedan bodies, including a new Mercedes-Benz shell, and a cool Chrysler PT Cruiser body. And for you NASCAR fans, there's the new Dodge Intrepid - available before the real car debuts in Daytona next February.







Serpent's new rig is not for the meek.



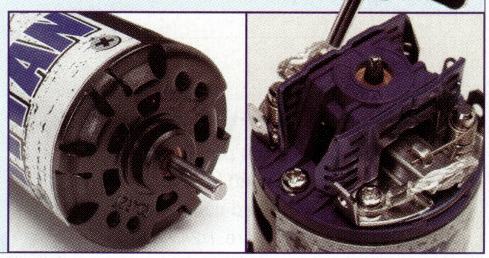
Atomic **Truck Bodies**

Never paint a body again. Atomic's new pre-painted bodies use a unique printing process to produce bodies that won't crack, chip, or fade. So far, there are only two designs available. But, more will be available soon. The new Atomic bodies are being exclusively distributed by Great Planes.

Reedy **Titan Motor**



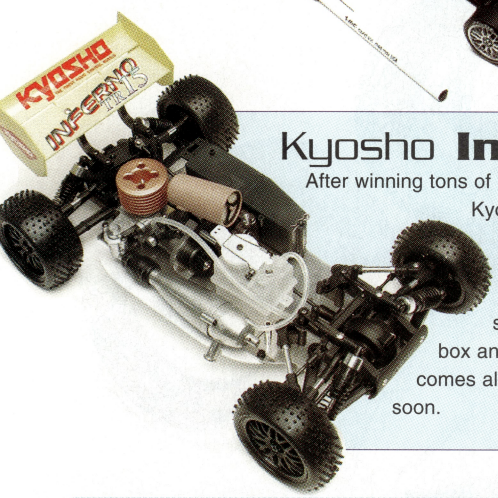
After being known for the super high RPM Rage motor Reedy is releasing the new Titan. The Titan incorporates a number of new design features and promises to have more torque than the Rage at slightly lower RPM. The new can design has large high volume air flow venting. The endbell has newly designed heatsinks and large cutouts for easy teching. The Titan is a rebuildable stock motor and is made to meet all of the mechanical ROAR and NORRCA specs.





HPI **Mini Cars**

New from HPI are these new 1/18-scale RS4 Micro sedans. Still in prototype form, these cars have four wheel drive, an independent front suspension, and will come with a variety of bodies, including a Dodge Viper and a BMW. The new 4WD design is unlike any other micro-sized car on the market. With HPI's proven track record for category innovation, these look to be very popular.



Kyosho **Inferno**

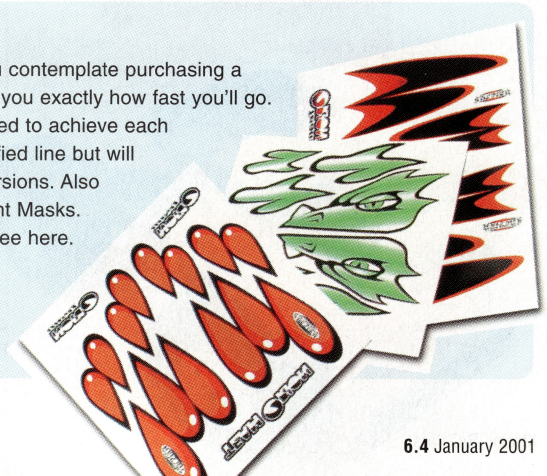
After winning tons of 1/8-scale gas world championships, you know that Kyosho knows how to put an off-road nitro buggy together. With that in mind Kyosho is introducing the new Inferno TR15. The new buggy will come complete with a 1/8-scale drive train, an aluminum countersunk main chassis, geared front and rear diffs, a large dustproof radio box and a Kyosho's GS15R engine. Out of the box, the TR15 comes almost completely assembled. Look for a complete review soon.



Orion **Motors & Decal Sheets**

"How fast will my car go?" That's the question asked around the world every time you contemplate purchasing a new motor. Team Orion has got the answers. Their new Speed Series of motors tells you exactly how fast you'll go. Along with each motor comes information about what kind of car and gearing was used to achieve each speed. The Speed Series is currently based on Team Orion's high-end Chrome modified line but will probably be available soon in less expensive machine wound versions. Also new from Team Orion are a new crop of Thunder Paint Masks. The new designs include the three you see here.





Reedy says the new Titan will be much better than Titan AE the movie.

Losi **Buggy & Truck**

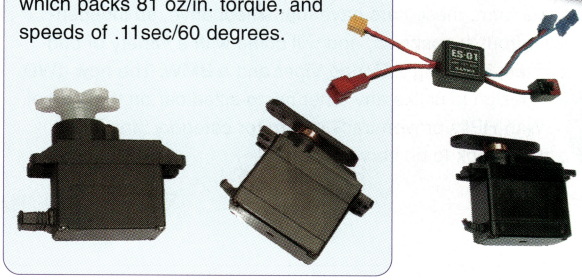
The biggest talk out of the Losi camp was the new Triple-X Spec buggy and truck. The new off-roaders are economical versions of Losi's multi-race winning Triple-X and Triple-XT. The new vehicles come with a number of accessories designed to promote spec class racing including blue Dirt Spec tires and other blue accessories like ball cups, shock bodies, and bumpers. The new kits with ball bearing transmissions come with an amazingly low retail price that should translate into some of the lowest street prices of any competitive off-road vehicles ever.

Also new from Losi is the Phobia body for the Triple-X buggy. The Phobia has a super low profile and more rounded lines, and fits the chassis very snugly.



Airtronics **Servos**

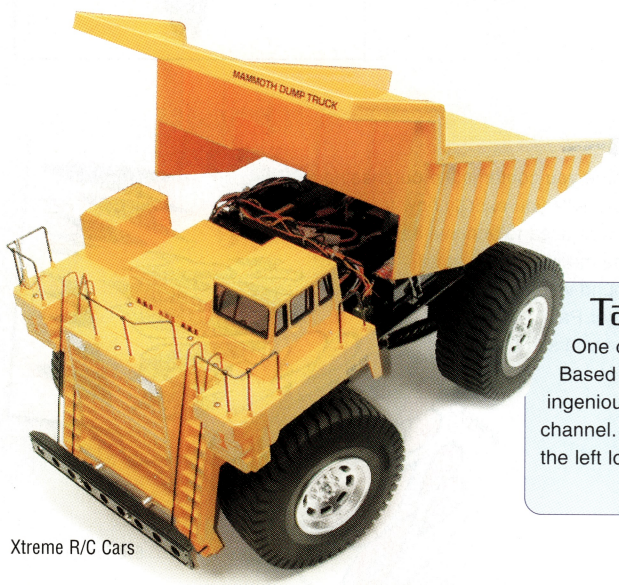
If you have a small scale project, Airtronics has got the stuff for you. New are the ES-01 speed controller and 94091 servo. Both are 1/24 scale in size. The ES-01 is capable of handling 6.0-7.2 volts of power and is roughly the size of a quarter! Also new from Airtronics is the 94755Z servo, which packs 81 oz/in. torque, and speeds of .11sec/60 degrees.



HRP **Aluminum T-Maxx Wheels**

HRP's Racers Edge brand has come out with some of the greatest looking T-Maxx wheels around. The new wheels are machined from high quality billet aluminum. The new wheels are easily polished and available in aluminum and blue.





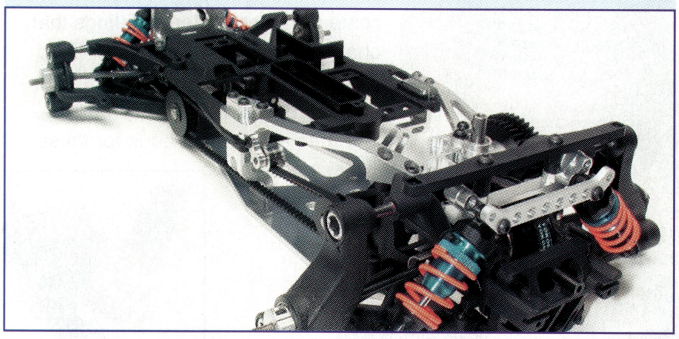
Tamiya **Monster Dump Truck**

One of the biggest items at the show-literally-was the Mammoth Dump Truck. Based on the Juggernaut frame, this truck can haul heavy (4kg) loads, and uses an ingenious system that allows the bed to raise and lower without the need for a third channel. Turning the wheels right at a dead stop raises the bed; turning them back to the left lowers it back down.

Electric racers have Dumpaphobia. Not to be confused with crapyourpantsaphobia.

Yokomo **GT4 Accessories**

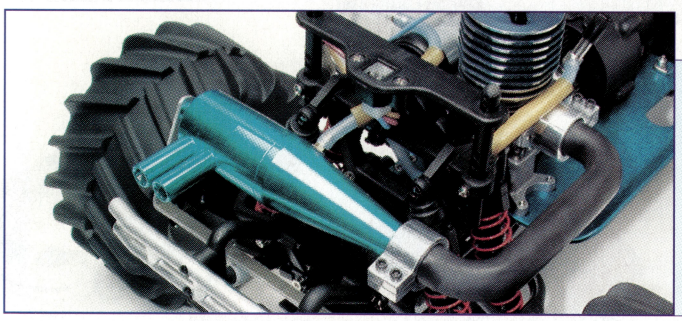
With the outrageous popularity of the GT-4 Yokomo is releasing a complete line of hop-up accessories. Tops on the list are machined aluminum braces, shock towers and other pieces that will make any GT-4 stiffer than nails. Also new from Yokomo are the MR-4 TC Sport and TC WC Replica. The sport will come with the basic MR-4 setup and a super low price while the TC WC Replica will come with everything but the kitchen sink. Check out the review of the TC WC Replica in this issue.



Corally **C4.1**

New from Corally is an upgraded version of their C-4 touring car, the C-4.1. Upgrades to this car include externally adjustable damping shocks, which also feature threaded bodies for precise adjustment, a fully woven graphite chassis, longer wheelbase, a lowered driveline with a narrower front belt, adjustable center one-way, and a tweak-free top deck plate. Mounted on the C-4.1 are new 24mm 5-spoke rims, with Corally/Take-Off tires. These new wheels and tires will also be available separately.





CVEC **T-Maxx Exhaust**

CVEC has jumped on the T-Maxx bandwagon with this rear exhaust conversion kit. The kit includes a solid manifold, pipe, and mounting hardware. Also new from CVEC is an exhaust kit for the big 1/5 scale cars.

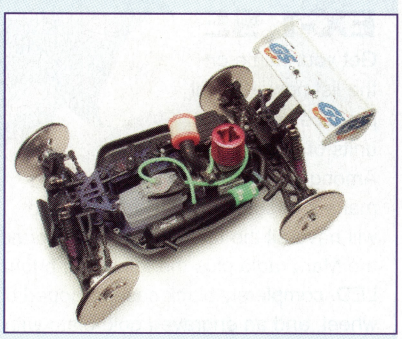
Associated **T3 RTR**

With the huge sucsess Team Associated's RC10 GT RTR they've decided to apply the same formula to the electric T3. The T3 RTR will come completely assembled and ready to go with an electronic speed controller and Hitex radio. Three different painted body options are available. Look for this new kit in time for the holidays.



General Silicones **RTRs**

New from General Silicones is a pair of new 1/8-scale racers. For you on roaders out there, GS has the RTR Sonic. This car has a lot of features, including a 5mm thick, countersunk 6061 T6 aluminum chassis, triple belt four wheel drive, a standard two-speed transmission, and lay down inboard shocks. Off roaders should check out the Storm, with three diffs, independent suspension, four-wheel drive, sway bars, and aluminum shocks. Both of these cars will be available Ready To Run with an included radio system and a new GS Power .21R01 motor, or in kit form. Another item from GS are their new aluminum set up disks for 1/8-scale cars. These disks allow for precise wheel set-up measurements.



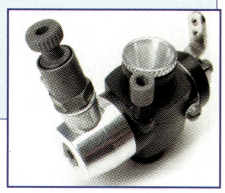


That's got to be the longest manifold we've ever seen.



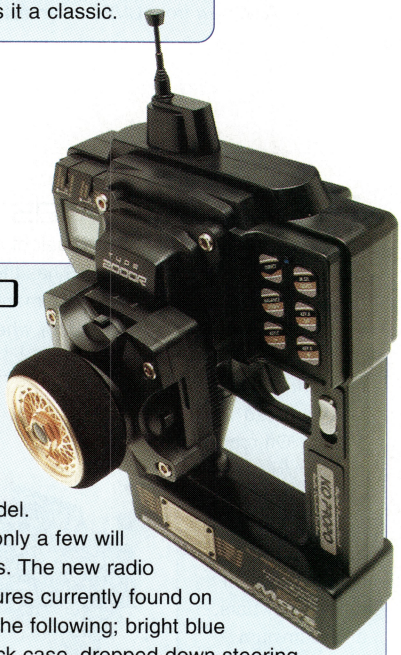
Thunder Tiger **EVO Engines**

Thunder Tiger is coming out with a new line of engines designed for racing.The EVO engines features molded carburetors that don't conduct as much heat as metal carbs. The result is less fuel evaporating before it reaches the combustion chamber. The new carbs also come with three different fittings that change the diameter of the air inlet. Also new on the EVO carbs is a high-speed needle that uses an Allen driver rather than a flat head. Look for these new engines soon.



Bo-Link **'56 Ford T-Maxx Body**

Add a little bit of Americana to your T-Maxx with Bolink's new '56 Ford pickup designed to fit the Traxxas T-Maxx. The new '56's has got all the authentic detailing that makes it a classic.



KO PROPO **Mars EX-1 SE**

Get your name on the list now. KO will produce only 2000 units of this new model. Among those 2000 only a few will make it to our shores. The new radio will have all the features currently found on the Mars radio plus the following; bright blue LED, completely black case, dropped down steering wheel, and an engraved gold plate with serial number.



Kyosho **New Mini-Z Kits & Pit Cases**

Kyosho adds to their Mini-Z car line with two new bodies. James bond is back with the new BMW Z8 roadster. The other new chassis isn't as racy, but just as unique. Audi's new TT roadster is the other convertible to hit the Mini-Z line. Look for these new kits in stores now.

Keep your important stuff safe in one of these new pit cases from Kyosho. The new cases are available with different foam inserts for things like springs, pinion gears, crystals, etc. Each case is translucent so you can quickly identify what you're looking for before even opening it.



Armed with his trusty blue LED Luke saved the village.

It's a smaller Inferno.... but still sure-fire.

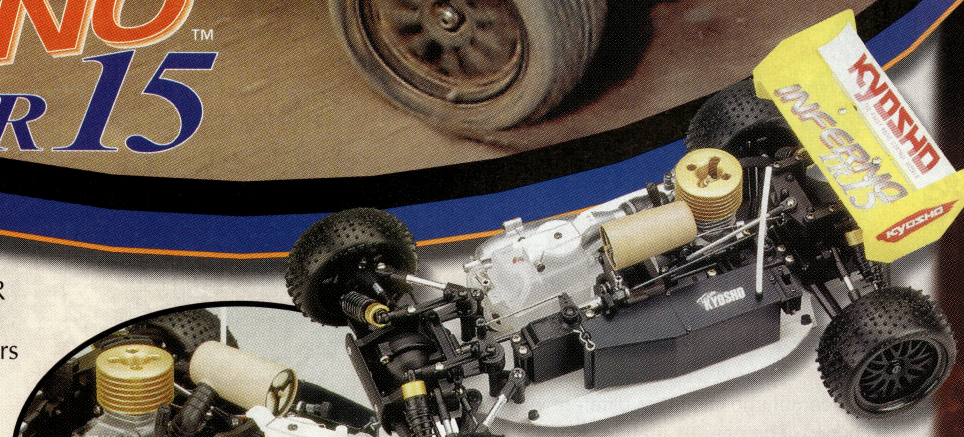
KYOSHO
THE FINEST RADIO CONTROL MODELS

INFERNO™ TR15

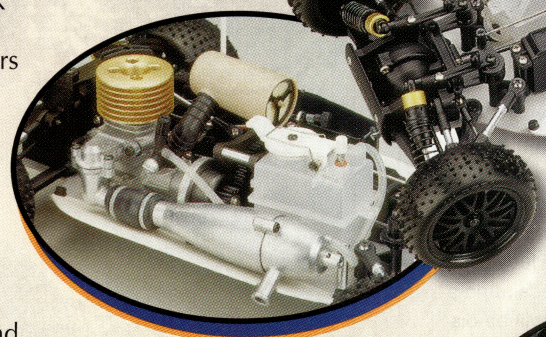
Any R/C driver worth his bearings knows about the 1:8 scale Inferno "MP" buggies from Kyosho. Four consecutive IFMAR World Championships tend to make you a household name with off-roaders everywhere. Ever wonder what it would be like to put yourself at the controls of a machine this technologically advanced?

Wonder no more. The Inferno TR-15 is here. It has all of the same superior racing engineering of the Inferno MP...in a .15-size buggy that's designed for slightly smaller tracks (and budgets). An aluminum main chassis with countersunk screws provides a stable and durable base, and the center shaft 4-wheel drive system is mounted low for better handling. Gear diffs front and rear deliver smooth, efficient power to the wheels, which are adorned with high-grip, pin-tread tires. A dust-proof radio box and large rear wing are just two more performance perks that the TR-15 shares with its big brother.

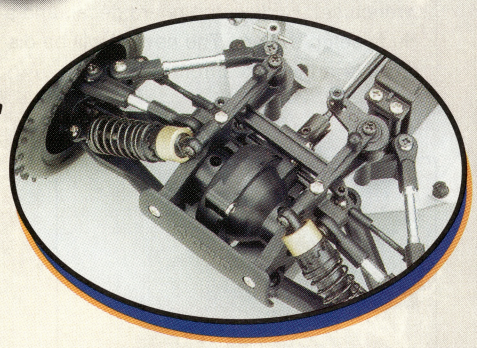
So if you have a burning desire to hook up with a truly hopped-up buggy, go with the awesome off-roader that everyone will recognize: the Inferno TR-15 from Kyosho. Hey, it's an Inferno — so you know it's hot.



Much of the Inferno TR-15's chassis comes already factory-built, so you'll be out tearin' up the terrain in just a few hours.



The included Kyosho GS15R engine is incredibly powerful, and starts easily with its built-in recoil starter. The realistic racing sound of the included tuned muffler adds even more excitement.



The oil-filled shocks and ball linked double wishbone suspension offer exceptional stability; the front suspension arms are adjustable to adapt to varying track conditions.

KYOC0434
Length: 15.4 in (390mm) • **Width:** 9.5 in (245mm) • **Height:** 5.9 in (150mm) **Wheelbase:** 10.8 in (275mm) • **Front Track:** 7.9 in (201mm) • **Rear Track:** 8 in (203mm) • **Gear Ratio:** 9.37:1 • **Approx. Weight:** 3.7 lb (1700g) • **Engine:** Kyosho GS15R w/recoil starter (included) **Requires:** 2-channel radio w/2 servos, fuel, starting equipment

For more information and the location of the dealer nearest you, see our web site at: **www.kyosho.com** or call 1-800-682-8948 and mention code number 2336V.

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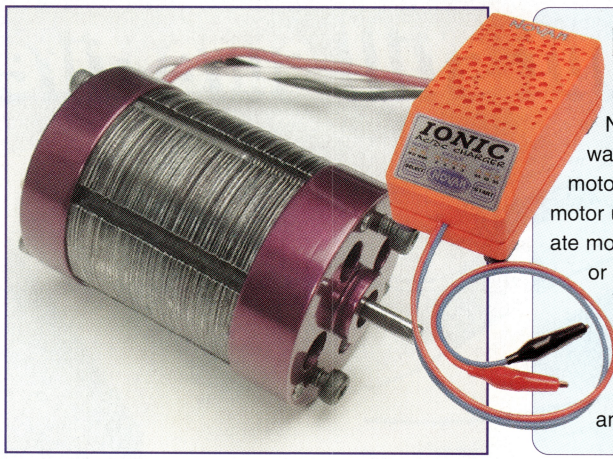
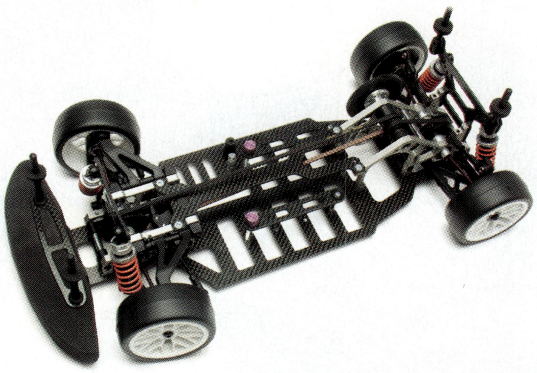


Novak **Brushless Motor and Ionic Charger**

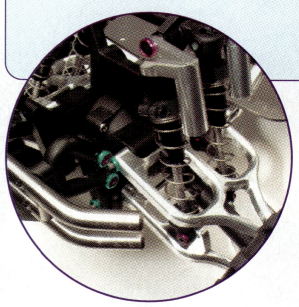
Novak decided to let the cat out of the bag early. On display in Chicago was a prototype brushless motor due for a Summer 2001 release. The new motors when used with a speed controller specifically designed for brushless motor use has a number of benefits. Brushless motors are more efficient, create more torque, and run faster. Brushless motors also don't need to be rebuilt or cut. No speed controller prototype was available for pictures in Chicago. We'll share with you more information as it becomes available.

Also new, Novak debuted their first AC Charger. The new Ionic features an easy to use interface, universal input voltage (100-240V AC), 0.5, 1.0, 3.5 am constant linear charge current, modes for both Ni-Cad and Ni-MH cells, and a built-in fan.



Hardcore Racing **T-Maxx Accessories**

Make your T-Maxx bullet proof, literally. Hardcore Racing offers just about everything you can think of in super hard titanium. Along with chassis, skid plates, pillow balls, brake calipers, braces, and other items all made of titanium. Hardcore also offers suspension arm, chassis braces, and wheels (not shown) made of Billet aluminum. Look for all these new items in stores now.

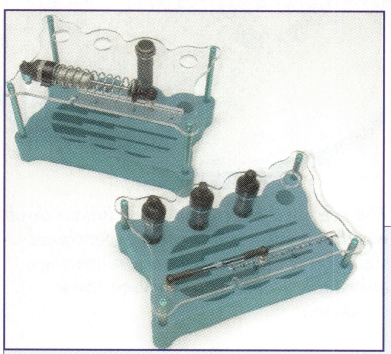




X-Ray **T-1 Sedan**

A new company named Xray is throwing its hat into the TC market. The new T1 features a number of machined components made by Hudy. The new car allows for different battery placement positions for different weight distribution. The new T1 features a double deck graphite chassis and composite molded suspension pieces. For a limited time the first Xray kits will come with a free bonus package of Hudy Chassis Droop gauges, Hudy 5-piece wrench set, Hudy setup board decal, and a Hudy setup system. The new kit will be distributed in the states from Serpent.





Trinity **Shock Dynos**

Never spill shock oil while filling your shocks again. Trinity's new shock dynos have four slots to hold shock bodies upright as air bubbles rise to the top. Also on the dyno is a setting slide that allows you to properly and consistently set shock length. The setting slide can also be used to adjust tie-rods. The shock dynos are available for either shorter touring car shocks or longer off-road shocks.

Parma **Gangster**

Want that lowered sled look on your nitro sedan or other 200mm car? Now you've got it with Parma's new Gangster body. The new body is sleek and low

Brushless motors, what is this world coming to?

STREET FORCE™ GP RTR

READY TO RUN

1:10 SCALE READY-TO-RUN 4WD NITRO TOURING CAR

50+ MPH!



READY TO RULE— JUST ADD FUEL!

Can't wait to hit the street with one of the fastest 4WD touring cars around? Then grab your coat — your ride's here! The 1/10 scale Street Force GP is all about speed — and you'll know it from the moment you open the box.

You'll look for parts; what you'll find are convenience and ease. Apply the included decals, and the painted and trimmed body is ready for mounting. Add glow fuel to the 75cc tank on the factory-assembled chassis, and you'll be ready to enjoy the best the Street Force GP has to offer.

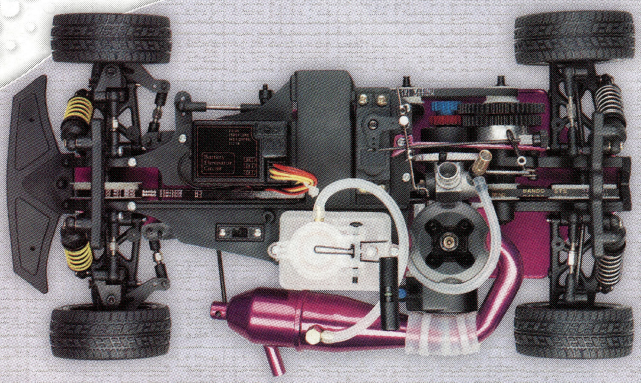
RADIO AND ENGINE ARE INCLUDED!



You get a 2-channel pistol grip radio and a recoil-started Velocity™ .15 engine. Like everything else, they're factory-installed and equipped to get you moving fast. Alkaline batteries for the radio are included, not extra— and the Velocity .15 comes complete with a glow plug, an air filter and a FREE video that can quickly make you a master of starting and tuning.

As an added bonus, DuraTrax includes a FREE Nitro Starter Pack in each Street Force GP Ready-To-Run. It consists of a glow starter w/battery and a 250cc (8 oz.) fuel bottle. Like the Street Force GP itself, it's ideal for getting off to a fast start in nitro street action.

All you need is Red Alert fuel — and you can find that at your local hobby shop. For the location of the hobby dealer nearest you, please call 1-800-682-8948 and mention code number 2335L.



HOP-UPS ARE BUILT-IN!

With the Street Force GP, the "best" includes a generous handful of hop-ups that most other nitro cars offer only in part — or only as expensive add-ons. You get:

- ***FRONT AND REAR BALL DIFFERENTIALS***
- ***2-SPEED AUTOMATIC TRANSMISSION***
- ***16-PIECE BALL BEARING SET***
- ***TOUGH METAL DRIVE SHAFTS***
- ***ANODIZED ALUMINUM TUNED PIPE***
- ***2.5MM T6 ALUMINUM CHASSIS***
- ***OIL-FILLED RAPID-TUNE™ SHOCKS***
- ***ADJUSTABLE TURNBUCKLES***

THE STRESS-TECH™ GUARANTEE

If any Stress-Tech plastic part breaks during the first 6 months you own your Street Force GP, DuraTrax will replace the part — FREE!

If you already own a radio, choose the Street Force GP Pre-Built. (DTXC0050). Requires a 2-channel radio, glow fuel & glow starter.

DURATRAX®

THE LEADER IN AWESOME R/C™

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DuraTrax **Intellipeak Pulse Chargers**

Four new chargers are making their way to market from Duratrax. Among the features the new chargers will pack are Ni-MH and Ni-Cad compatibility, AC/DC input, reverse polarity protection, different charge and discharge profiles. The suggested retail price on the new chargers will range between just under $100 and $160.

Dreir Racing **1/8-Bike**

This cool 1/8-scale bike from Bergonzoni was on display over at the Dreier racing booth. The bike features front fork shocks, a rear spring shock, all aluminum frame and rims, and a body with rider.



Boca **Bearings**

Go with Green. That's what Boca Bearings says. Their new Green Seal Bearings are of the highest grade and available at a low, low price. The new bearings are available in a wide range of both SAE and Metric sizes. The new bearings will be available from most hobby shops and Boca.





HPI **Best Booth Honors**

By far the best looking booth in the entire show was that from HPI Racing. The new booth featured displays of all of HPI's new products along with a big screen television displaying video of HPI cars and trucks in action. Kent Clausen and his design team were behind the huge undertaking of coming up with the new booth. Great job HPI!



Powers Japan **Setting Disks**

Powers Japan's new setting disks allow for quick access to cars using pillow ball suspensions like many of today's newest nitro touring cars. Available in four different colors these disks are perfect and available now through Schumacher.



Parma **Monster Jam Trucks**

Straight from the television show, Parma has officially licensed many of the cars and trucks from Monster Jam. Available from Parma are bodies and decals so that you can faithfully recreate your favorite Monster Jammer.



Some kids tried to hook up a Playstation to the tube, but HPI had none of that.

1/10 SCALE
GAS POWERED 4WD TOURING CAR

NITRO MTX-2

The Fastest 1:10 Nitro Powered Touring Car!

NEW

CHASSIS KIT
CHASSIS With MT12 ENGINE KIT

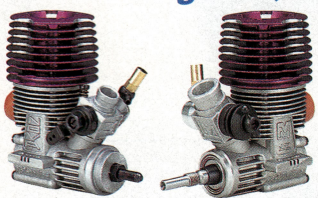
- Belt Drive 4WD・Cam Type 2-Speed Gear Housing・3PC Clutch・Disk Brake・Turn Buckle Steering Rod
- 3mm (A70-75) Chassis・Front Urethane Bumper・75c.c. Fuel Tank Filter-equipped・Resin Radio Plate
- Manifold for MT12Engine・Air Filter・Adjustable Front Bump Stop/Rebound Stop
- Adjustable Rear Bump Stop/Rebound Stop
- Adjustable the angle of Front/Rear Damper
- 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
Stroke：14.00m/m

MBX-4 Parts



C0179
Al.Rear Tension Rod for Long Chassis

CX12 Engine (Side Exhaust) Parts for MTX-2



T0701Engine Shaft for CX12
T0903Manifold for Side Exhaust
51601Black Pipe (12)

MUGEN SEIKI® Racing

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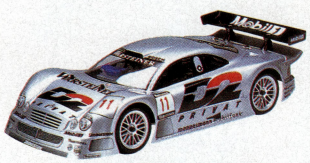
e-mail:support@mugenracing.com

Mugen Seiki Racing Ltd.
20914 Bake Parkway Suite 106
Lake Forest, CA 92630
Phone: 949-707-5607 Fax: 949-707-5614

PRIME12/MTX-2 BODY 200mm



K1001 CASTROL TOYOTA TOM'S SUPRA GT BODY



K1005 MERCEDES BENZ CLK-GTR BODY



K1008 TOYOTA COROLLA WRC BODY



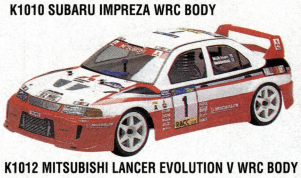
K1014 PEUGEOT 406 STW BODY



K1010 SUBARU IMPREZA WRC BODY



K1016 TAKATA DOME MUGEN NSX BODY



K1012 MITSUBISHI LANCER EVOLUTION V WRC BODY

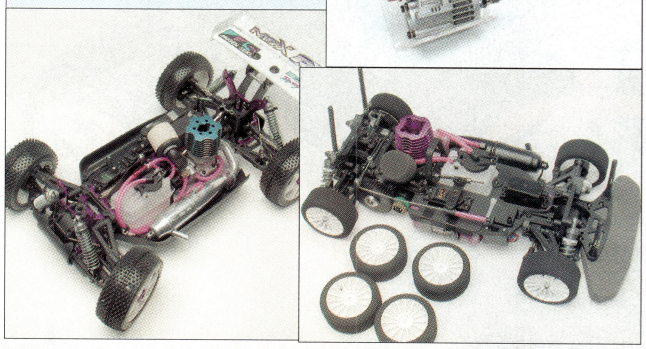


K1018 DODGE RAM TRUCK BODY

Mugen **kits and Engine**

Mugen has made getting into 1/10-scale on road easier with the new MTX Sport. Mugen gives you all sorts of goodies in one box, including a motor, Nova Rossi pipe, mounted Ellegi foams, and a Pro-Line body. For speed freaks who think that too much is never enough, Mugen has a new .12 mill for you, the MT.12 Turbo. As the name implies, this motor allows the use of turbo plugs instead of standard glow plugs. Also available for 1/10-scale touring cars are new mounted and trued Ellegi foams. Shaking things up in 1/8-scale is the MBX-4 Full Option XR. This tricked out off roader comes with a slew of options, including a new chassis, front and rear chassis braces, a graphite radio tray, a new conical rear diff gear that allows the front wheels to overdrive, and a fuel filter.

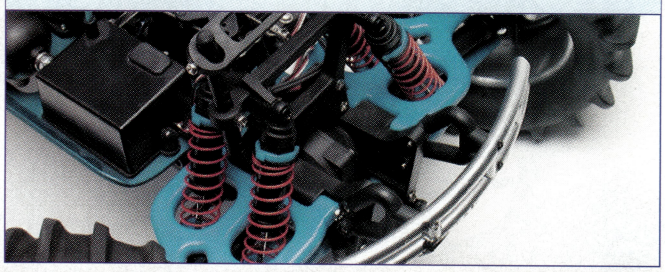






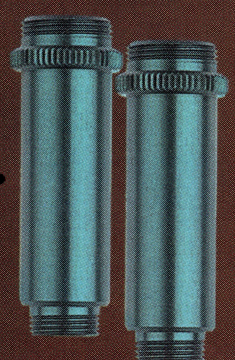
RPM **T-Maxx A-arms**

On display at the RPM booth were these new suspension arms for the Traxxas T-Maxx. These pieces replace the stock lower and upper arms, and are more durable than the stock parts. The parts will be available in blue, purple, and black.

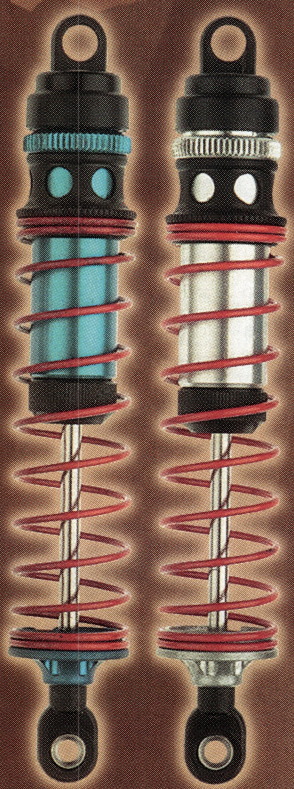


New Traxxas Aluminum Shock Components Work With Your Stock Parts!

T-Maxx Blue Shock Bodies



CNC machined, blue anodized aluminum shock bodies, sold in pairs. RRP 8511

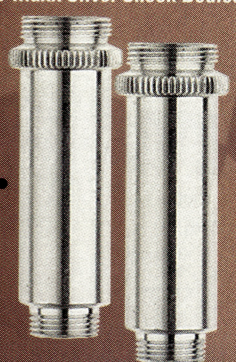


Aluminum Upper Spring Retainers



Machined upper spring retainers, sold in sets of 4. RRP 8530 8mm, RRP 8520 4mm

T-Maxx Silver Shock Bodies



CNC machined, natural silver aluminum shock bodies, sold in pairs. RRP 8510

Blue Lower Spring Retainers



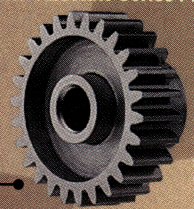
Machined, blue anodized aluminum retainers, sold in pairs. RRP 8516

Silver Lower Spring Retainers



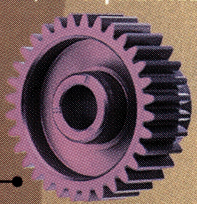
Machined, natural silver aluminum retainers, sold in pairs. RRP 8515

48P Absolute Series Pinions



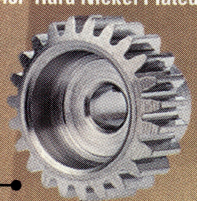
Super hard, lightened and cut with unmatched precision. Great with any spur, but with an Absolute spur, even on-off noise is gone! Available in 48P in 16T thru 28T sizes. RRP 1416 - RRP 1428

48P / 64P SuperLite Aluminum 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

48P Hard Nickel Plated Steel Pinions



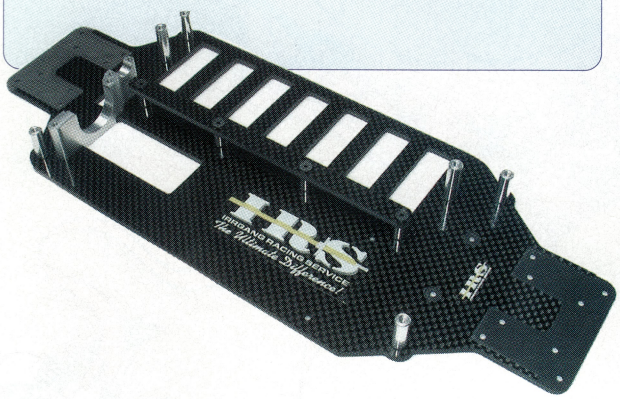
These precision cut gears have an extremely hard coating that makes them really last. Available in 12T thru 35T. RRP 1012 - RRP 1035

RRP

www.robinsonracing.com

IRS **TC3 Single-Deck Chassis**

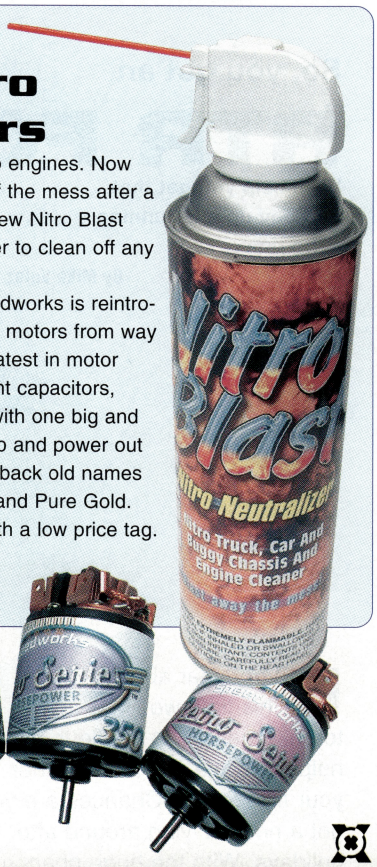
Irrgang Racing Service has several hop-ups for the Associated TC3. The biggest news is their TC3 Graphite Conversion Kit (Part # IRS150). This kit comes with a strong, light lower graphite plate with a center brace that further stiffens the assembly. With this, you get a machined aluminum motor mount that IRS says keeps the chassis from tweaking when you tighten down the motor clamp, and machined aluminum standoffs that attach to the upper front and rear braces. Another advantage of this chassis is the large battery slots that allow your cells to stay cool.



Trinity **Nitro Blast & Retro Series Motors**

First came the fuel, then the Picco engines. Now Trinity's got something to clean off the mess after a long day of nitro racing. Trinity's new Nitro Blast packs a powerful stream of cleaner to clean off any gas car or chassis.

It's a blast from the past. Speedworks is reintroducing many of their most popular motors from way back. The Retro Series uses the latest in motor technology including surface mount capacitors, HVS "Split wind doubles" wound with one big and one small wire for quicker spool up and power out of the turns. The new winds bring back old names like the 427, 350, Monster Mash, and Pure Gold. The new motors will also come with a low price tag.





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

RRP

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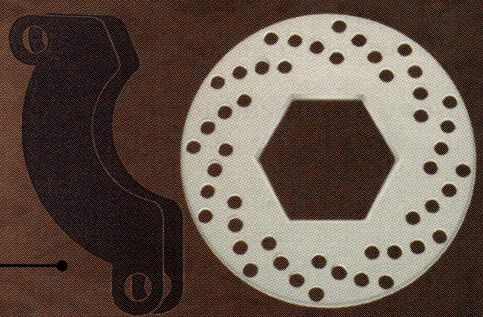
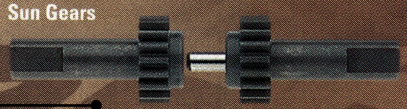
T-Maxx Aluminum Brake Kit



New, lightweight aluminum high performance brake kit, includes bigger, aggressive brake pads and backing plate. RRP 8560

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



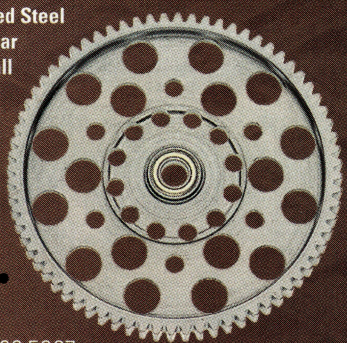
CNC Machined from bar stock, these hardened, Sun Gears will last longer in your Traxxas machine. RRP 8500

T-Maxx Vented Flywheels



Aluminum vented flywheels move air over clutch bell, improving performance and cooling. RRP 8551 Blue, RRP 8550 Natural Silver

Hardened Steel Spur Gear With Ball Bearing



Precision CNC machined from solid steel, and then hardened, these spurs will last and last. RRP 8572 T-Maxx and Nitro Rustler, RRP 8565 Nitro Stampede

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So, you got an

RTR FOR XMAS

We'll help you get that bad boy up and running in no time.

By Mike Velez



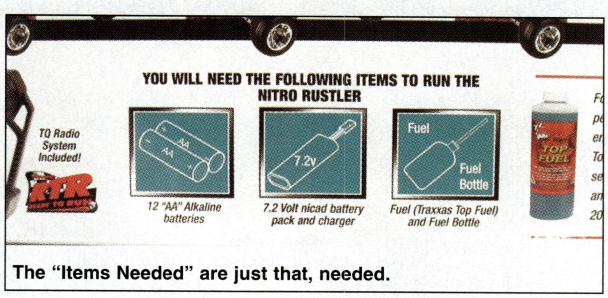
Every year about this time we like to put together an article to help guys like you put together your first car kit. Chances are you've got a new kit lying around after the holidays. With the huge phenomenon known as ready-to-run, we had a sneaking suspicion that more readers this year could use an article to accompany a new RTR than a new build up kit. So here goes.

Read The Directions

A cardinal rule to just about anything in life is to read the directions first. Companies (well, most companies) go to great lengths to furnish you with detailed instructions – instructions that anyone can understand and use to get their new car off and running as trouble-free as possible. Read each page step by step before you even attempt to get your vehicle running.

Have the Right Items

On the outside of every car kit there will be a list of the items needed to complete your kit. If it's a gas kit, you'll need fuel, a fuel bottle, glow plug starter, "AA" batteries, and maybe even a 7.2V battery pack and charger. There also might be some other items listed like glue or tools. Have all of these items before you attempt your first run. These items are listed for a reason – you NEED them.



The "Items Needed" are just that, needed.

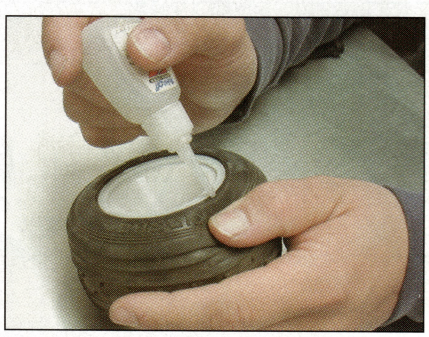
Break-in

On a nitro RTR engine, break in is extremely, extremely important. I know you're going to be in a rush to get your new car running up and down the street at Mach 2, but don't overlook the break-in process, which should be detailed in the instruction manual. Since there are different ways to break in an engine, follow your kit's detailed instruction. Here are some additional break-in tips to follow:

- Always run your engine rich during break-in.
- Go easy on full throttle; break in at low speeds with lots of air flow to the engine head.
- Replace the engine's glow plug after break-in.
- Allow the engine to cool down completely between fuel tanks.

Keep them on the Wheels

Some RTR kits come with the tires glued to the wheels, others do not. If your kit's tires aren't glued to the wheels you'll need to glue the tires to the wheels. To do this you need high-quality CA glue. This can be found at any hobby shop. If available, stick with a glue that's designed for rubber tires. Formulas do differ slightly. When applying the glue, pull the tires back away from the wheel and run a thin bead of glue between the wheel and the tire. You only need a small amount of glue. Most glues are thin enough that it will work its way around the rim of the wheel. Whether you know it or



Even if your kits tires come pre-glued you might want to add a little extra for protection.

Did you get everything you wanted?

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)

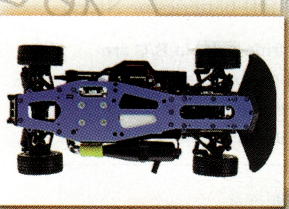
Years of development make this the best gas car available!
-Masami Hirosaka (10 Time World Champion)

PROTOTYPE SHOWN
visit our website for final version specs.

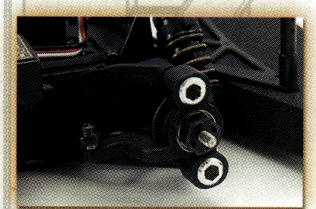
A new generation of nitro turing cars

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.

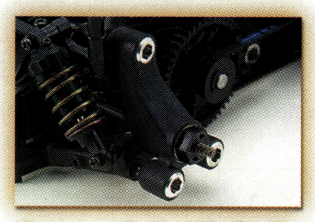
KEY FEATURES



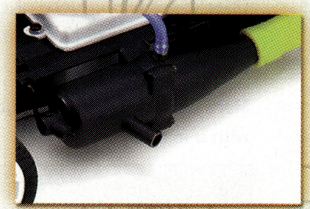
3MM DURALUMINUM CHASSIS



BALL ADJUSTABLE FRONT SUSPENSION



BALL ADJUSTABLE, REAR SUSPENSION



DUAL-TUNED MUFFLER PIPE

Yokomo USA

7 IFMAR WORLD CHAMPIONSHIPS

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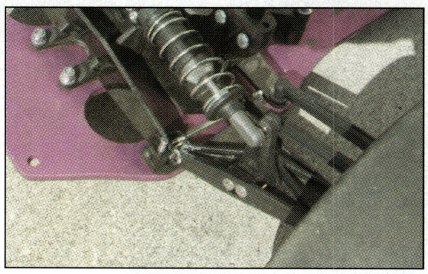
not you're already familiar with CA. It's also known as Super Glue® so keep plenty of towels handy and avoid getting any glue on your fingers or the kitchen table.

Don't Run with the Body Off

As tempting as it is to just go out and run your car, it's important that you don't lose your lid. Never run your vehicle without the body properly secured to the car. The body protects the suspension, engine, and other internal components of the car. Running without a body will only result in a broken shock tower or body mount.

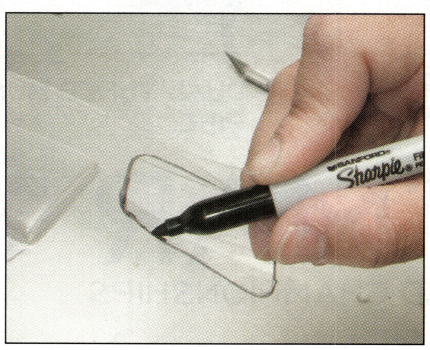


No body many times equals broken kit.

Stay Cool

If your RTR is of the nitro-breathing variety, you must remember to keep your engine cool. To do this you'll need to cut out a couple holes in the body to allow air flow to the engine head. You'll need one hole on the front windshield and one behind the engine, as directly in front of and behind the engine head as possible is desired. To cut the holes, first grab a Sharpie® marker and trace out the wholes that you want to cut. Next, grab a sharp hobby knife and trace over the marker line; this is called scoring. Continue to follow the same score lines with your hobby knife until you see the knife begin to pierce the body. Once the knife breaks through the plastic, push the piece of body that's being cut out outward. The center piece should come right off.

Mark where you want to cut the hole first with a marker.



Man that's Tight!

After every run, inspect your car for any loose screws or nuts. If you find any use the tools included in your kit to tighten things up. If some screws or nuts consistently loosen after every couple of runs, pick up some liquid thread-lock from the local hobby shop. Place just one drop of thread-lock on the threads of any screws that are continually coming loose.

Paint

A number of RTR kits these days are coming pre-painted. If the body in your kit is clear, you'll need to apply some paint. Stick with paint found at the local hobby shop that's designed for Lexan bodies. This would include Parma Faskolor or Pactra Racing Finish. If painting is required, your kit's instruction manual should have some basic painting tips. Here's some of our own:



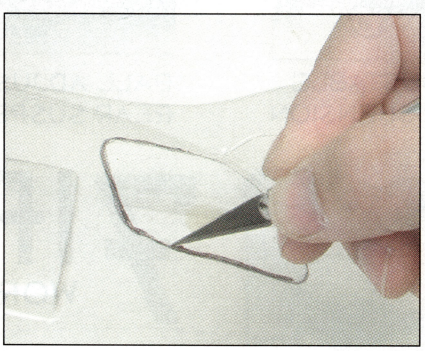


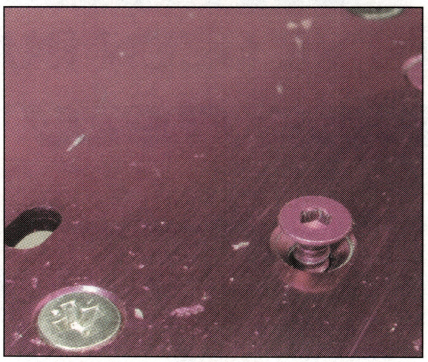
- Keep it simple. Stick with just one or two colors.
- Clean the inside of the body first with a light dish soap and warm water.
- Don't paint in the rain or on a particularly cold or humid day.
- Use thin coats or paint to avoid runs.
- Allow plenty of time for the paint to dry between coats. Follow the instructions on the can or bottle.

What a Cut Up

Most bodies will require you to cut the bodies in order to mount them to the chassis. You'll need a pair of Lexan scissors for this task. Again, Lexan scissors can be had at the local hobby shop for under $10. These scissors have a unique shape and make body cutting easy. Follow the cut lines molded into the body. On wheel wells

Next take your hobby knife and score the mark that you made to be cut out.





A simple loose screw can spell disaster down the road.

or tight corners, you might try the same scoring technique you used to cut the venting hole for the engine. When it comes to cutting body holes, use a drill or a body reaming tool like the one shown. Body reamers are very popular these days and available from a variety of manufacturers. Tools like body reamers, hobby knives, and Lexan scissors are items all R/Cers should have and will last a lifetime provided you don't loan them out to your buddies.



Scottie, I need More Power

If your new RTR runs on positively-charged electrons and not nitro, you'll need a battery pack or two and a charger. For the first timer or RTR owner, I highly recommend picking up a few inexpensive sport packs in favor of more expensive race packs. Also pick up a peak charger, which will automatically shut off once the battery is completely charged. Recently the price on peak chargers has come down quite a bit so they're very affordable.

When purchasing battery packs pay attention to whether you're buying Nickel Metal Hydride (Ni-MH) batteries or Nickel

Most nickel metal hydride cells in R/C are 3000 mAh. When siting next to a nicad cells you can quickly tell which is nickel Metal Hydride from its slightly larger size.



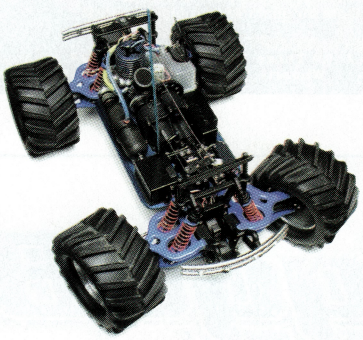
Tops on our list is a massage from Pamela Lee.



Make your T-Maxx as strong as it can be with a little help from RPM!



Bearings get dirty, blast them clean with the RPM Bearing Blaster #81170

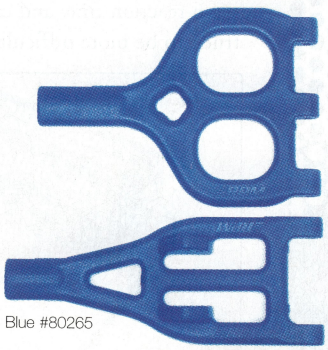


Make your T-Maxx bullet proof with these new T-Maxx replacement arms from RPM.

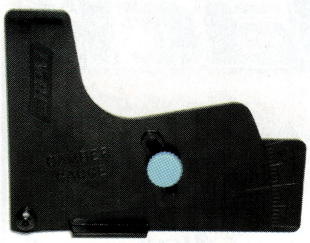
- Guaranteed not to break.
- Stronger than stock arms.
- No modification needed.
- Available in three colors.
- Top and bottom sold together.
- Molded from high strength Nylon.
- Only $10.95 a pair.

The RPM advantage is easy to see!





Blue #80265



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Purple #80268



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Quick suspension adjustment is easy with Quick Adjust Spring Clips and Spring Cups. Available in Black, Blue, Yellow, and Purple.

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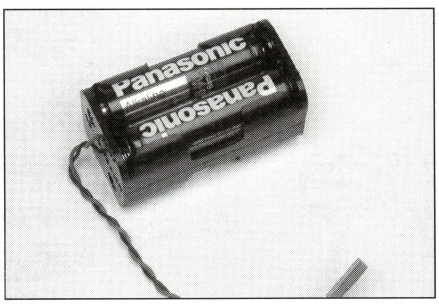
Cadmium (Ni-Cad) batteries. Each battery type requires different procedures for care and charging. Basically Ni-Cads are more durable, but require discharging after use; Ni-MH batteries must be charged with caution so that you do not to overcharge them, but they don't require discharging. Whichever batteries you decide on, make sure that the charger and batteries you chose are compatible.

Nice Batteries Eh?

One of the items on every new R/Cers list is AA batteries for your transmitter. If you're running on nitro you'll also need AA's for your car. To save some cash in the long run, opt for some rechargeable batteries for your transmitter. Stick with alkalines in your nitro 4-pack unless you go with an aftermarket 5-cell rechargeable pack. Since rechargeables offer less voltage as compared to their alkaline counterparts, using only four rechargeables in your nitro car will slow down the servo reaction time and cause your car or truck to be more difficult to drive.





You can use rechargeable AA batteries but you'll experience slower moving servos in your nitro car. Your best bet is to purchase a rechargeable 5-cell pack like the one pictured just above.

With everything I've told you here and the important information that's in your kit's instruction manual, you're ready to set out on RTR bliss. Remember, no matter how easy it is to get started in R/C, the kinds of R/C cars covered in the pages of *Xtreme* are not toys. Always use caution around small animals and children and have fun with your new kit.

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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-2001 ..... Set of 2 ..... SRP $58.75
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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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Unfortunately Pam didn't work at the place down the street.

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#24227* 27MHz Universal,
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This month's **QUICK TIPS**
come to us from
3 of the World's Top Drivers.

Scott Hughes
Prepping your Rubber



Getting a clean connection between tire and wheel is extremely important whether they're on a gas or electric car. Before mounting any rubber tires, be sure to scuff-up the mounting bead of the tire with a piece of sand paper or a Dremel tool and a grinding or shaving bit. As soon as you see that the high sheen of the rubber is dulled you don't need go and remove any more rubber. You only need to rough the rubber up a bit. Use a clean towel to remove any of the rubber shavings or dust that might be on the tire. Don't touch the mounting bead with your fingers after you've scraped it up. Now go ahead and mount the tire to the rim just as you normally would.



Richard Saxton
Cleaning Brake Discs



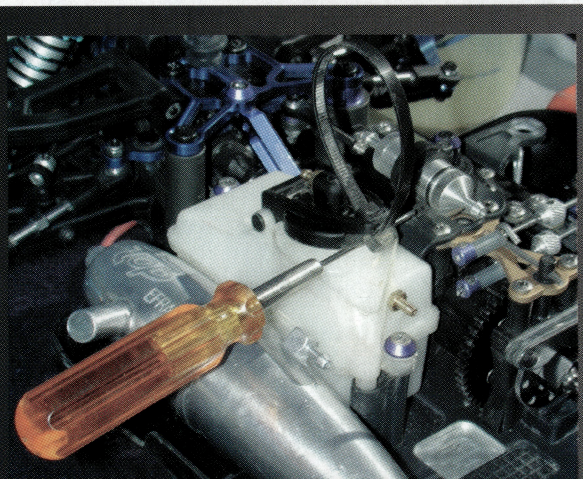
As a brake disc is used, the brake pads will actually begin to polish the brake disc. This polishing action gives the disc a sheen that smoothes the surface the disc and causes the brake disc to slip longer before locking up when your vehicle's on the brake. Also, fuel, oil and other debris can get between the brake disc and shoes and form a glaze over the disc that will also cause the car to take longer to stop. You can decrease braking distance and make braking action more consistent by cleaning your disc regularly every time you rebuild your ride. Remove the disc completely from the car. Find a ScotchBrite® pad or some 400-grit sand paper. Run the disc over the pad or sand paper in a circular motion. Mix in a little motor cleaner on the pad or paper as your sanding off the sheen. After a few minutes on each side the disc it will be clean and ready to be reinstalled. This should be a regular step in any nitro car maintenance routine or rebuild.





Mark Pavidis
No Condensation

Nitro fuel attracts water. Any amount of fuel can create condensation inside the tank. To combat this, before an important race Mark disconnects the fuel tubing that's attached to his car's fuel tanks and puts something between the fuel tank lid and the tank so that the tank is open. This allows the fuel tank to dry out completely without any condensation forming inside the tank.



We had to rephrase the question when we asked Scott how he preps his rubber.

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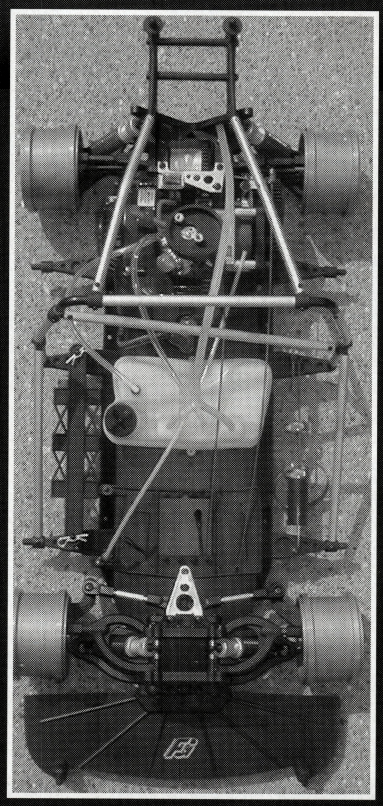

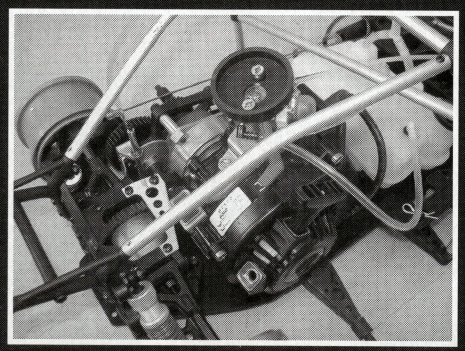

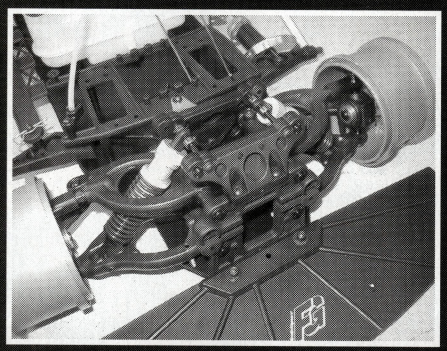

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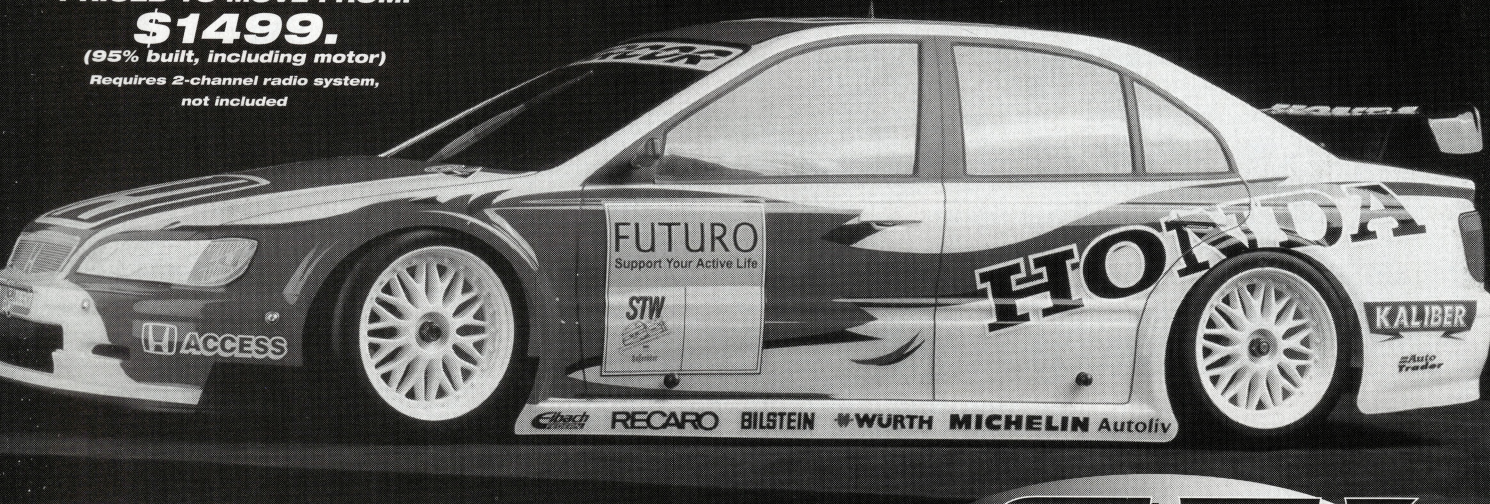
Requires 2-channel radio system, not included



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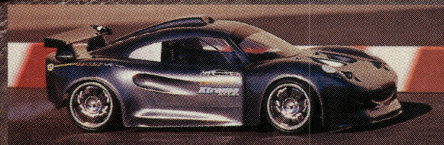


SCHUMACHER NITRO LOTUS BIG 6 SPORT ELISE

'TRO LOTUS SPORT ELISE BIG 6 NITRO LO

Is this the next big thing?

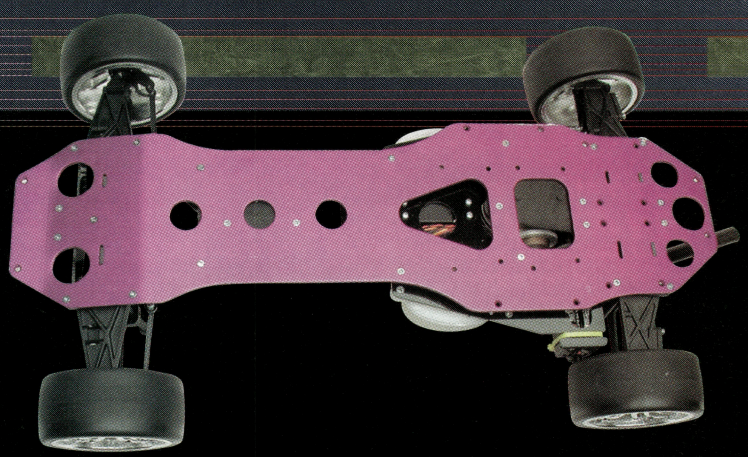
by Mike Velez

Companies often try to come up with a product that will be "the next big thing." Schumacher has taken that idea literally and come up with the next big thing. It's a whole new size category, 1/6-scale – not quite 1/5-scale and much bigger than 1/8-scale. The idea is a new category of car that features scale looks, is fun and fast, and is easy to drive. The beautifully-sculpted Lotus Elise body fits the scale looks category, but do the chassis and power plant deliver the rest?

Hits:
- Lots of fun to drive.
- Bigger is better.
- Good value.
- Very powerful engine.
- Easy to work on.

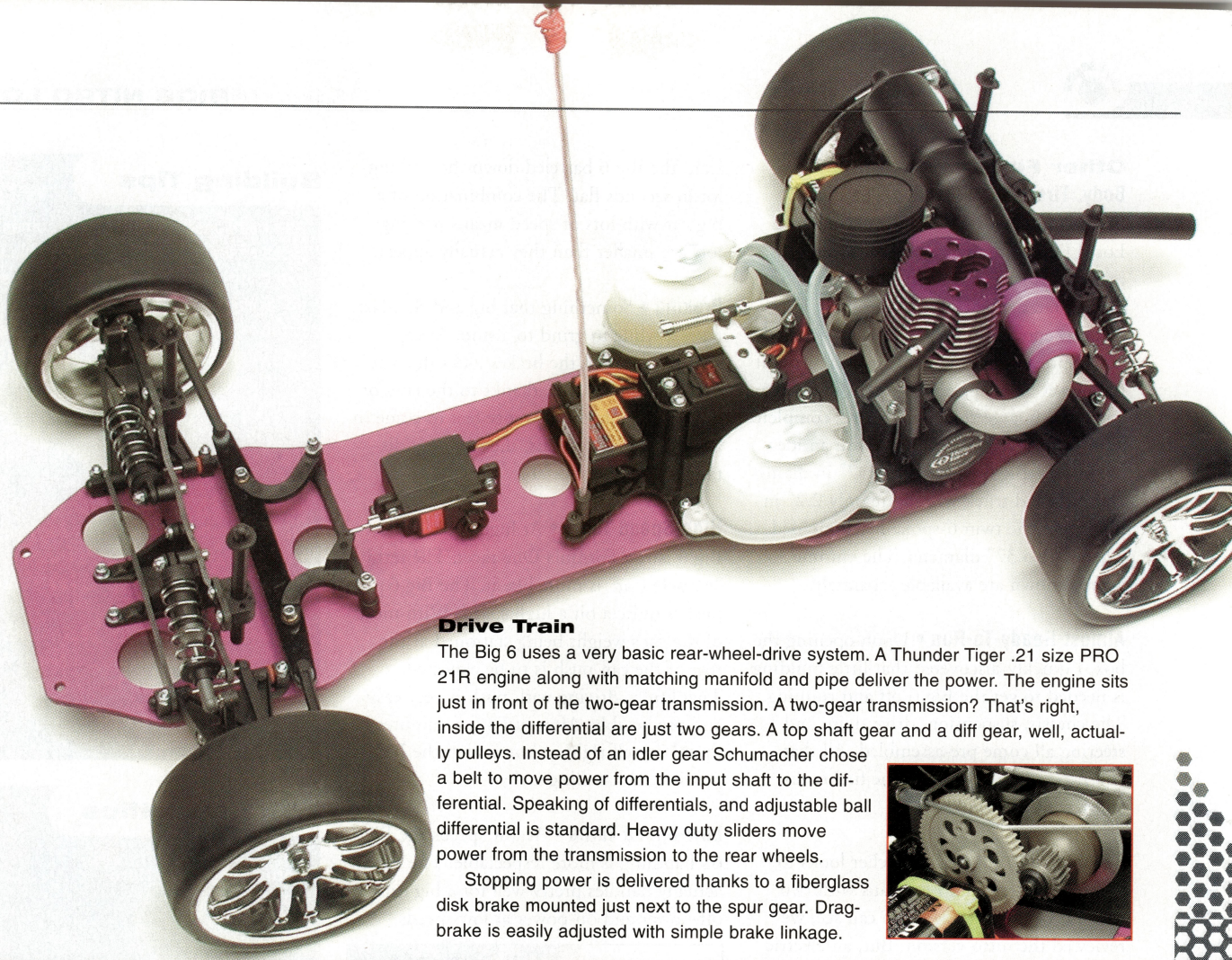
Misses:
- Runs funny on the second tank.
- Pushes at most speeds.
- Some suspension peices might not be beefy enough for a bad crash.

Instructions 4
Parts Quality/Fit 4
Durability 3
Tunability 3
Overall Performance 4
Value 5



Chassis

The Big 6 Nitro is sets itself apart from other R/C cars thanks to the size of its chassis. The Big 6 chassis is a whopping 22‰ in length and 4mm thick. The chassis is made from aircraft-grade, purple-anodized aluminum. There are a number of large cut-outs for weight savings. The car's components are bolted onto the chassis using countersunk screws. The front of the chassis features a 5º kick-up. In the center of the chassis, a large radio tray holds two 75cc fuel tanks, and the throttle servo, receiver, and a 4-cell battery pack are mounted. The radio tray sits a quarter inch off of the chassis and is easily removable. The two fuel tanks are run in series. Pressure goes into one tank while a fuel lead runs from that tank into the pressure fitting on the second tank. From there, fuel flows into the carburetor.



Drive Train

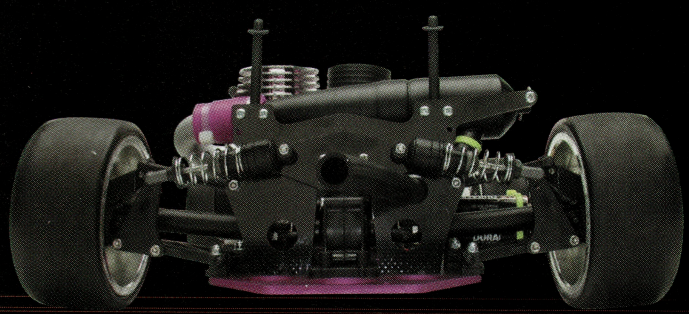
The Big 6 uses a very basic rear-wheel-drive system. A Thunder Tiger .21 size PRO 21R engine along with matching manifold and pipe deliver the power. The engine sits just in front of the two-gear transmission. A two-gear transmission? That's right, inside the differential are just two gears. A top shaft gear and a diff gear, well, actually pulleys. Instead of an idler gear Schumacher chose a belt to move power from the input shaft to the differential. Speaking of differentials, and adjustable ball differential is standard. Heavy duty sliders move power from the transmission to the rear wheels.

Stopping power is delivered thanks to a fiberglass disk brake mounted just next to the spur gear. Drag-brake is easily adjusted with simple brake linkage.

US SPORT · ELISE BIG 6 NITRO LOTUS SPO

Suspension

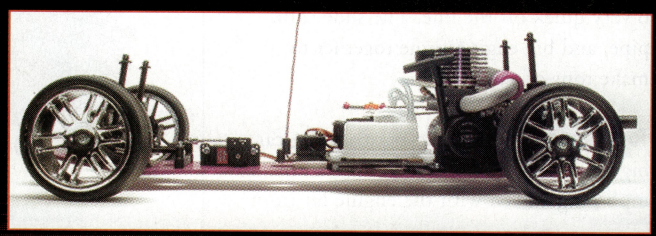
The Big 6's suspension system pretty basic. Completely independent, four oil-filled shocks flank the corners. The shocks themselves use volume compensating foam and are very smooth . Both the front and rear suspensions use components like arms, hub carriers and other pieces found on Schumacher's competitive 2WD off-road buggies. This helps to increase the likelihood that parts can be found in a pinch. Aside from those components, the other suspension pieces are designed specifically for the Big 6. The car's shocks mount to stand offs bolted to the suspension arms and place all four shocks almost parallel to the chassis. This gives all four shocks a unique lay-down look. In the front, the wheels mount to axles that are supported by bearings installed in the front spindles.



Steering

It's kind of funny to see the steering servo mounted all by itself and not crowded by a speed controller or some other component. The steering system is very straight forward; it's just really big. Two bell cranks support a steering rack that, in turn, connects to the steering spindles via molded control arms. In case of a bad crash, a spring-loaded servo saver mounts to the steering servo.





Back in high school bigger was always better.

Other Features

Body, Tires, and Wheels • The Big 6 Nitro comes with a beautifully sculpted Lotus Elise body. The Lotus Elise is Lotus' marque sports car available everywhere but in the States. The true-to-form body is detailed enough to be an officially licensed and approved replica of the original. To put the power to the pavement, the Big 6 Nitro comes with large rubber slick tires complete with foam inserts. Just to give you an idea of size, the Big 6 wheels are 3.37" in diameter; off-road truck wheels are only 2.2" in diameter. The twin 6-spoke black molded wheels are 3.37" diameter. The chrome wheels shown are available separately.

Almost-Ready-To-Run • Upon opening the box, I quickly discovered that little building is needed to get the Big 6 off and running. The chassis, suspension, drive train, and steering all come pre-assembled. All that you need to do is to build the fuel tanks and install the radio gear.

Petrol or Current • Schumacher looks to win over electric and nitro fans with two versions of the Big 6. As you can see, we reviewed the nitro version. But, an electric version of the Big 6 is also available. The electric counterpart uses the same basic chassis just a different drive train. The electric version uses a 6- or 7-cell battery pack and a standard stock or modified motor.

Testing Gear

Hitec Lynx 3D • The Hitec Lynx 3D radio along with a Hitec HS-945MG servo for the steering and a HS-925MG servo for throttle fit the car perfectly. Both servos features enough speed and torque to handle both jobs without problem.

O'Donnel 20% Fuel • O'Donnel's 20% fuel was perfect for the Thunder Tiger engine. The car ran flawlessly on this fuel through out the entire testing.

Testing

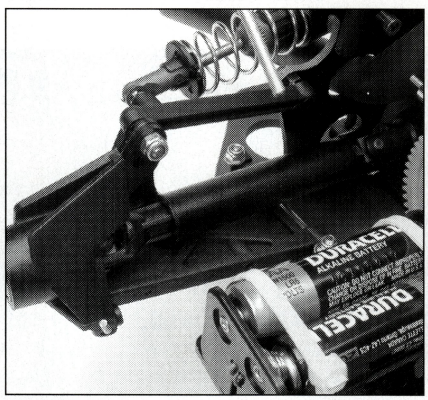
Acceleration • Hold on to your hat. This thing is a rocket. The PRO 21R power plant is more than enough to make the Big 6 very quick off the line. The slide carb, pipe, and big engine come together to make tons of acceleration.

Top Speed • Holly Crap Batman! Big car, big speed. The Big 6 is very fast – in the 45 mph range. Even with the engine far from lean, the Big 6 barreled down the parking lot in seconds flat. The combination of a big car with lots of speed means parking lots are smaller than they actually appear.

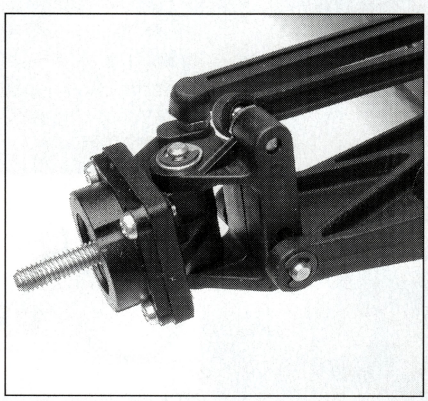
Braking • Something that big and that fast takes a while to grind to a stop. At top speed, slamming the brakes locks the rear tires up quickly. But, thanks to the laws of physics, it only took twenty feet to come to a stop. At lower speeds, the stopping distance is more respectable.

High-Speed Turns • At high-speeds, the Big 6 isn't a Formula One racer. The term "Muscle Car" is more like it. The Big 6 pushes quite a bit a high speed. With most of the car's weight being stationed at the rear of the car, push is to be expected. Thankfully, driving with push is very easy and predictable. After just a few minutes I found myself right at home with the Big 6's predictable handling style.

Low-Speed Turns • At low speeds the Big 6's handling is more respectable. The Big 6 actually handles pretty well for a big car off-power and on-power at low speeds.



Above: The heavy duty slider shafts and beefed up rear hub carriers should keep the car in good shape for some time. Below: Front wheel bearings are kept clean thanks to their completely captured design.



Building Tips

As I mentioned earlier, the car comes mostly assembled. There's very little text in the instructions, but not much is needed. Some prior building experience would come in handy, but is also not needed.

• Although the screws used in this kit look like standard Phillips head screws, they're actually unique to the European market. They're called Pozi screws. The depth and the shape of the socket is slightly different than standard Phillips head screws. You can pick up a Pozi driver at most well-stocked hardware stores or hobby shops.

• Take special care when building the fuel tanks. Their leak-free operation is very important.

• When screwing the ball socket onto the throttle link on page 7, be cautious. We were a little too heavy handed and ended up breaking our throttle link.

The specifics

Lotus Elise Big 6 Nitro
Part# #k024
MSRP:$379.99
ESP:$379.99

Vehicle Type
2WD Nitro-powered 1/6-scale car

Chassis
Type: Flat Pan
Material: 4mm thick anodized aluminum.

Wheels and Tires
Black molded star wheels with large slick tires.

Drive Train
Type: Two pulley belted drive box.
Drive Shafts: Molded slidders
Diff: Adjustable ball differential
Slipper: None
Bearings: Full set
Brake: Fiber disk

Suspension
Type: Independent lower arms with non-adjustable control links.
Damping: Plastic -bodied, coil-over, oil-filled shocks with plastic pistons, stainless steel shafts, and O-ring seals.

Engine
Thunder Tiger .21 with pull-start

Other Items You'll Need
2-channel radio with receiver and two servos, glow starter, fuel, and lots of paint.

Main Competition
None

The Lotus Esprit was often featured in James Bond flicks in the late seventies.

Two HOT new Pistol grip radios



Blazer Sport
2 Channel
AM 27 and 75Mhz

2 Channel Blazer
AM 27 and 75Mhz

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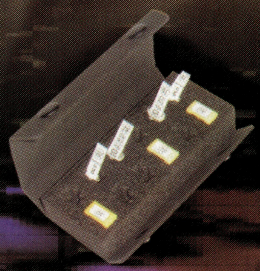
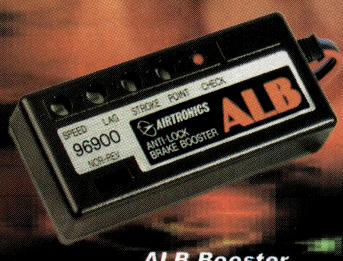
Contender Speed Controller With Reverse Part # 96315



Crystal / Glow Plug Case Part # 96730



ALB Booster

Part # 96900



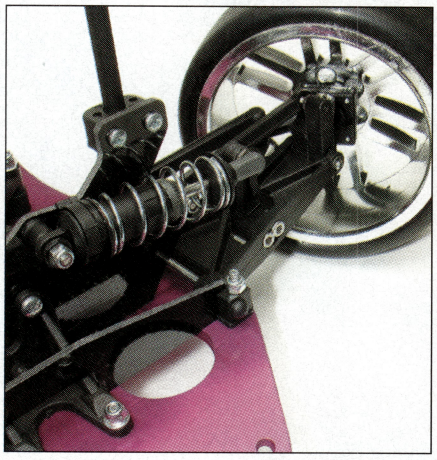
Deluxe Transmitter Wrist Strap

Part # 99104

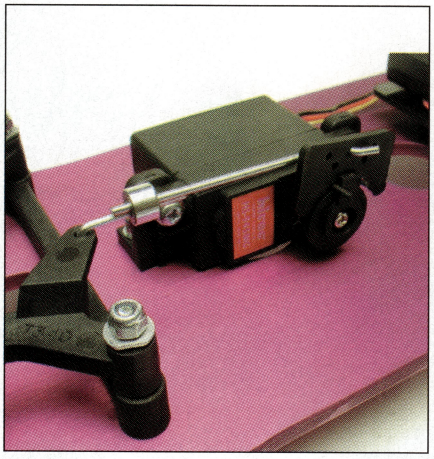
Laying into the gas too quickly can cause the rear end to come around once and a while. But, some light throttle control solves this handling trait.

Tuning •Since the Big 6 wasn't really intended for racing, tunability wasn't very high on Schumacher's list of priorities when it came to designing the car. I did remove a small spacer from each of the front shocks in an effort to get a little more high-speed steering. The adjustment did work. Camber and a number of other adjustments are not available on the Big 6. If tuning is something you like to play with you'll need to pick up a set of adjustable turnbuckles for Schumacher. If you like to keep things simple, then out of the box the Big 6 is perfect.

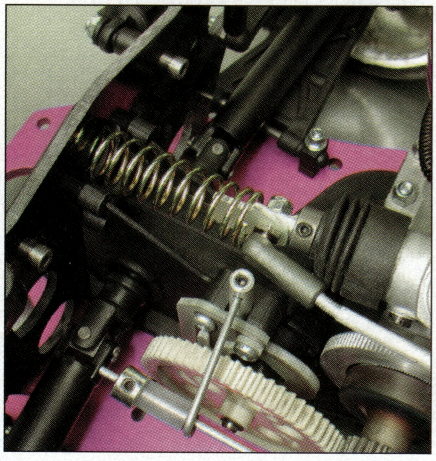
Damage • During testing I was not particularly easy on the car. I didn't slam the car into the curb (not intentionally), but I didn't baby it. On one run, the car got away from me and I spun it out into a wall. The



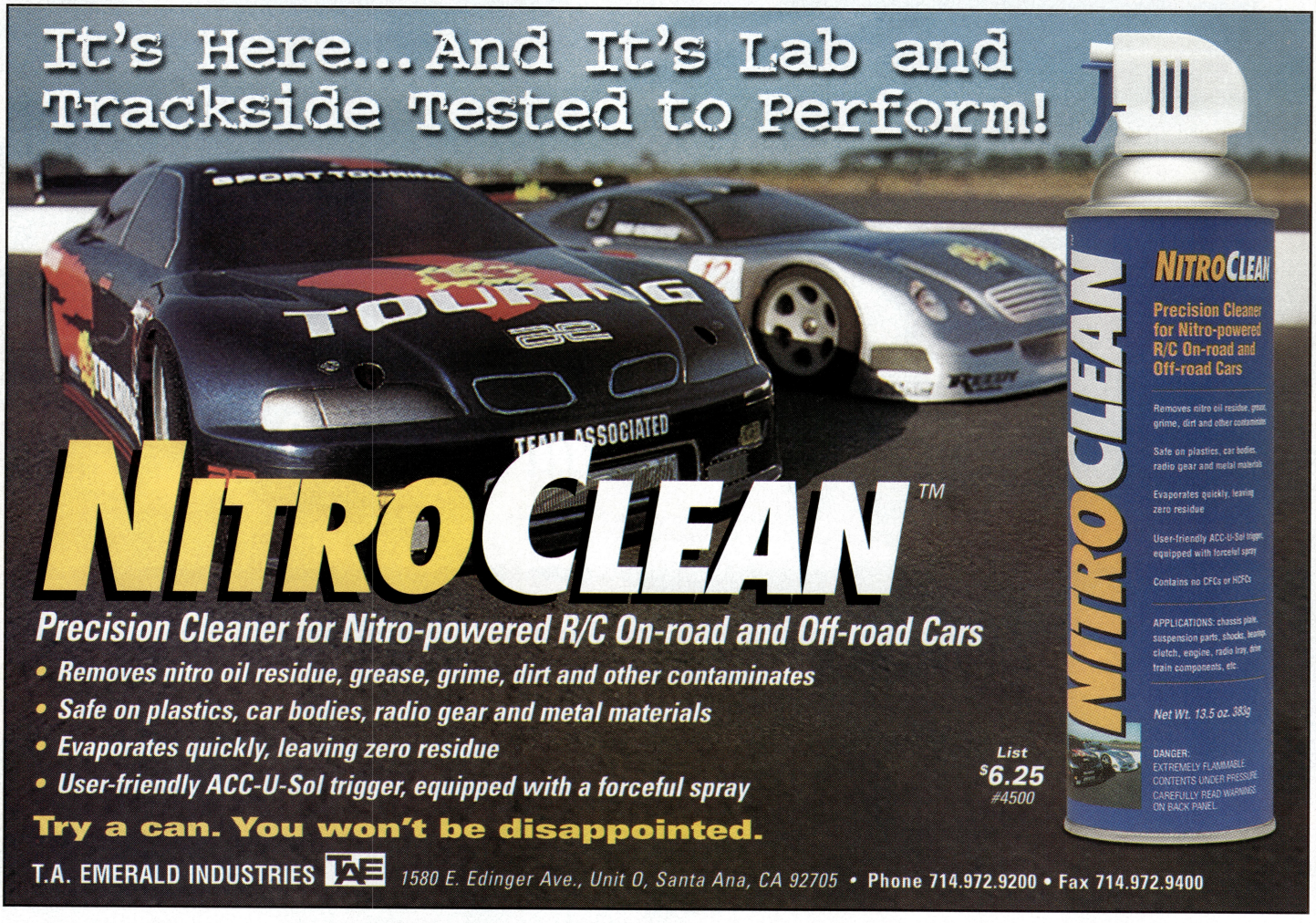
The lay down shock suspension design is unique and works pretty well.



Let's hope the servo saver can also save some control links. A really hard hit could be a problem.

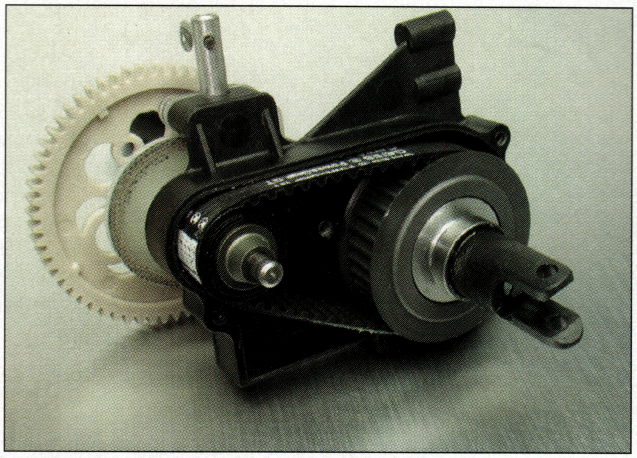


This has got to be the biggest return spring we've ever seen.



car hit the wall with only protection from the body. The only broken part came during the building process when screwing a ball cup onto a throttle link.

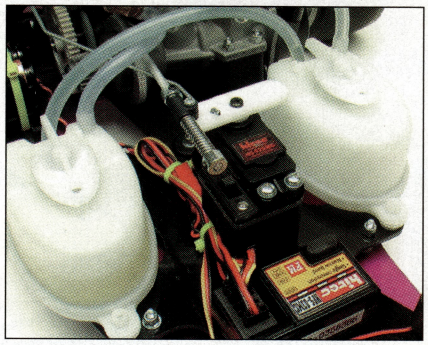
Other Aspects • When the second tank became about half full, the car's engine would sputter and hesitate at times. When this would happen I knew it was time to fill up again. Also, when only the second tank has fuel in it, starting the car becomes more difficult.



Based on years of racing experience, Schumacher decided to go with an enclosed, belted gear box as opposed to a more conventional idler gear design.

Conclusion

I can easily see this car catching on. It's different, powerful, easy to drive, and lots of fun. It's unique size turns heads, couple that with a realistic body and lots of speed and you've got nothing but a winner. Although the Big 6 Nitro didn't handle like a 1/10-scale touring car, it was easy and fun to drive. It's power plant left me looking for the brakes more often than full throttle. It's fast! Building was easy and quick. I didn't care for the sputtering when the second tank was still half full, but aside from that



The dual fuel tanks provide the big six with a long runtime.

I really can't find much to complain about. As far as value goes the big six isn't bad. Much, much less than a 1/5-scale car and only slightly more expensive than a Super sized car from a number of Japanese companies. I can't wait to see other bodies to fit the Big 6. Hopefully some other good looking offerings will be available soon. If you're looking for something different, maybe the next big thing – this is it.



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HPI NITRO MT RACER

RO MT **RACER** NITRO MT **RACER** NITRO M

Two. Two reviews in one!

Four-wheel-drive is nothing new to the world of R/C. Racers have been enjoying the tractability and forgiving handling of 4WD for more than a few years. Whether it's 1/8-scale buggies, 1/10-scale sedans or even 1/10-scale buggies, manufacturers have found ways to apply the concept of power to all four wheels to most of their lineup. All this time, however, 1/10-scale nitro trucks have remained rear-wheel-drive only.

Enter HPI's Nitro MT. Since its introduction, the MT has piqued the interest of the gas truck faithful. Because the delivery of a modern 2-stroke engine is anything but smooth, a 4WD gas truck just makes sense. Consider also that a 2-stroke engine has no engine-braking effect, so this 4WD machine won't exhibit the off-throttle push of other 4WD vehicles. Nitro MTs began popping up at local tracks, but (due mainly to the lack of a slipper clutch) they often had trouble finishing races.

The Nitro MT Racer hopes to silence the MT's critics, and win over a whole new group of gas truck fanatics. Of course a slipper clutch is now standard, but HPI didn't stop there. MIP CVDs, Pro-Line racing rubber, and a tuned pipe along with a list of other hop-ups are now included in the package. But does the MT Racer earn its Racer designation?

Hits:
- Truck is bulletproof.
- Adapts well to tuning.
- 4WD nitro truck; need I say more?
- Slipper clutch, shiny CVDs, and a tuned pipe included.

Misses:
- Radio tray not that easy to get in and out.
- Cheesy exhaust manifold.

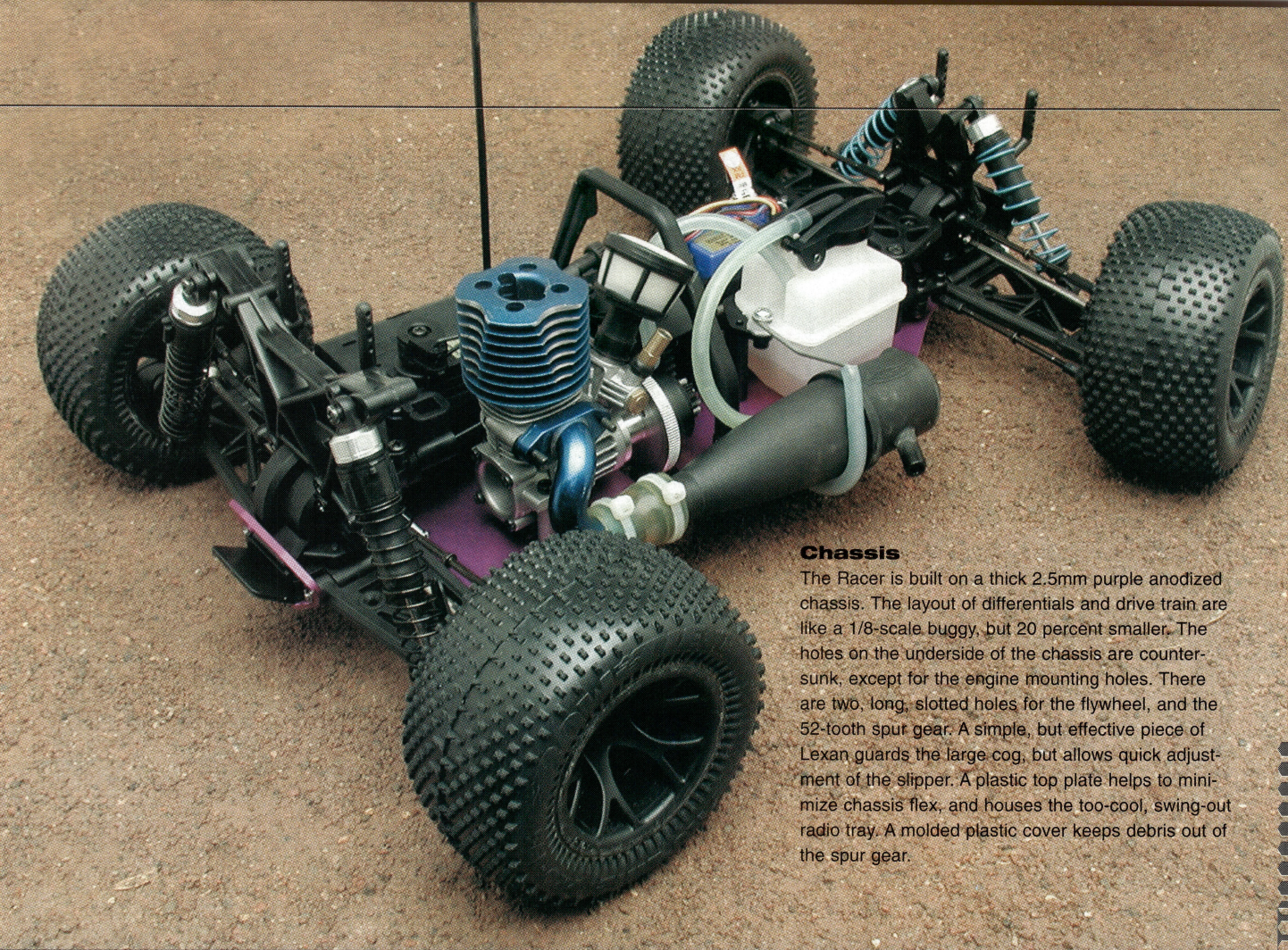
Instructions	4
Parts Quality/Fit	4
Durability	4
Tunability	4
Overall Performance	4
Value	4

by Mike Henry


NITRO MT RTR


NITRO MT RTR


NITRO MT RTR

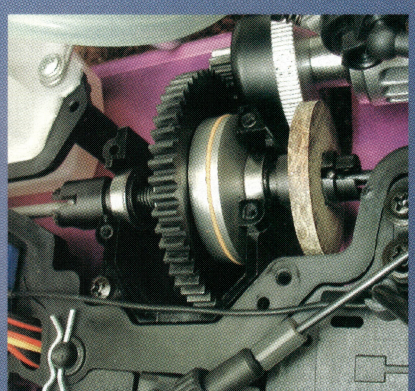


Chassis

The Racer is built on a thick 2.5mm purple anodized chassis. The layout of differentials and drive train are like a 1/8-scale buggy, but 20 percent smaller. The holes on the underside of the chassis are countersunk, except for the engine mounting holes. There are two, long, slotted holes for the flywheel, and the 52-tooth spur gear. A simple, but effective piece of Lexan guards the large cog, but allows quick adjustment of the slipper. A plastic top plate helps to minimize chassis flex, and houses the too-cool, swing-out radio tray. A molded plastic cover keeps debris out of the spur gear.

RACER NITRO MT RACER NITRO MT RAC

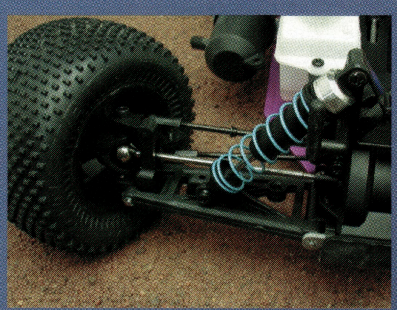
Drive Train



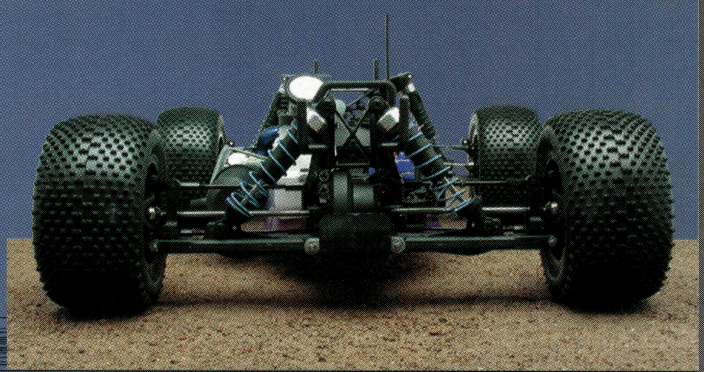
Power transfers from the engine through an MIP-style 2-shoe clutch to a 12-tooth clutch bell. Once at the spur gear, power is evenly split to the front and rear gear diffs, via steel dog bones. Each corner of the MT is flanked with shiny MIP CVDs. A beefy fiber disc brake replaces the plastic rotor from the standard MT. Perhaps the best feature on the truck is one that isn't easily seen. A single-disk slipper clutch sits just in front of the spur gear. The slipper is spring-loaded, and can be adjusted through a hole in the bottom of the chassis. Gear diffs do not slip, so the spur was the weak link in the drive train on previous MTs. Kudos to HPI!

Suspension

All of the suspension arms and both shocks towers on the Racer are made of molded plastic. The front shock tower does not offer any additional holes for tuning, but there are three holes on the front arms. The Racer does include alloy braces for the rear arms. The rear shock



tower features two mounting holes, and the arms offer three more. The arms move on stainless steel hinge pins, the adjustable turnbuckles are also made of steel. HPI's reliable plastic-body shocks serve damping on the Racer. Although plastic, they do not leak, and provide very smooth damping. A set of tuned springs finish off the suspension.



Building Tips

HPI includes a thorough instruction manual. There is a parts size reference guide, along with computer drawn images and actual photos. Building the MT Racer is not difficult, but you cannot be careless. Use thread-lock wherever it is noted in the instructions. The following are points that may need extra attention.

Step 1 Make sure you apply a light coat of grease to the surface of every gear in each diff. Also, if you do use the shims that go over the outdrives, make sure you place the shims on before you slide the bearing over the diff.

Step 6 Building the turnbuckles on the Racer is a snap, if you use the included 4-way wrench and the turnbuckle wrench. Every kit should come with these tools.

Step 19 When you place the spur gear/slipper assembly into the chassis, make sure the slipper is closest to the brake. If you put it in backwards, the spur and the clutch bell will not line up. I know this because I put mine in backwards. After a frantic call to Mike Velez, I discovered my mistake. Everyone back at the office laughed at me. I think they're still laughing...

Step 20 The plastic-body shocks, if built properly, are super-smooth. Make sure you trim any burrs from the pistons, and use some AE Green Slime on the shock shafts.

Step 32 The kit does not come with a throttle return spring. Take five minutes to rig one up. If you are using alkaline batteries to power the receiver pack, do not skip this step.

Setup Tips

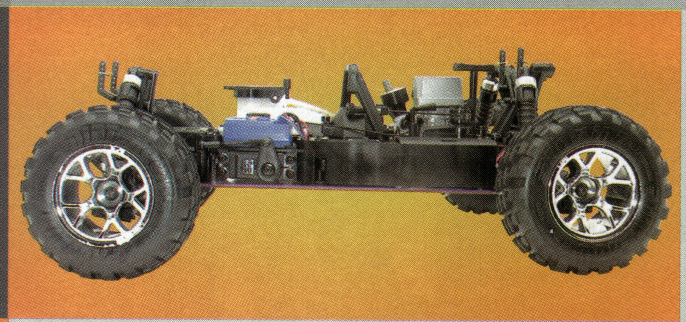
The MT Racer kit is very complete, but I made a few changes to mine.

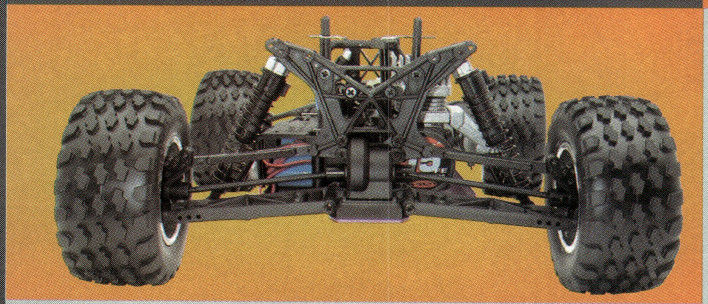
- Team Losi 40 weight shock oil and #3 pistons at all four corners.
- I flipped the rear suspension arms around, and mounted the rear shocks to the back of the shock tower. HPI calls this the "Quick Steering" setup.
- The included manifold looks like a prop from the 1970's TV show *Battlestar Gallactica*. It also looked like a potential bottleneck for my Rex CR12. I swapped it for a Traxxas T-Maxx manifold #4940. It looks cool and makes good power. Master fabricator, Jay Rose, modified an RC10GT pipe bracket for the truck.
- Use better-flowing fuel tubing. The included hose is too thin for a competition nitro engine.
- Ride height- Front: arms just below level. Rear: bones just above level.

NITRO MT **RTR** NITRO MT **RTR** NITRO MT

NITRO MT RTR

HPI also sent us one of their Ready To Run (RTR) Nitro MTs. As the name implies, this incarnate of the MT is ready to run, out of the box. The RTR MT is very similar to the original MT. Clearly, this kit is aimed at the hobbyist/backyard basher. But it still has most of the solid features that make any Nitro MT a killer vehicle. Let's take a look.





Features

- The MT RTR is built on the same platform as the MT Racer. It features the same mini-1/8 scale drive train format using gear differentials. Power is delivered to the wheels via dog bones, but all four hub carriers feature ball bearings. Non-adjustable plastic camber and toe links keep things simple. The RTR uses the same plastic shocks as its Racer sibling, but with different spring rates.
- The heart of the RTR is HPI's reliable pull-start Nitro Star 15FE engine. The engine only has one needle setting for mixture, and a throttle stop screw. A standard barrel-type carb atomizes the air/fuel mixture. The engine breathes through the same angular manifold and dual-chamber plastic pipe that the Racer uses.
- The included radio gear is HPI's version of the Airtronics Rival 27 Mhz AM setup or a Futaba TF-1. The truck uses standard servos for both steering and throttle. The receiver pack requires 4 AA batteries for power.
- The Nitro MT RTR also features Pro Line Dirt Hawgs and HPI's chrome MT Mesh wheels. The Lexan body arrives unpainted, but good results are within reach thanks to a complete set of lively decals.

Testing

I decided to forego the typical race track test, and headed for the challenging alley behind my apartment for initial testing. The pavement is uneven, and there are always stray cats, cars and homeless people treasure hunting in the alley.

The Nitro Star engine came to life on the fifth pull. Once it reached operating temperature, I began tooling around the area. The take-up in

RTR Slang: Really Tight Rig, Ready To Race, Right To Rant.

Other Features

The MT Racer features a race-ready fuel tank. It appears a bit on the small side, but proved otherwise during testing. The kit also comes with a tuned 2-chamber plastic pipe, and an art-deco-looking exhaust manifold. As with other Racer kits, the MT does not come with an engine, or radio gear. The engine mounts are universal, as long as you use a .12 or .15 size engine. The throttle linkage is setup for a rotary carb although a slide carb modification kit is available separately (#A889). The kit also includes fuel line, an air filter and tie wraps.

Steering • The dual bellcrank setup is a carry-over piece from the older MT. The bellcranks rotate on plastic bushings, and are connected by a non-adjustable drag link. No additional Ackerman adjustments are provided. The steering servo is connected by an adjustable turnbuckle, which is a nice touch.

Body, Wheels and Tires • The standard HPI truck body is used in the Racer kit. It doesn't really resemble any full-size truck. HPI does include window masks and hell-of-a-lot of decals. The black MT Mesh wheels are also HPI units, but they are wrapped with Pro- Line Bow Tie M2 compound rubber in.

MT Racer Testing

Acceleration • 4WD plus Rex CR12 equals neck-snapping acceleration. With the slipper cranked down, the Racer just hooked up whenever I got on the gas. The Rex liked being on the pipe, so I had to keep the revs up. The gearing seemed like a perfect compromise between punch and top end. The rear end of the truck never stepped-out, even when I hammered the throttle. A slight on-throttle push was evident, but never hampered my driving.

Top End Speed • The truck achieved terminal velocity quickly and without drama. There were a few other 2WD gas trucks racing with me. The Racer seemed every bit as fast on the back straight. The truck felt rock-solid, even when barreling at top speed. It just soaked up the bumps and ruts, and went about its business.

Jumping • The truck really took to the air admirably. I had a lot of control over the clutch was a bit slow, but predictable.



The truck's suspension felt really springy when I set it on the ground, but it seemed appropriate once things got rolling. The MT accelerated briskly, and reached top speed easily. The Nitro Star had good mid-range punch, but it also made good power on the top end.

Handling was very neutral, but I was able to coax some cool Starsky and Hutch-style power slides out of the truck with some quick driving. The MT actually picks up the inside front wheel, when turning under power. Braking was adequate, but a little light for my driving style. The RTR MT felt very much like its Racer counterpart, just softer and slower to react. Soon the alley was depleted of obstacles, so I decided to move my operation elsewhere before the neighbors started throwing things at me.

I found myself at Tucson's Grant Park, another haven for homeless, junkies, cops and others hoping to avoid all of the above. The terrain was mostly short grass, but featured some loose dirt and sand. There are countless imperfections and tree roots that can make testing very interesting.

The engine came to life on the first pull, so I removed the glow igniter, and started looking for carnage. I spent most of the first tank learning the characteristics of the truck on the grass. The truck maintained its easy-to-drive feel, even on the loose stuff. I made a few bonzai top speed passes, hoping for the best. The MT just soaked up the bumps, and kept its heading, straight and true.

Impressed, I decided to hit a few mounds of packed dirt. The truck jumped and landed smoothly, but the suspension did feel over-dampened. The rear end bounced up a few times, after hitting the face of the jump. I never did put the MT on its lid, though. I spent the rest of my time at the park perfecting my stunt maneuvers, and getting closer and closer to a group of unsavory characters. Fearing I might run out of gas at the worst moment, I collected the MT and headed for home.

Conclusion

The Nitro MT RTR is a killer bashing machine. The included engine and radio gear is more than adequate for first-timers and novices of nitro vehicles. The engine never stalled, and it started on the first pull, once it was warmed up. The suspension settings are a good compromise between performance and driveability. The kit itself is very complete, and even includes a few spare parts. HPI also has a great customer service staff, and a cool website where owners can post questions about their vehicles. If you're looking for a reliable bashing nitro truck, the MT RTR deserves at good long look.

Almost Ready To Run

Before you grab the pull starter, and start yanking, there are a few things you need to address.

- Make sure you scrape the chrome plating from each wheel before you glue the tires on.
- Don't forget to cut a hole in the passenger-side of the windshield and in the bed of the body.
- Check your throttle and steering settings before the truck is running.
- Follow the break-in instructions included in the kit. This is very important.

The following items are needed to make the MT truly ready to run:

- Fuel and a fuel bottle
- Glow igniter
- CA for gluing the tires
- 12 AA batteries for the radio gear
- Paint suitable for Lexan

If your pull-start doesn't get you going quickly you could get "yanker's elbow."

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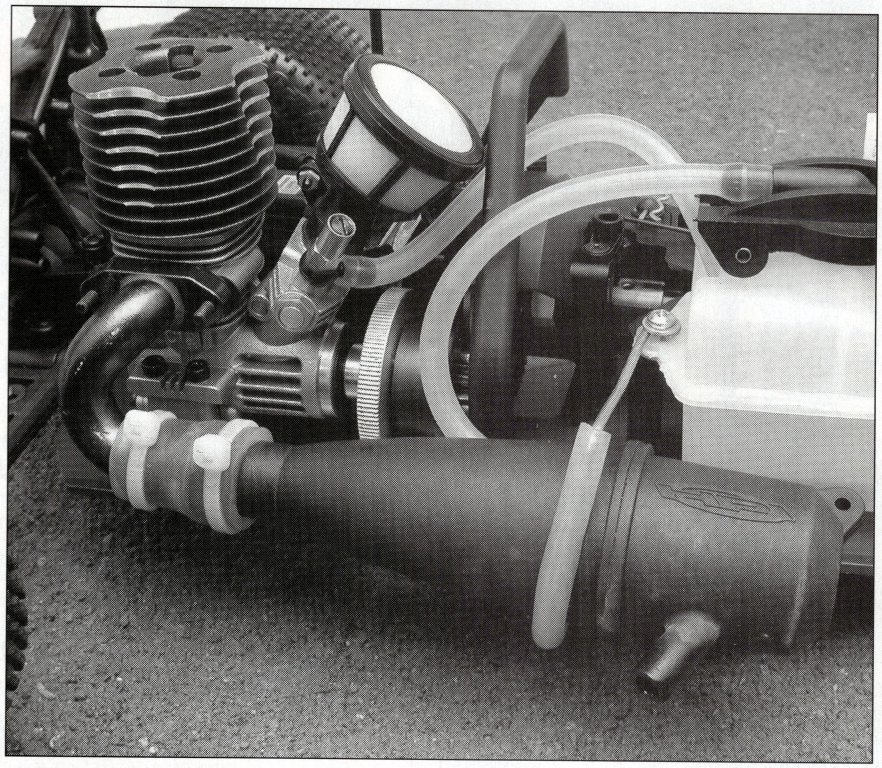
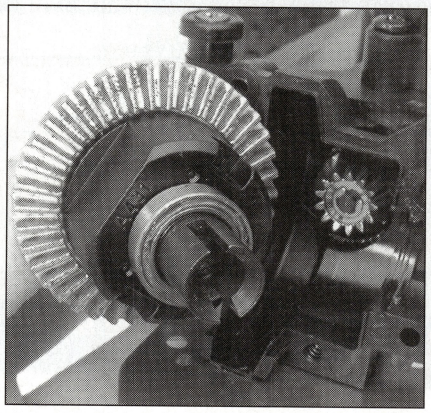
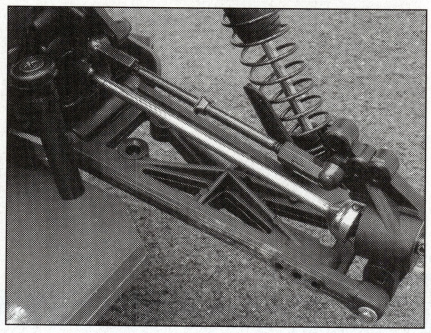






Above: I did notice a improvement in performance once I installed the T-Maxx manifold. Top right: The beveled gear drive system worked flawlessly with not a single hiccup. Bottom right: Shiny MIP CVDs are a nice touch and worked great.

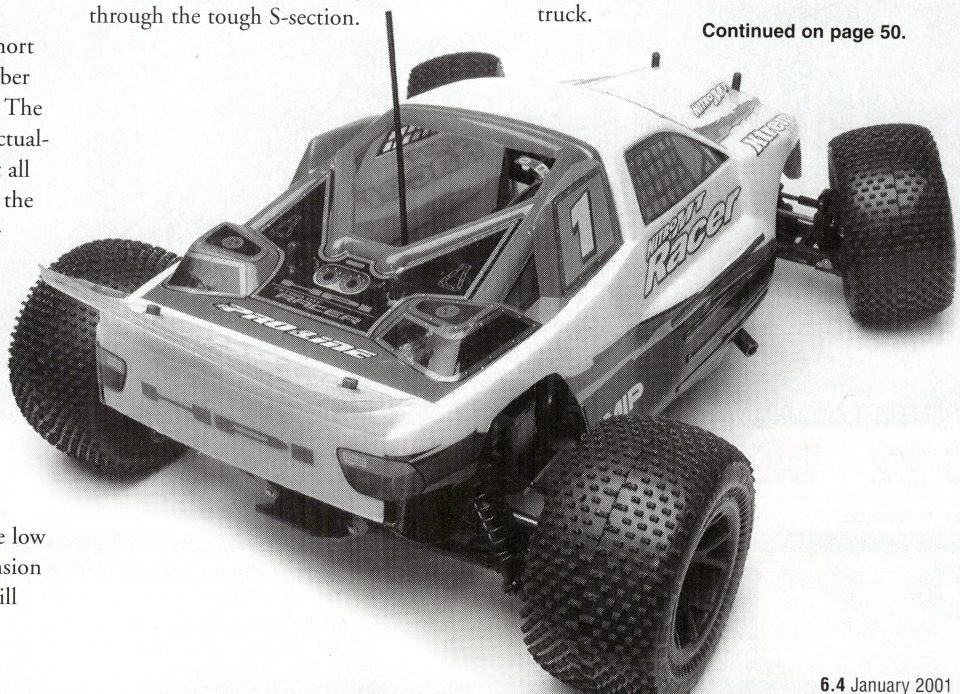
the truck's attitude in the air, with all four wheels turning. If the nose was a little high, a quick tap on the brakes would bring it back down. The damping felt great, and allowed me to attack all of the jumps on the track. The chassis never bottomed out, even on landing the more severe obstacles. I was able to run tighter lines leading to the jumps, knowing the truck would just hook up and go. This truck needs to be driven aggressively.

Braking • The MT Racer was never short on braking. The kit includes a thick fiber brake rotor, and makes good use of it. The truck had so much braking power, I actually had to turn the throttle EPA almost all the way down. This eliminated any of the on-off feeling, and allowed me to control the truck with more finesse. Even with the brakes impending lockup, the truck never went off line. This allowed me to exploit its 4WD coming off the fast back straight. I was able to jam on the brakes, and make an early apex into the corner.

Low Speed • The MT Racer needed a little bit of tuning to rail through the low speed corners. Flipping the rear suspension arms around certainly helped, but it still exhibited a touch of off-throttle push. This may be contributed to front tires. I don't think Pro Line designed the Bow Tie to steer nitro trucks. Nevertheless, I played with the truck's ride height, and ended up getting very close to ideal. Again, throwing the truck around will reward you with the fastest lap times. I actually found myself using the brakes in some of the slower sections to help steer the truck. By the end of the night, the MT was flying through the tough S-section.

High Speed Turns • If there's an unfair advantage to a 4WD nitro truck, this is where it lies. The MT Racer was stuck to the track in the faster corners. Race director, Adam Crippenm made the bold statement, "That's the most dialed gas truck I've ever seen!" The truck was able to carry a lot of corner speed into the turns, and exit without scrubbing off too much momentum. I was able to run literally any line I wanted to without affecting my lap times too much. The MT was simply neutral, unless I asked something else of it. In fact, I had to make a conscious effort to upset the truck.

Continued on page 50.



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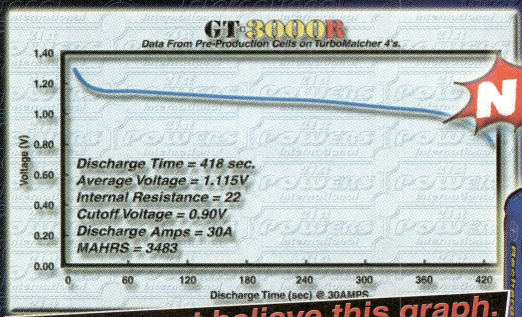

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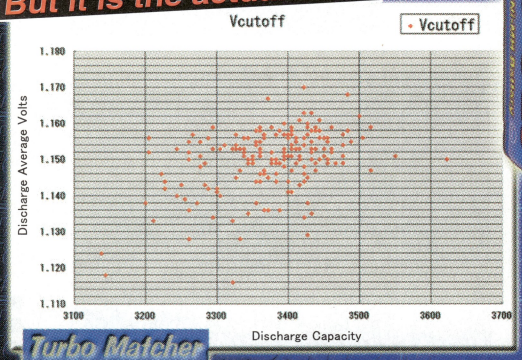



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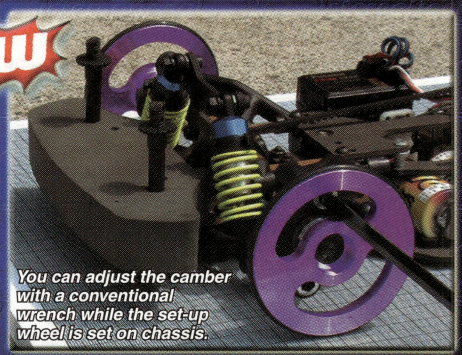



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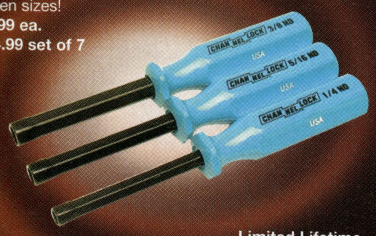

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RE0037B-RE0037V **$10.50 each**

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



RE7054-RE7060

$1.75 each
$8.50 set of Six



Super Flex Silicone Fuel Tubing
Available in 2 foot packages in red, blue, yellow, orange, pink, and green.

RE3500-RE3505 **$2.00 / 2 feet**

B3 Front Brace
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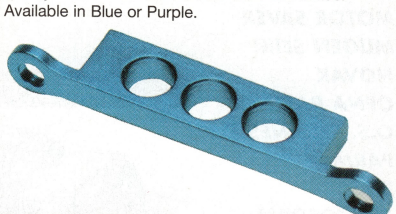

RE9120B & RE9120P **$14.99**

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$132 (MT-4)



MT-2 (w/o laser)
MT-4 (w/ laser)

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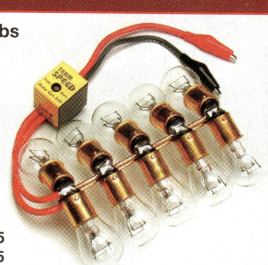

2A: A002 **$4.95**
20A: A020 **$17.95**
24A: A024 **$19.95**
Cutoff Only: 7098 **$17.49**
20A Bulbs w/cutoff: 7099 **$35.99**

Tool Center
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**

Continued from page 47.

Damage Inc • The original Nitro MT was a little fragile when out on the track. The MT Racer is a different story, however. As I began to gain confidence with the truck, I started driving it harder and harder. It survived two nights of racing 100 percent unscathed. The spur gear still looks brand new. The only evidence that the truck has been raced is revealed on the underside of the chassis. The once pristine purple anodizing now has that raced look. The shocks did not leak at all, despite their plastic construction.

Trackside Tuning • The MT Racer has some cool features, most notably the swing-out radio tray. Unfortunately, the holes in the tray and the holes on the top plate did not line up quite right. After some wrangling I managed to get everything to fit into place. Making camber and toe changes was simple, as HPI included a turnbuckle wrench. The slipper is accessed through the bottom of the chassis, but you have to remove the Lexan guard that covers the spur. Back off the setscrew, tighten or loosen the large nut, and you're finished. Refueling was also done quickly, as the fuel tank can be filled through the hole in the windshield. I do recommend using a rechargeable battery pack to power the receiver. One of the wheels was very warped. So warped that it

The specifics

Nitro MT Racer
Part#: 545, RTR - #556
MSRP: $509 Racer, $629 RTR
ESP: $350-$360 RTR, $290-$310 Racer

Vehicle Type
4WD Nitro-powered Stadium Truck

Chassis
Type: Flat Pan
Material: 3mm thick anodized aluminum.

Wheels and Tires
HPI MT Mesh wheels with Pro-Line Bow-Tie M2 tires (Fr/Rr).

Drive Train
Type: Dual differential, 4WD 1/8-scale type system.
Drive Shafts: MIP Shiny CVDs
Diff: Two beveled gear
Slipper: Friction slipper
Bearings: Full set

Suspension
Type: Independent lower arms with adjustable turnbuckles.
Damping: Plastic -bodied, coil-over, oil-filled shocks with plastic pistons, stainless steel shafts, and O-ring seals.

Engine
.12 or .15 size not included

Other Items You'll Need
.12 or .15 size engine, starting box or starting system, 2-channel radio with receiver and two servos, glow starter, paint.

Main Competition
Traxxas Nitro Rustler, Traxxas Nitro Stampede, Duratrax Maximum Pro ST and MT, Associated RC10GT RTR, HPI Nitro Rush

FEATURING:
AIRTRONICS
CROSS
CVEC
FUTABA
HPI RACING
INTEGY
KAWADA
KO PROPO
LUNSFORD
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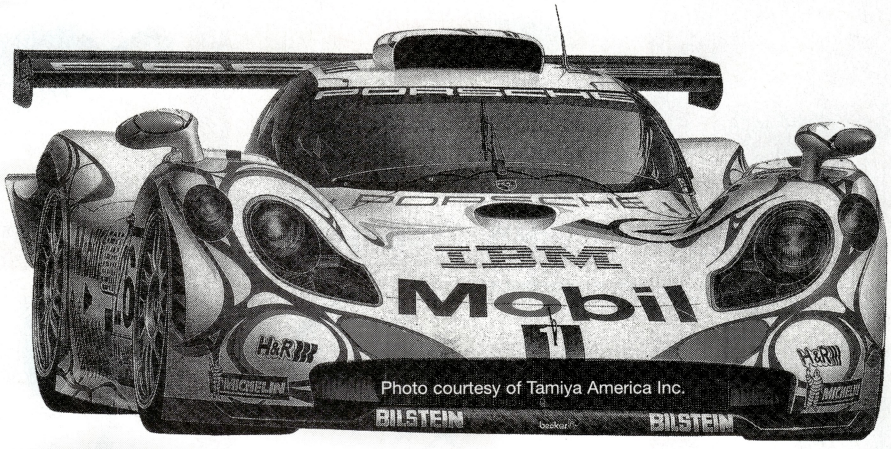

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1/10th Nitro
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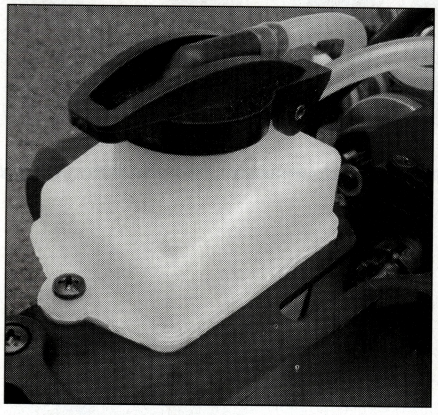
prevented me from getting an accurate camber reading. I swapped it with one of the better wheels from the rear.

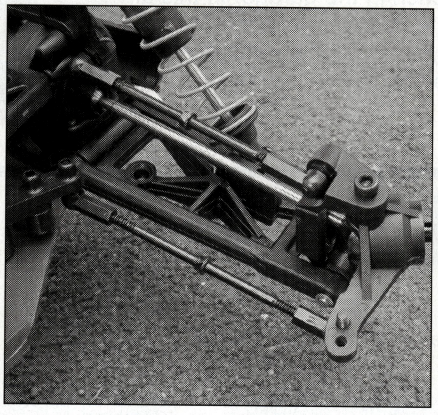
Maintenance • The MT Racer requires very little maintenance. The gear diffs should outlast your racing career, thanks to the slipper clutch. Common sense goes a long way with any nitro-powered vehicle. Drain the fuel tank before you store the truck. Place a few drops of after run oil in the engine, and turn the engine flywheel over a few times.

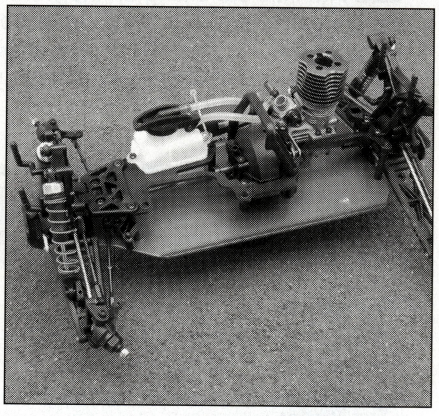
Conclusion

The HPI Nitro MT Racer does everything well. Racing is the ultimate test for any vehicle, and through racing and R&D, HPI has come up with a bulletproof, fast truck. The kit is thorough and complete. The truck was fast everywhere on the track, and the slipper clutch saved the drive train. After a few heats, more than a few racers were gathered around the Racer in the pits. "Oh cool. It's four-wheel-drive," and "When can I drive it?" were the two most common comments. The MT Racer is truly in a class of its own. In fact, once the truck is dialed in, you may have trouble finding people that are willing to race you.

Left: The fuel tank has a racer style pressure inlet with no primer pump. Center: The long suspension arms managed to soak up all the jumps and bumps during a brutal test session and a crazy photo shoot. Right: With the radio tray removed the MT is very easy to clean and maintain.







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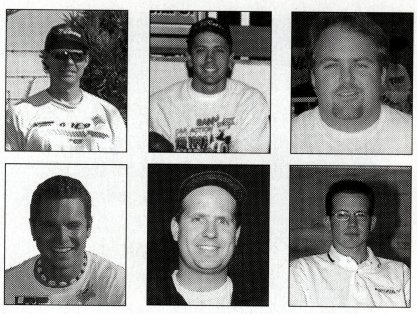

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***Xtreme R/C's* complete guide to R/C hardware**

HARDWARE 101

by Mike Velez

Let's face it. R/C cars are tons of fun. If you're willing to open your mind a little, it's amazing how much you can learn from that little car sitting on the work bench in the garage. In this article I'm going to turn you into an absolute hardware expert. You'll know all there is to know about screws, nuts, washers, different types materials, basically everything you can think of when it comes to the hardware used in R/C.

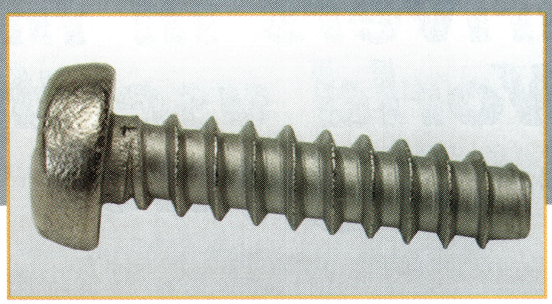
SCREWS

Threads

Any R/C screw can be divided into two main categories depending on the type of thread the screw employs.

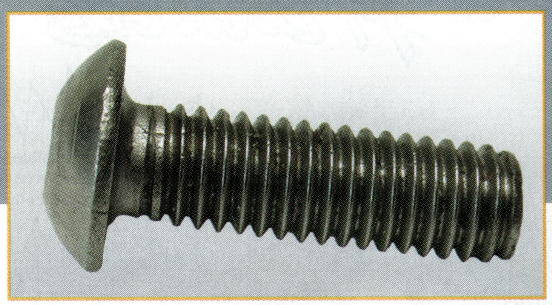
Self-Tapping

Self-tapping screws are designed to be used where no tapping is present. Self-tapping screws have longer threads relative to their diameter and the gap between threads is greater. These two properties are so that a thread can actually cut into the material being screwed into rather than just making the matting whole wider.



Machine

Machine screws use a thread design that's engineered to mate with an item that is tapped (the opposite of threaded). Machines screws have short threads relative to the screw's diameter. Machine screws can also tap their own threads when necessary if being screwed into a plastic object like a chassis or suspension arm.



Sockets

Most R/C car screws can be divided up further by the type of socket used to turn a screw. There are two basic categories.

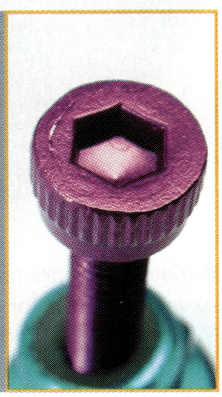
Phillips-Socket

Phillips-socket (aka Phillips Head) screws are popular among Japanese from Tamiya, Kyosho, and HPI. Most Phillips-head screws in R/C use a #2 driver. A lot of torque can be gotten when using the correct size driver and screw. But, be careful not to angle the driver and the screw head too steeply or else you'll strip out the screw head. At the first sign that the screw head is stripping out, you should replace the screw.



Allen-Socket

Allen-socket (aka Allen-head) screws use a six-sided tool called an Allen wrench or Allen driver. Allen head screws are commonly found on American kits from companies like Associated and Losi and also on competition kits from Yokomo, Mugen, and others. Allen-head screws work great with proper fitting mating drivers. Some Allen drivers have a round head that allows tool insertion at up to a 45° angle. This makes Allen-socket screws great in hard to reach places.



Socket, Head, Nuts... We're not touching those with a ten foot pole.

Heads

Both Phillips and Allen, machine or self-tapping, can be found with a variety of head types.

Counter-Sunk-Head

A counter-sunk-head (aka flat-head) screw has a tapered head. When mated with a countersunk hole, a counter-sunk screw gives a flush finished product. These screws are often used on the underside of a chassis. Because of the tapered design of flat-head screws there shoulder of the screw has a lot of surface area. That means that flat head screws when tightened make a tight, firm connection that's less likely to come loose than other types of head designs.



Cap-Head

Cap-Head screws are commonly found with a Allen socket. These screws have a deep head that allows the Allen driver to get a large amount of contact area with the mating driver. These screws have a narrow shoulder and are often used with a washer to help spread the mechanical load.



Button-Head

Button-head screws are commonly with Phillips sockets. Button head screws have a wide shoulder and don't often need a washer. Button-heads have round edges and are shallow in head depth.



NUTS

Nuts are used to secure a screw or axle in place. Most nuts in R/C are six-sided. Nuts differ in shape and features depending on how much holding power is required.

Jam Nut

Jam nuts are easily identifiable by their thin size. Jam, or plain, nuts are held in place by the amount of pressure applied when threaded in place. When more holding power is needed, a drop of liquid thread-lock can help keep jam nuts in place.



Locknut

A locknut has a small amount of plastic or nylon above the threading. The plastic or nylon helps to keep the locknut in place and keeps it from backing off. Locknuts don't need to be tightened down to be held in place. That makes them ideal for being used in areas where free movement is needed, like on shock towers.



Flanged Locknut

A flanged locknut gives you the virtues of both a jam nut and a locknut. A flanged locknut has a flange on the bottom that helps spread the load when tightened down and also features an insert at the top to help keep the screw in place. A flanged locknut is used where maximum holding power is needed, like holding a wheel onto an axle.



OTHER



E-Clips and C-Clips

E-Clips are given their name for their unique shape and how they resemble an "E." E-Clips are used in R/C to hold shafts or pins in place. E-Clips can commonly be found on hinge-pins and to hold shock pistons in place. E-Clips are snapped in place and can spin on a shaft once in place without popping off, sometimes. There are actually two sides to an E-clip. A smooth side and a rough side. When installing an E-clip you want the sooth side with the round edges to be facing the item it might come in contact with. That would be towards the suspension arm when used on a hinge pin. The rounded edges and smooth side of the E-Clip will lessen the chances of the pin popping off when in use.

C-Clips are just like E-Clips but don't have the middle ridge. C-clips can more closely fit a shaft and don't protrude past the diameter of the shaft as much as E-Clips do.

Pictures of C-clips can also be found in mags that have nothing to do with R/C.

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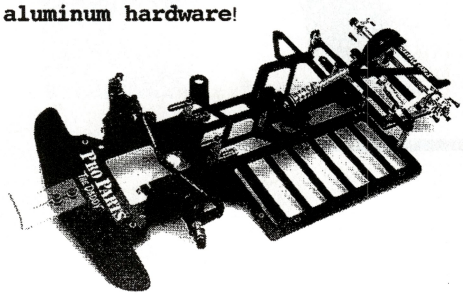

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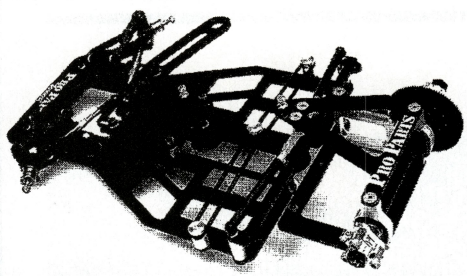

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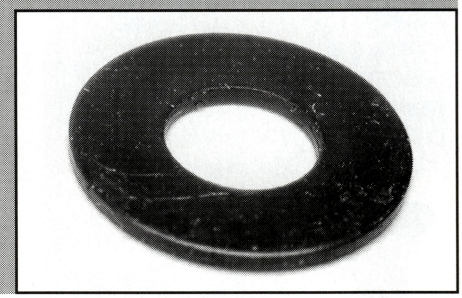
Washers

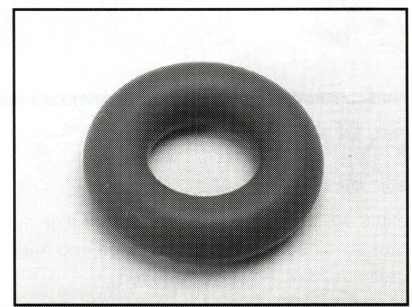
Washers are the small little rings used in various R/C applications. Washers are measured by their diameter. American washers are numbered by the screw size that fits into the washers inside diameter. For example a #6 washer would work on a 6-32 screw. Metric washers are also measured by their inside diameter. A 3mm washer would work with a 3mm screw. Washers are used for two basic reasons. Either to shim the limit of the reach of a screw if the screw length is too long, or to help spread the load of s screw so that it can be tightened with more force than without a washer. Most washers are flat. Conned washers are used when varying force is required. Some differentials use cone washers. When tightened completely conned washers will flatten out. Yet, conned washers can do their job without being completely tightened. This gives conned washers kind of a spring-like effect.



C-Rings

C-Rings do the same thing as E-Clips and C-Clips, but C-rings do it on the opposite direction. Like and E-Clip, a C-Ring is pressured into place. It's holding power is directed outward. When a C-Ring is removed or put in place it is squeezed together. When released its pressure is directed outward. C-Rings are often used to hold shock components in place on large bodied shocks. To get a C-Ring in place a special tool called a C-Clip wrench is used. A C-Clip tool is kind of like a pair of pliers with small pins used to grasp the ends of the C-clip and bring it closer together.



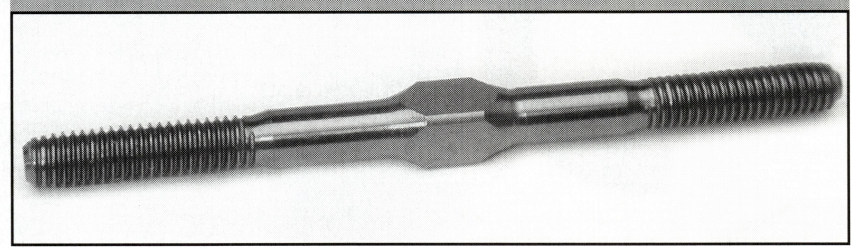


O-Rings

O-Rings are rubber or silicone seals used to keep fluids in their place. The most common O-rings in R/C are the small red or blue O-rings used inside most shocks. O-rings allow a shaft to move in and out of the O-rings inside diameter without great loss of suspension fluid from the inside of the shock. Whenever a shock is rebuilt the O-rings should be replaced. O-rings wear and lose their tight fit with a shaft after time. O-rings can also be damaged from solvents like motor cleaner and fuel.

Tie-Rods and Turnbuckles

Tie-rods and turnbuckles are used as upper control arm links, and as throttle and steering links. Tie-rods are threaded in one direction. This means they must be removed from the vehicle in order to be adjusted. A turnbuckle on the other hand has threads that go in opposite directions. This allows a turnbuckle and accompanying ball ends to be lengthened or shortened without being removed from the vehicle.



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#2651W fits Stampede & Rustler Electric Front
#2652W fits Stampede & Rustler Electric Rear
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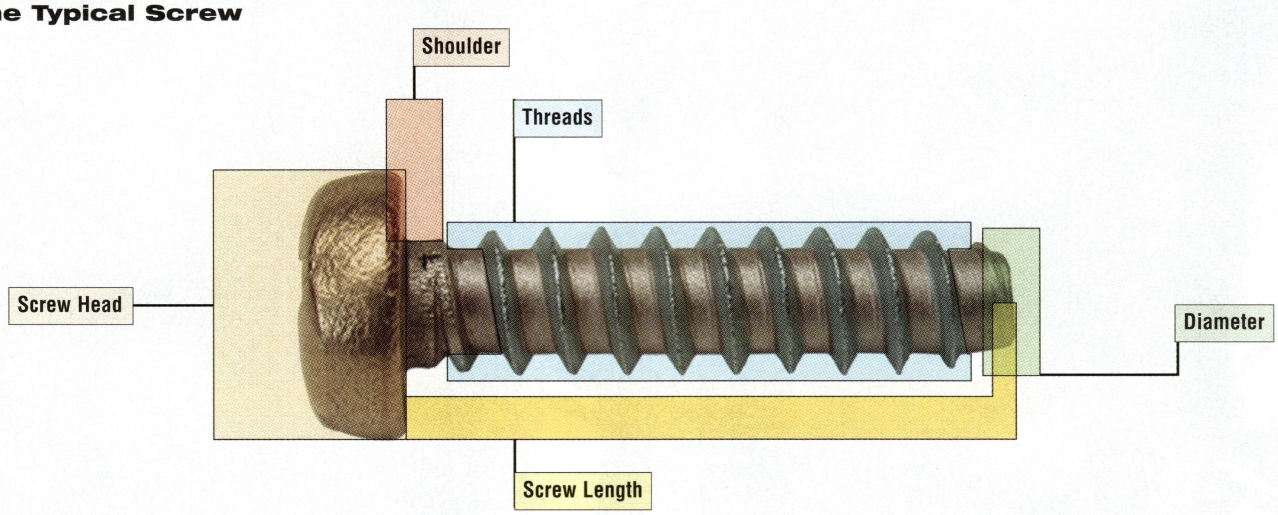
Measuring Screws

On most 1/10- and 1/12-scale American cars, 4-40 screws are common. The designation 4-40 refers to the diameter of the screw and the number of threads per inch. In this example, the number (4) means #4 size of screw diameter, the larger the number the larger the diameter. The second number (40) refers to the number of threads per on inch of length. So with that in mind a 6-32 screw would be a #6 diameter screw with 32 threads per inch in length.

Metric screws are a little more straight forward. Metric screws are labeled by their type, machine or self-tapping, and their diameter and length. For instance a 3mm x 12mm machine screw is 3mm in diameter, 12mm long and has a standard machine threading.

When measuring the length of the screw measure from the bottom of the head or the shoulder to the tip of the screw. The only exception to this rule is when measuring countersunk screws. These are measured from the end of the threaded shaft to the top of the head.

The Typical Screw



Materials

Screws, nuts, and washers can all be made in a variety materials. Each material has different properties that allow

Aluminum

Aluminum has the advantage being a weight reducer. Screws and nuts in not critical or low-load areas can be replaced with aluminum screws. Weight will be reduced at the cost of strength and aluminum is often times anodized and can add some color to your kit.

Steel

Most hardware is made of steel. Steel is strong and inexpensive, but weights more than other materials. Most stock kits come with steel hardware.

Titanium

Titanium offers the best of both worlds. It's stronger than steel and is as light as aluminum, but it's more expensive than both. As far as hardware goes titanium is only found in screws, ball-ends, suspension shafts, and turnbuckles. No one that I know of manufacturers titanium nuts for R/C use. If you don't mind spending the money titanium screws and hardware would make a fine fit in any situation thanks to its strength and weight savings.

Plastic

Plastic, nylon, and other molded materials can be made into screws and nuts. When used as a nut molded products have plenty of strength and work similar to a Locknut or Flanged Locknut. When a screw is molded it's typically used in a low-stress situation like mounting a wing to a body.

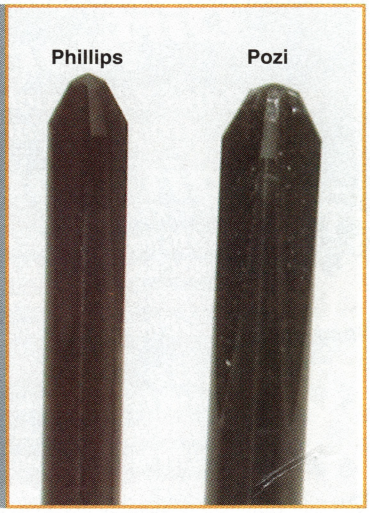
Thread-Lock

Thread-lock works great to help keep screws in place. When screws are threaded into metal opposing pieces, vibration can cause the screw to loosen. Thread-lock acts as a glue to keep things in place. The most common thread-lock is Loctite® brand medium strength. It's available at most hobby shops and works in just about any R/C application. Another popular brand is from Tamiya and is a clear blue gel. Both compounds are safe on the plastics used in R/C.



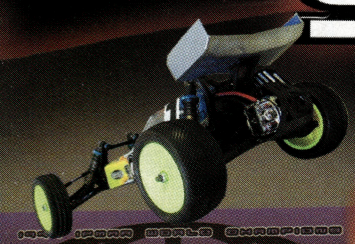
Pozi About That

European companies like Schumacher use unique screws that look much like standard Phillips Socket screws. These screws are not Phillips socket, they are Pozi socket screws. A Pozi screw uses a a drivers that looks just like a Phillips head screw driver but the tip is a little more shallow. Using a Phillips head screw driver on a Pozi screw will result in a stripped out screw socket. You can pick up a Pozi driver from a well stocked hardware store or hobby shop. Hudy, Wiha, and Schumacher all offer Pozi drivers.



You don't want to know what we were going to take a picture of to show O-ring.

Chrome Stock RS





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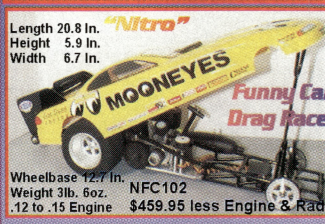





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MCT203	Upper 4 Link Mount	$19.50
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MCT301	Front Bumper	$39.95
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HOT HOT HOT

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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
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TRM323	Rear Bumper pr.	$18.95
TRM324	Front Bumper Supports pr.	$24.95
TRM325	Rear Bumper Supports pr.	$24.95
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TRM328	Steering/Shift Servo Mt pr.	$18.50
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AGT301	Hi-Torque Ripple Pipe Powder Coat Blue	$29.95
AGT301W	Pipe Wire Blue	$ 5.00
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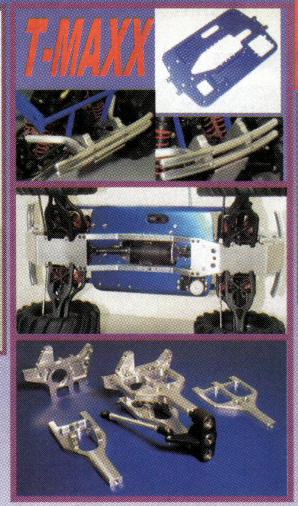




NTF101 $499.95 less Engine & Radio

1/10 SCALE UPGRADES

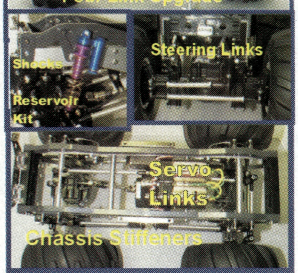


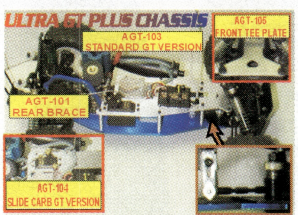
Upper Steel Tube Chassis for OFNA Monster PIRATE $169.95



Upper Steel Tube Chassis for USA1 $169.95 Chassis only







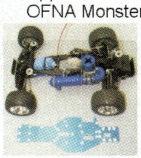
AGT103 Bl-Level Chassis $79.50
AGT106 for 21 Engine $109.50



AGT101 Rear Brace $21.95
AGT102 Front Brace Tubes $ 7.95



Upper Steel Tube Chassis for OFNA Monster Blazer $169.95



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TRS333	Rear Control Arms	pr. $34.00
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PRO PARTS "THE DADDY"



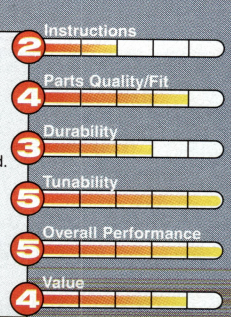
PRO PARTS "THE DADDY" PRO PARTS "THE

Go fast, turn left! That's the mantra of every oval racing fanatic. While it may seem a little simplistic to those who have never tried it, oval is actually tougher than just driving around in circles. Having a car that's highly adjustable is important, but it shouldn't be overtly complex. Heck, even building an oval car is an exact science. If you make even one tiny mistake here, the car will never perform correctly. But what if you could get an oval car that came straight out of the box built, tuned, and checked for precision? Now, thanks to Pro Parts, you can get a oval car that's not only pre-assembled and tweaked, but also comes with a heap of parts that are expensive upgrades on other cars. Introducing "The Daddy."

by Nathan C. Miller

Hits:
- Pre-assembled.
- Great handling straight out of the box.
- Many hop-ups already included.
- Easily tunable.

Misses:
- Instructions need help.
- Doesn't accept smaller servos.



Vital Info
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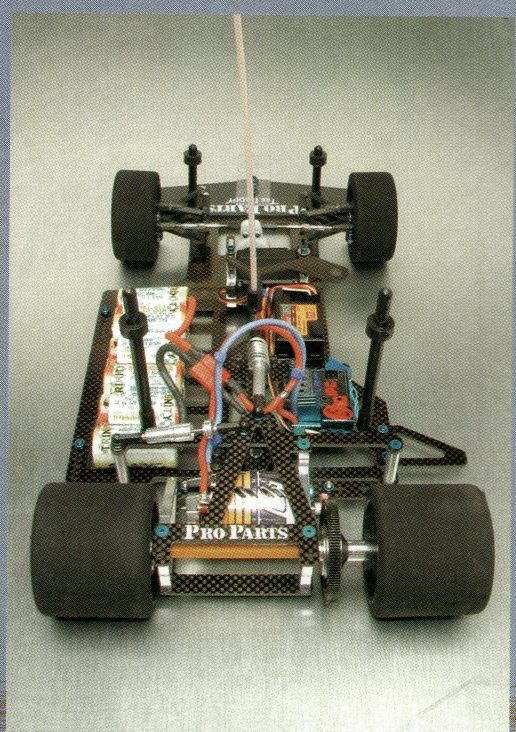
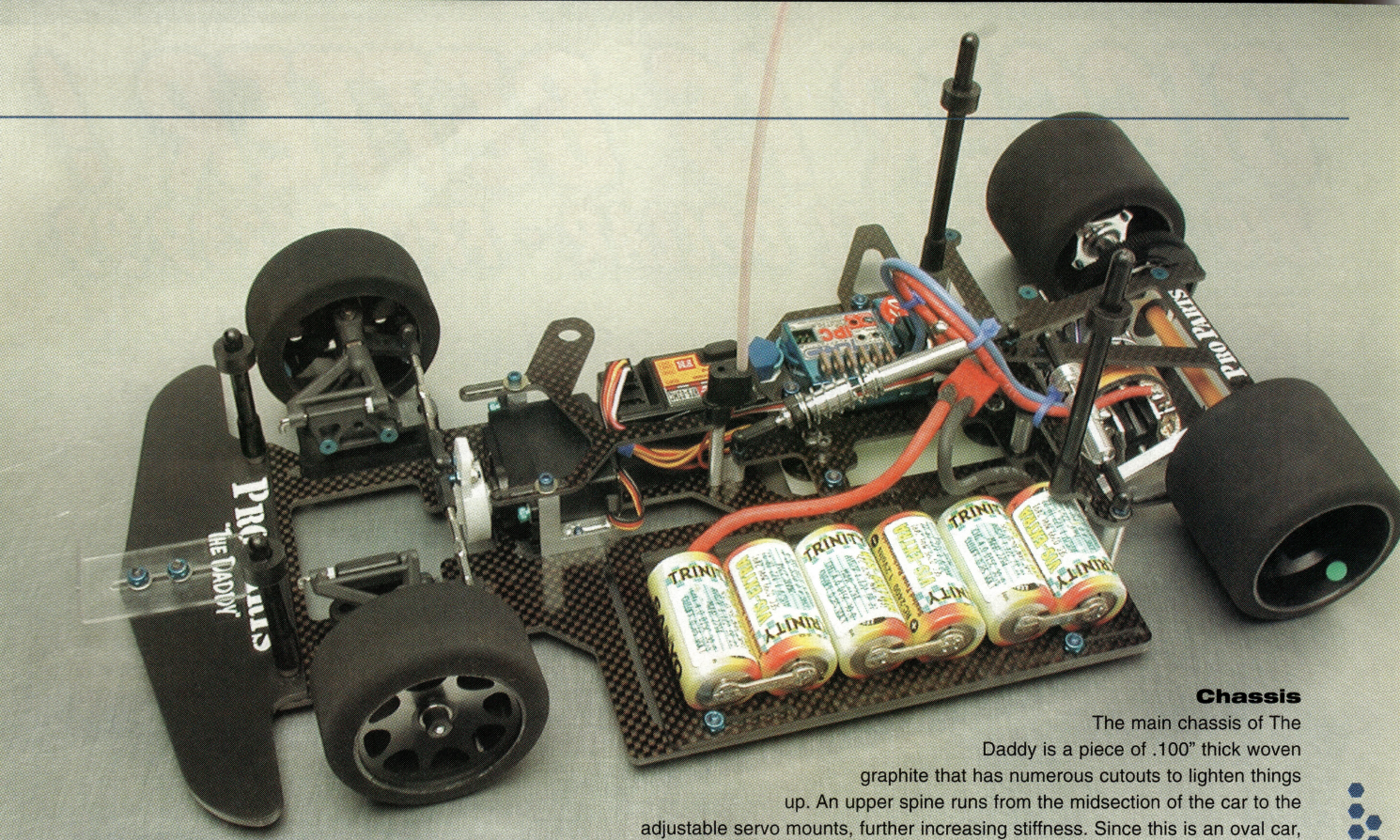


Oval racing: Not just for guys named cletus anymore!



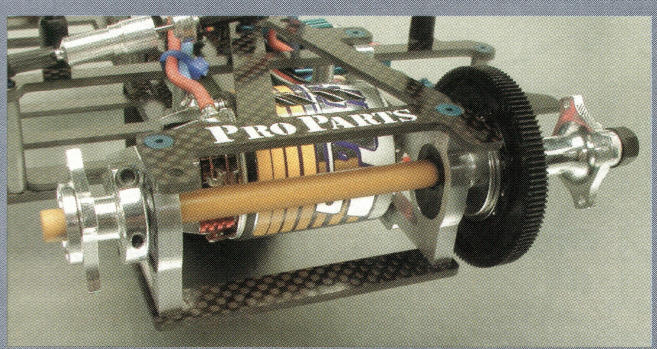
Chassis

The main chassis of The Daddy is a piece of .100" thick woven graphite that has numerous cutouts to lighten things up. An upper spine runs from the midsection of the car to the adjustable servo mounts, further increasing stiffness. Since this is an oval car, all the battery slots are offset to the left. However, the plate that the batteries set in can be moved forward and backward to adjust weight bias. Another small plate sits over the rear tweak bar, and not only helps stiffen the rear, but also is a part of this cars unique tweak screw setup (more on this later). Overall, the combination of cutouts and braces adds up to one very light, very rigid car.

"DADDY" PRO PARTS "THE DADDY" PRO P

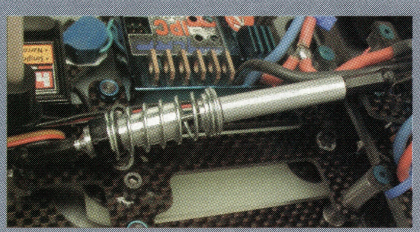
Drive Train

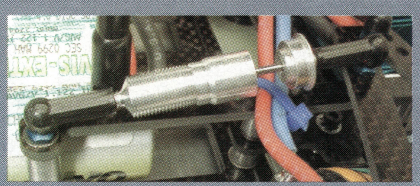
For maximum efficiency, the Daddy uses a direct drive rear axle. As with most pan cars, the ball diff is situated in the spur gear. Pro Parts doesn't skimp on the extras here. The rear axle is a lightweight IRS fiberglass piece, and the aluminum hubs are also IRS pieces. For top performance, the rear diff uses pinned rings. A 116-tooth, 64-pitch Kimbrough spur gear is included, and the axle rides on a set of bearings. Bearings are also included for the front wheels.



Suspension

Up front, the Daddy uses the tied and true Associated Dynamic Strut front end. This is good because many people are familiar with it and parts are readily available. This front end also allows for easy caster and camber changes, so tuning is a snap. The front end can also be moved forward and back, allowing for wheelbase adjustments. Out back is a standard T-bar assembly with a bit of a twist. While on most cars tweak is adjusted from the top, on the Daddy, tweak is adjusted using two small grub screws that go through the bottom of the bar. The grub screws touch against a pair of screws that are run through the plate that goes over the T-bar, mentioned in the "Chassis" section. The consequence of this is you can make on easy trackside tweak adjustments without needing to remove the body.





The rear end also features adjustable offset, and a pair of Associated micro shocks to control dampening. The side shock is interesting. It is mounted to the left and doesn't use a spring. Unconventional, considering most cars use a tri-shock rear. We'll see how this works on the track.

Who's your daddy? I got your Daddy right here!

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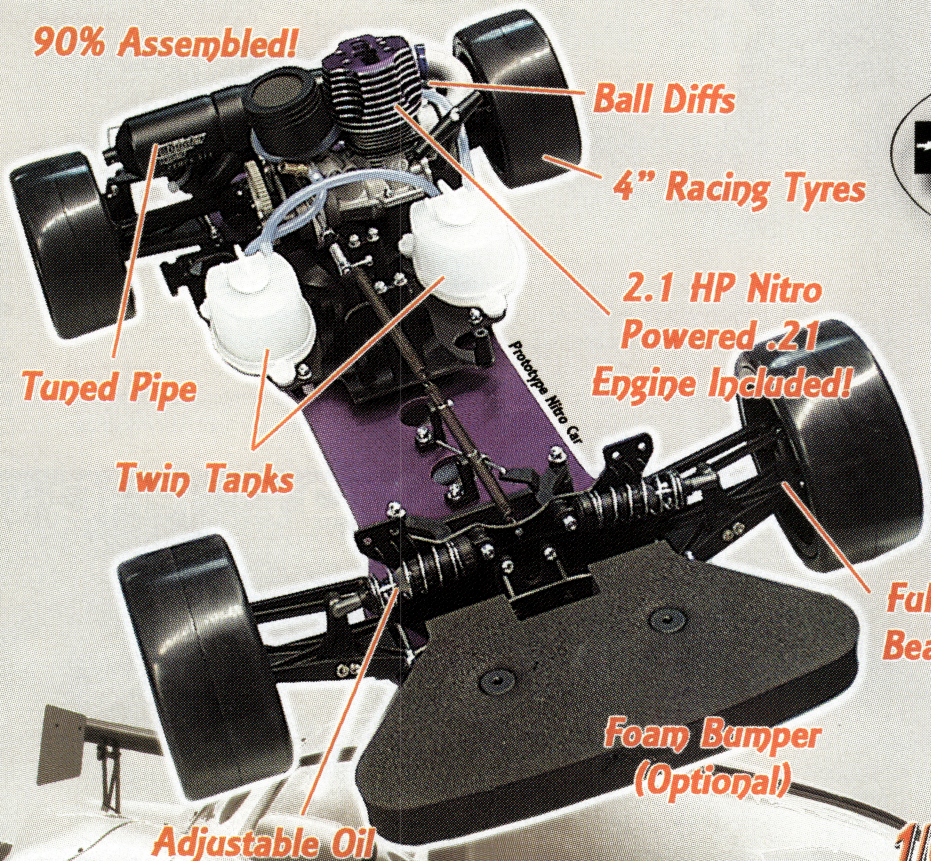

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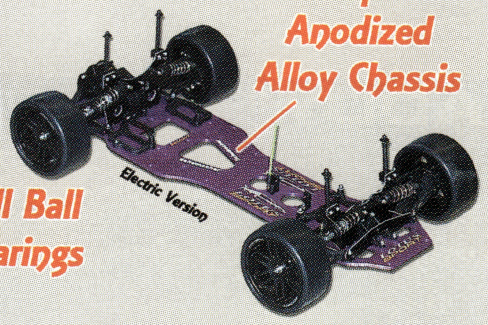

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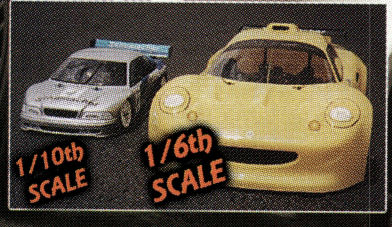

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Other Features

The Daddy comes with a full set of bearings, blue anodized hardware, and a large front bumper with a body brace. This car comes assembled, and comes with a final assembly manual. Unfortunately, there are no pictures to illustrate the instructions and rebuild information is nearly nonexistent. The pointers given for setting the car up are OK, but some more specific setup information would be nice. You can request specific advice for your track – that is, if Pro Parts has any info on your track.

Steering • A large Kimbrough servo-saver transmits movement directly from the servo through a pair of Lunsford titanium tie rods to the steering blocks. This is simple and effective. The steering servo mounts to a pair of aluminum mount that can be slid forward and back to keep the tie-rods nice and straight. My only gripe about the mounts is they do not accommodate servos smaller than a standard sized unit. I prefer smaller servos for oval myself.

Tires, Wheels, and Body • None, none, and none. Since this is a top-level competition car, Pro Parts leaves all these choices up to you.

Testing and Setup

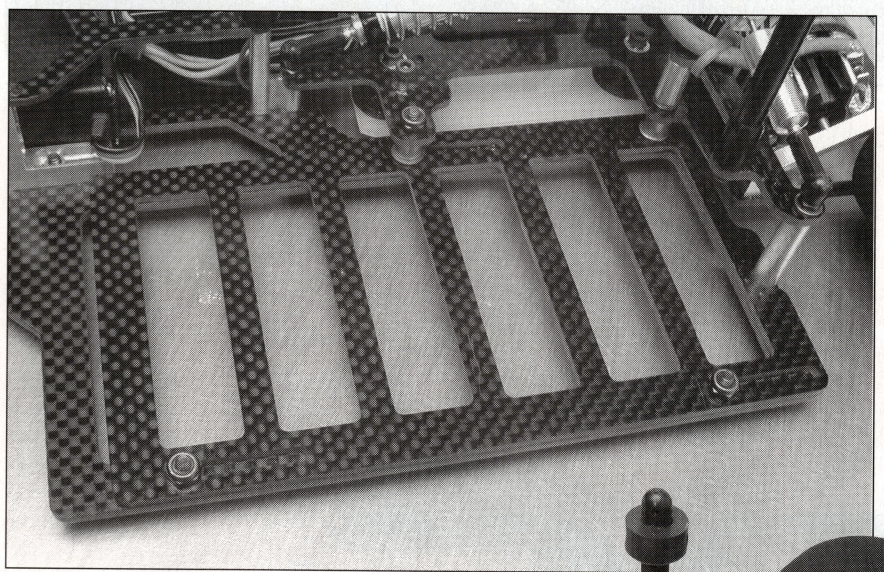
To get my car rolling, I grabbed a set of Pro-Line Jacco Mounted slicks, and decided to start with what's considered a standard starting point for compounds – green rears, blue fronts. The instructions recommend a blue/orange right front, blue left front combo. I deviated from this because the track I did my testing on had new carpet that was free of a groove of traction compound. For traction compound, I used some Racer's Choice TQ plus. To keep the car planted, I chose a Protoform Ford Taurus. I used the kit-included rear mounts, but went with shorter front mounts from Duratrax. This was simply because the shorter mounts didn't need to be cut down. I used a Hitech 945MG servo and receiver with a Lynx 3D FM radio. After trying several motors, I finally settled on an Orion Chrome RS stock motor, which got juice from Trinity 2000mAh and 2400mAh cells. Channeling all the power was a LRP V7.1 ESC. Lastly, a Robinson 34-tooth pinion was mated to the included spur. I left the car setup as it came out of the box. Let's get ready to ruuuuumble.

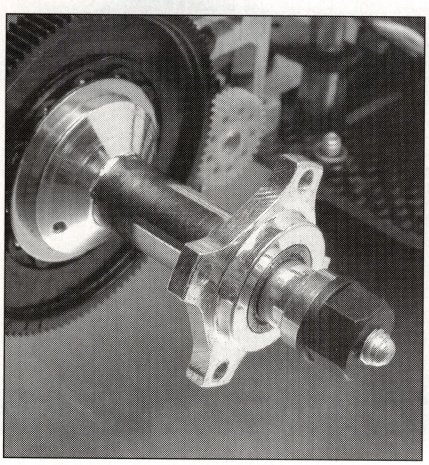
Test Drive • All testing took place at the new Thunder Hobbies oval in Indiana, PA. This flat oval features long straights and tight corners. Because of this combination, a car has to have good cornering speed and the ability to haul in the straights. I set my trims on a couple of slow laps, and then started to put down more power. Eventually, I got up to speed and was hanging with the other 6-cell stock motored cars on the track. I was afraid that I would be a little off, as I hadn't driven on the track before, and it had been a while since I had raced a full-on oval racer. However, after a couple of laps, I fell into a relaxed groove.

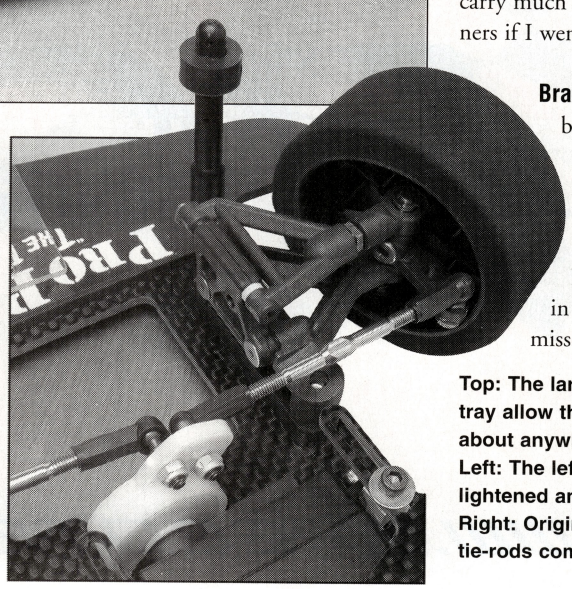
Acceleration • With the Orion motor in place with the gearing mentioned in "Testing and Setup," the Daddy pulled very hard out of the corners, and was up to full song by midway down the stretch. From a dead stop, this car was a rocket; I often could make my way into the first turn in front of the field. A lot of credit for this has to go to this car's very low weight and light drive line. Unfortunately, I also managed to upend the car starting in front of me once. Nerves, nerves...

Top Speed • Even with a stock motor, top speed on this car was impressive. The car was a bullet in the straights, and could carry much of this speed through the corners if I went with a higher line.

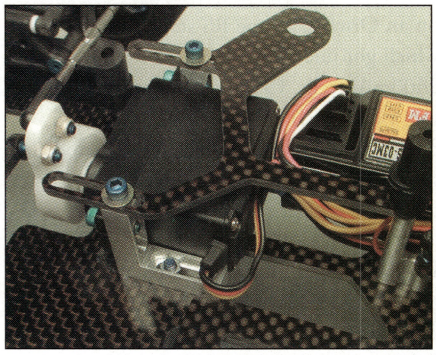
Braking • Jamming down the brakes on the straights brought the Daddy to a quick, uneventful stop. A lighter touch in the corners was never enough to upset the car in any way. However, jamming the brakes in the turns (as I had to do to miss a couple of tangles) threw the

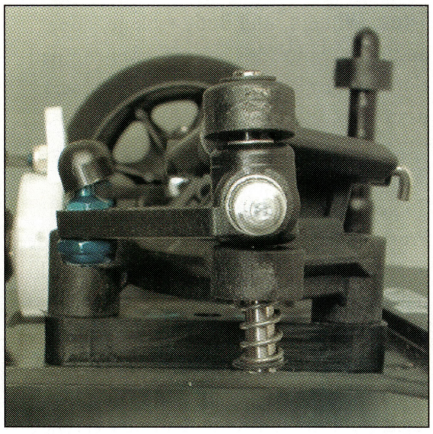


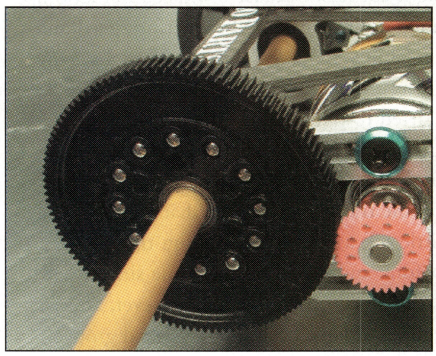




Top: The large battery cut outs and sliding tray allow the weight to be placed just about anywhere.
Left: The left and right diff halves are lightened and polished.
Right: Original Lunsford Punisher titanium tie-rods come standard.







Top: Although it won't fit mini servos, the Daddy will acomdate different size servos. Top Right: Associated Dynamic front end is standard. Above:Diff action comes from IRS and Kimbrough

car sideways. After doing this a couple of times, I decided to try and weave my way through the carnage.

High-Speed Handling • Even wide open, The Daddy was very smooth and responsive, but not twitchy. The word I would best use here is fluid. The car reacted quickly enough to do some inside-outside moves on other cars, but it never showed any signs of losing composure. Even going from lock-to-lock at full throttle never caused a spin.

Building Tips

Since the car comes assembled, I can only give you a few pointers:

1.) Even though I had no problems, check for loose screws, and any binding in the suspension.

2.) You may have to sand a couple of edges here and there on the chassis. Be careful of rough spots! I also had to smooth out the transponder mount hole.

3.) Be sure to check the diff setting before going on the track, and then after a few laps of running.

4.) No instructions are included for rebuilding the shocks. I suggest tracking down some Associated instructions so you can rebuild these units. The same goes for the IRS diff assembly.

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The Specifics

Part # : The Daddy
MSRP: Not available at press time.
Street Estimate: Not available at press time.
Manufactured in USA

Vehicle Type: Rear motor, 2WD oval pan car

Chassis
Type: Flat Pan
Material: Woven Graphite

Transmission
Type: Direct Drive
Diff: raced ball

Bearings: Full Set
Suspension
Front: Independent Associated Dynamic Strut
Rear: Fiberglass T-Bar with fore and aft and lateral oil filled dampers.

Fore and aft shock features coil-over spring.

Other Items You'll Need
Two channel radio with servo and speed control, wheels and tires, NASCAR style narrow body, motor, pinion gear, paint for body, battery in side-by -side configuration, charger.

Main Competition:
Associate RC10LS3, Trinity Switch Blade 2SS, Racetech Slider

Low-Speed Handling • Huh? What's low speed? OK, when I did have to slow down (like dodging and driving my car to the grid) this car was very responsive, and seemed very undisturbed by hard shots of the throttle. This car just doesn't like to spin.

Stability/Overall Handling • Much to my pleasant surprise, this car was very stable in every aspect. It showed just the faintest hint of a push if I went into the turns too hot, but the push never made me go off my line far enough for someone to pass me.

Never did get the car loose exiting the corners. I managed to lessen the push a little by adjusting the tweak and putting a little more traction compound on the inside front tire. I enjoyed driving this car, as I knew I could push it a little and never lose control.

Damage Report

Luckily, I never cracked anything really hard. Heck, I barely even scratched the body. So, needless to say, nothing was broken, and the car exhibited no premature wear on any parts.

Conclusion

At first, I was skeptical of an oval car that came pre-assembled and already set up. However, after driving the Pro Parts, LLC Daddy, all skepticism faded. This car is a great weapon to use on the oval near you. On my first day out with the car, I was able to compete with, and best, drivers who had been racing their cars for some time. I'm taking no credit as a driver; this car made life easy. If you're in the market for an oval car, give this car a serious look. It includes a lot of aftermarket goodies out of the box, and is a capable car that can take you to victory lane.

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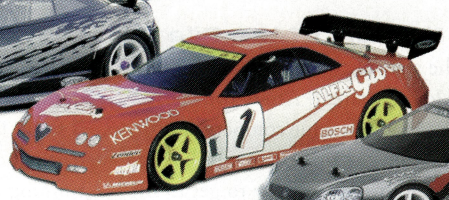

ALFA Gtv
#7439 Alfa Romeo GTV (200mm)



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NEW #7438 Honda Civic Coupe Si (200mm)
#7338 Honda Civic Coupe Si (190mm)

NEW 190mm!



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#7440 Toyota Celica (200mm)
#7340 Toyota Celica (190mm)



ALTEZZA
#7346 Toyota Altezza Netz Castrol (190mm)
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Mercedes-Benz AMG
#7443 Mercedes-Benz AMG S-Class (200mm)



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#7341 Nissan Silvia (S15) (190mm)



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



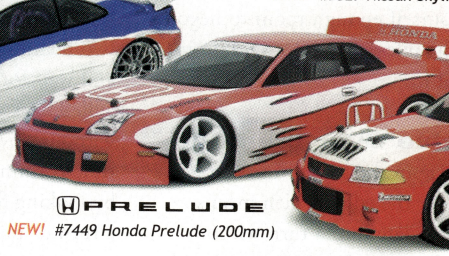
Stratus
#7416 Dodge Stratus (200mm)
#7316 Dodge Stratus (190mm)



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



PEUGEOT 406 Coupé
NEW! #7426 Peugeot 406 Coupé Body (200mm)
#7326 Peugeot 406 Coupé Body (190mm)

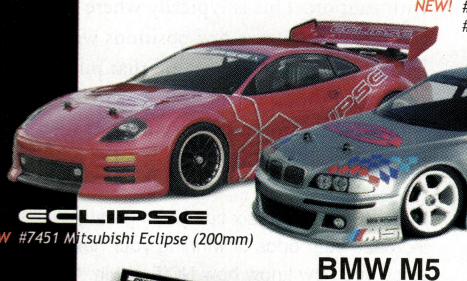


PRELUDE
NEW! #7449 Honda Prelude (200mm)



LANCER Evolution
NEW! #7348 Mitsubishi Lancer EVO VI (190mm)
#7448 Mitsubishi Lancer EVO VI (200mm)

Free vinyl decals complete with headlights, tail lights, window lines and logos are included with each body.



ECLIPSE
NEW #7451 Mitsubishi Eclipse (200mm)

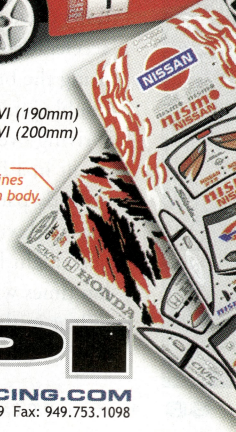


BMW M5
NEW #7450 BMW M5 (200mm)

PONTIAC Firebird
NEW #7447 Pontiac Firebird Trans Am (200mm)



Painting bodies are made easier with full-color painting tips, step-by-step decal instructions and window masks!



HPI

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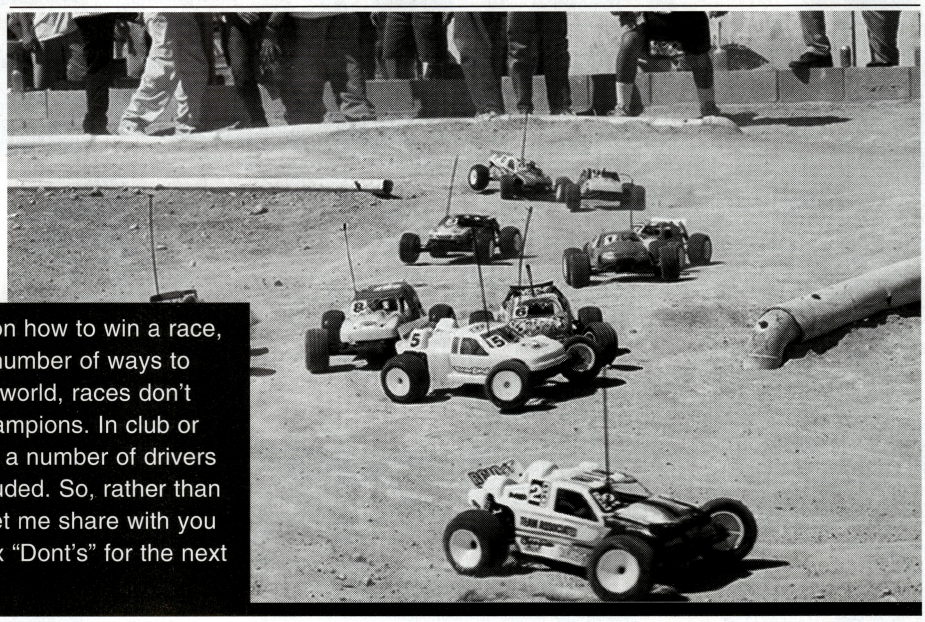
How To Not Win A Race

by Mike Velez



There's no simple answer on how to win a race, but there are definitely a number of ways to ensure defeat. In the real world, races don't always have a field full of world champions. In club or parking-lot races, you're faced with a number of drivers with average skills, this author included. So, rather than me telling you how to win a race, let me share with you how not to win. Here are my top six "Dont's" for the next time you go for the gold.

Don't Be Part of the Pile Up

During the start of the race, you need to employ a lot of strategy. Assess your position on the grid and your competition. If you're sitting on the first or second line, go for it. Go full throttle and try to get to the first turn first. Being in the middle of the pack is by far the most dangerous. Not only do you have to worry about the guy behind you hitting you from the rear, but you must also make sure that you don't run up the back of the guy in front of you. My best advice is to get away from the pack. But while you're stuck in the middle, pay more attention to the drivers around you. If the pack will be leading into a right-hand turn, go wide and avoid the pack. If you can, go wide all the way around the turn and avoid the pile-up. If you're starting from the back of the pack, you'll be hoping for a pile-up. Take advantage of having no one behind you by approaching the pile-up with caution. Give yourself enough room to negotiate around the pile-up and not end up in the middle of it.

Don't Drive Over the Edge

Whether you're in the lead or in dead last, don't drive over the edge, which means accelerating too late into a turn without using the brake, or trying to turn a double-double jump in off-road into a triple-single. Driving over the edge will without a doubt result in a Paul Tracy-esque crash. Drive at a steady pace. If you're behind, pushing it too hard will result in a crash. All the gain you might have made from a few quicker lap times will evaporate with one bad crash. When in the lead, keep a steady pace.

Don't Battle

Although it looks cool for those watching, don't battle with other drivers. If someone is faster than you during qualifying, don't battle it out with him. You'll both just be running at a slower pace. Communicate on the drivers' stand, tell that driver where and when to pass that way you don't fall off the pace. One of the biggest mistakes I see all the time is when someone is being passed or lets someone pass they immediately push it and end up T-boning that same driver in the next turn. If you're in a main and battling for a position, take a different strategy depending on your position. If someone is trying to take your position don't adjust your line. Stay as close as you can to the apex of each turn. Don't give up an inside shot to the other guy. This will often times mean accelerating longer and braking later into each turn. If you're in the position to pass someone, it's better to lay back and wait than be the aggressor. Stay a foot or two behind the guy you're looking to pass and wait for him to make a mistake. He will. That's your opportunity to get by without slowing your pace too much. If time is running short, be more aggressive by looking for that driver to go too wide on a turn or to bobble on a jump.

Don't Stop Until You're Told To

Standard procedure at almost all race tracks is to tell you when time is up, then to call off your number once you've crossed the finish line for the last time. Never stop before you're sure your number has been called. I've see first place drivers lose the race because they pulled their cars off the track early.

Don't Expect Different Results

Insanity has been described as consistently doing the same thing and expecting a different result. It's insane to think that when you haven't cleared that triple jump that you're all of a sudden going to on the tenth try. If something's not working, adjust your driving style quickly before its too late. For instance, if you can't seem to land the back end of a table-top jump try a different approach. Ease off the throttle before the jump, land the table, and drive down. Or, try a little brake while in flight this might be enough to bring your car's nose down and land the backside of the jump. Whatever you do don't just keep going balls to the wall and landing on your lid every time.

Don't Add To the Pile, Know When To Slow Down

If out of the corner of your eye you can see that a turn marshal is on the track or that a pile-up has occurred slow down. Proceed with caution. This is typically where you can move up quite a few positions without having to battle. Chances are that pile-up will be on the racing line, so slow down, go wide, and go around the accident or turn marshal.

By following these six tips you'll greatly increase your odds of winning your next race since you now know how NOT to win. Good Luck.

Mike's a pro at that headline.

MODIFIED MOTOR TIMING



Tuning electric motors for RC racing isn't always an exact science. Motor tuners closely guard their secrets, leaving most racers in the dark. However, getting the most power out of your modified motor doesn't have to be based on guessing or trial and error. Once again, we've busted out the Robitronics dyno and burned our connections to help clear up the voodoo and esoterica that surrounds adjusting timing on modified motors. **by Mike Henry**

Timing Explained

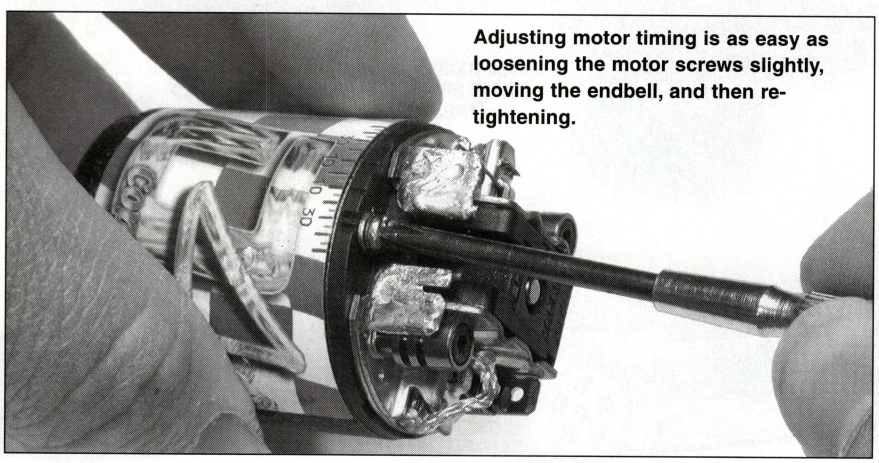
A motor's timing is simply the position of the brushes in relation to the magnets in the can. If (when looking down at the top of a motor) the endbell is turned clockwise, the timing is retarded. If the endbell is turned counterclockwise, the inverse is true, and the timing is advanced. Most modern modified motors have timing marks on the sticker affixed to the can. If your motors do not have timing marks, you can purchase a simple motor stand, Fantom makes an effective unit, that will allow you to accurately set the timing. Most motors also have a zero degree mark stamped in the can. All modified motors do have a small pointer built into the endbell.

Oversimplified, in most cases, the more timing a motor has, the more power it will make. But if you advance the timing too far, power and efficiency will drop off. There are many other variables that affect performance and longevity. If you simply crank up the timing, the motor may be making mad power, but at the expense of brush/commutator wear.

When you advance or retard the timing, you're also effectively moving the power band. So you can see there are no hard and fast rules when it comes to mod motor timing. It should be examined with a case by case approach.

How Much Timing?

To help explain the practical end of mod motor timing, we tracked down Team Trinity and Team Losi factory driver Billy Caley. Billy has been racing R/C since the early 1990s, and is consistently one of the fastest drivers on the west coast. Last year he was invited to the Reedy International Race of Champions, where he placed 8th in the invitational class, and 13th overall in the 2WD/4WD points. He most recently grabbed a 5th place overall finish in 2WD Mod at the Cactus Classic. Being a Team Trinity factory driver, Billy gets his information directly from the guys in Edison, NJ.



Adjusting motor timing is as easy as loosening the motor screws slightly, moving the endbell, and then re-tightening.

How much timing should you generally start out with?

BC: That really depends on a few things. Variables to consider are the wind of the motor, and what type of battery you're using. Keep in mind 3000s and 2400s don't put out as much voltage as 2000mAh cells. Run time is also less of a concern with the higher-capacity cells, so you can usually turn up the timing, making the motor less efficient, but also making more power.

What about 4WD vs. 2WD vs. Trucks?

BC: Assuming you start close to the suggested timing setting, (see chart) generally trucks and 4WD cars run with a little less timing. When you run a lot of timing in a high amp draw vehicle you can experience motor-fade. This is when the motor's efficiency begins to drop due to excessive heat. The motor will begin to slow, which leads it to draw more

Continued on page 86

Battery	Number of Turns		
	14-17	11-13	10 or less
3000	30°-35°	15°-25°	10°-18°
2400	30°-35°	15°-25°	10°-18°
2000	20°-25°	10°-15°	7°-14°

Motor timing is *not* timing how fast it takes to reach top speed.

TC3

The Car that ROCKED Yatabe!

Mark Pavidis:
A-main finalist,
2nd overall
Fastest Single Lap

Craig Drescher:
A-main finalist,
4th overall

Billy Easton:
A-Main Finalist,
6th overall
Fastest qualifying round: 19/5:06.97

Mike Blackstock:
A-main finalist,
10th overall

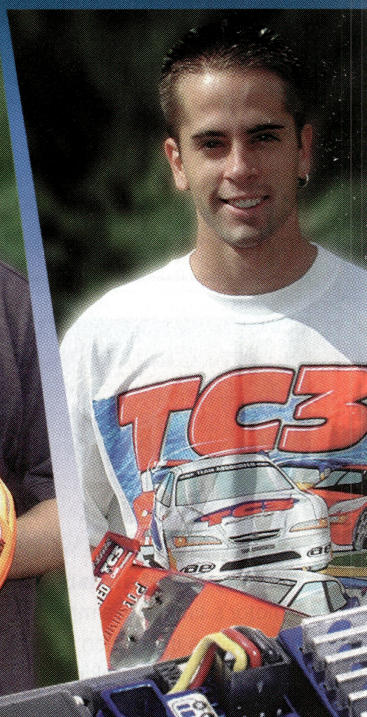
Mark Pavidis



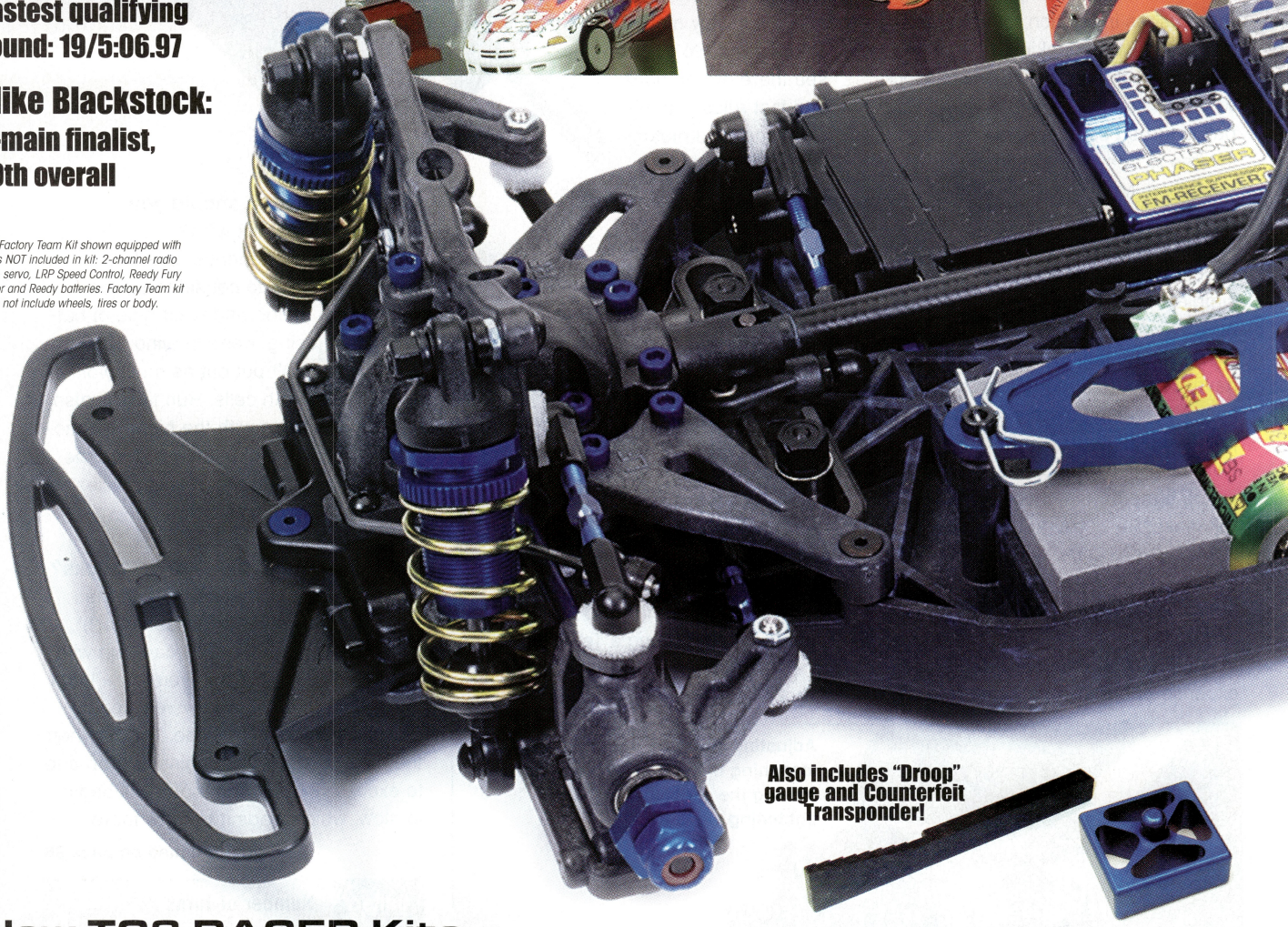
Craig Drescher



Billy Easton



TC3 Factory Team Kit shown equipped with items NOT included in kit: 2-channel radio gear, servo, LRP Speed Control, Reedy Fury motor and Reedy batteries. Factory Team kit does not include wheels, tires or body.



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New TC3 RACER Kits...



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Includes ALL the hot components...

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- Factory Blue threaded VCS shock bodies
- Unobtanium shock shafts
- Factory Blue Heatsink, motor clamp, and motor cam
- Factory blue aluminum battery brace
- Factory blue aluminum hex drives
- Anti-sway bars front and rear

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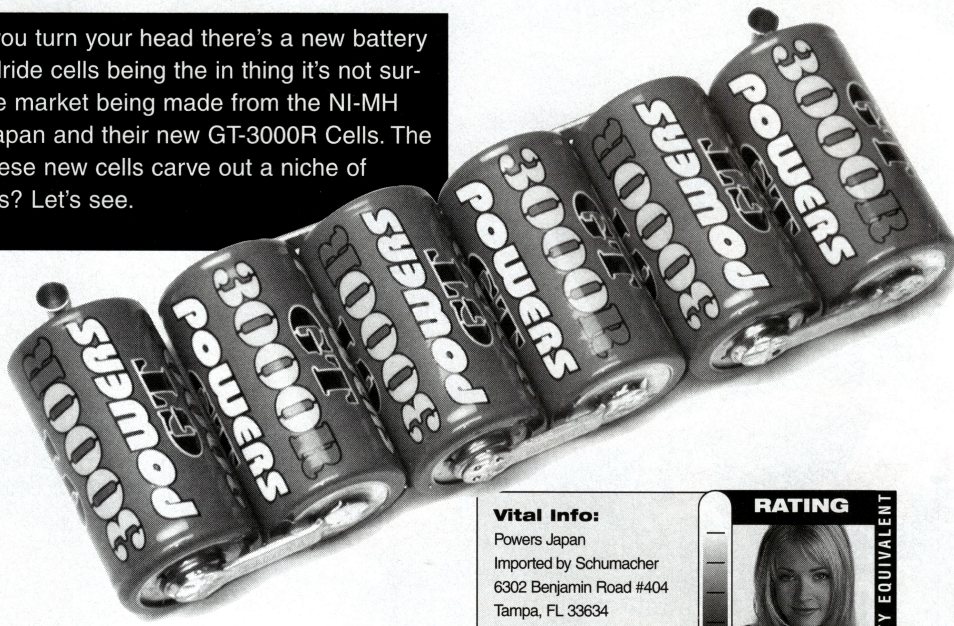
ad #1076

Powers Japan GT-3000R Cells

These days it seems like every time you turn your head there's a new battery on the market. With Nickel Metal Hydride cells being the in thing it's not surprising to see new batteries hitting the market being made from the NI-MH mold. Enter into the picture Powers Japan and their new GT-3000R Cells. The new cells are 3000 mAh rated. Will these new cells carve out a niche of their own in racing and bashing circles? Let's see.



Features

Powers Japan GT-3000R cells are speced at 3000 mAh. They are roughly the same size as sub-c size Ni-Cad cells. That means they are a bit smaller than the newest NI-MH cells from Panasonic and Sanyo. The GT-3000R cells are shrunk wrapped in bright blue shrink and feature all the warnings and precautions you'd expect.

Assembly

Building the GT-3000R cells was easy. Thanks to their size they fit my Deans Speed Jig perfectly. (Note: Deans is modifying the Speed Jig to easily accommodate larger Ni-MH cells from Panasonic and Sanyo.) After going through the normal process my battery pack was built and ready to go for testing.

Testing

Before I did any testing I cycled the cells six times over the course of two days. The first test was with HPI RS4 Sport 2 with a stock P2K motor. The battery pack performed well. Run time was long and punchy. I wasn't overwhelmed by the power, but the car was not a slouch either. The next test was with a modified 13 turn triple motor. Run time decreased slightly but the car was still very punchy.



Despite the mess, our bench testing proved fruitful.

All of these tests are vague and really don't prove much of anything. The real test would come later on the bench.

I charged the pack throughout testing with an updated Novak Millennium charger at 5 amps. The back responded well to charging and didn't get overly hot. Discharging was done using a Victor Hi-IQ³ battery conditioner. On each of the tests the battery did well. All of my testing was conducted at 20 Amp discharge. Average voltage averaged out at 1.10 volts per cell. Through ten cycles on the bench the voltage fluctuated only slightly. Run time was consistent with an average of 570 seconds at 20 amp discharge. And the mAh supplied never once dropped below 3000 on the Hi-IQ³ and actually stayed around 3200 throughout testing. After all this, I was curious to see how the cells would respond to Zapping. I used the Xipp Zapper 3000 at the highest setting and retested. I noticed a very good jump in voltage and no adverse effect on run time. After zapping, the average voltage jumped to around 1.15v per cell. After six more cycles of zapping, the cells maintained their increased voltage.

The Specifics:

Part #'s:Various
Estimated Street Price:
Not on market at time of press.
Manufactured in China.

Vital Info:
Powers Japan
Imported by Schumacher
6302 Benjamin Road #404
Tampa, FL 33634
813-889-9691

Hits:
- Responded well to zapping.
- Very long run time.
- Same size as Ni-Cads
- Well suited for modified racing.

Misses:
- Out of the box these cells' voltage is not spectacular.
- Zapping effect will eventually wear off.

RATING

The Last Word
The new GT-3000R cells are a good alternative to what's currently on the market. Voltage is okay before zapping and excellent after. Run time is consistently good. These cells are perfect for modified racing but not better than Ni-Cads for Stock.

Conclusion

In unzapped form the GT-3000R's performance was adequate but not spectacular in the voltage department, although run time was very long, longer than other Ni-MH cells we've tested. This longer run time could have had an effect on the average voltage data. After zapping, the cells really responded well to the zapping process. These new cells will be comparably priced with the standard 3000 cells from Panasonic. I suspect that battery matching companies will be impressed with these cells as an alternative to what's on the market currently.

MIP On-Board Temp² Gauge



In the world of nitro few things are as critical as your engine's temperature. An engine that is running too cool won't produce enough horsepower to get you to the winner's circle. An engine that is too hot will soon spell disaster. So, knowing your engine's temperature at all times is vital to the proper use and longevity. Five years ago MIP came out with the first On-board Temp Gauge. The first gauge was very simple – tell me how hot the engine is. Since then, the original Temp Gauge has gone through a number of refinements. Now MIP has released the Temp² Gauge. Let's give it a try.

What It Is/What It Does

The On-Board Temp² Gauge is designed to be installed in any nitro or electric car. Although it's primarily designed for use in nitro cars it can be installed in an electric car to read motor temperature. Once in the car the gauge's loop is installed around the engine head. MIP suggests installing the loop around the lowest rung on the engine head. That way the temperature sensor is closest to the piston and sleave where most of the engine's heat is being generated. Once installed and turned on, the Temp Gauge will continually give you a temperature reading.

The Temp² has some new features. First there is an on/off button. This is a great feature since the older model would stay on even when not needed. The result was a dead battery after a couple months. The second new feature is another button that allows you to toggle between Centigrade or Fahrenheit temperature readings. Also new is a small lexan shield that covers the entire gauge to protect it from fuel and dirt. Although a splash of fuel now and again on the gauge will do no damage, the shield is just an additional defense from possible malfunction brought on by the introduction of fuel into the circuit board. All this comes at a relatively low suggested retail price of $48. Half the price of the least expensive infrared temperature gun.

Vital Info:
MIP
830 W Golden Grove Way
Covina, CA 91722
626-339-9008
www.miponline.com

Hits:
- On/Off switch saves battery life.
- Can give you reading in Centigrade or Fahrenheit.
- Relatively inexpensive.
- Updates constantly.

Misses:
- Not dead on accurate during boiling test.
- Not as easily movable from car to car as a temp gun.



The Last Word
A very improved version of a proven product. Affordable addition to any nitro racer's tuning tricks. If you do not know your engine's temperature, you're really taking a risk. Keep it cool.

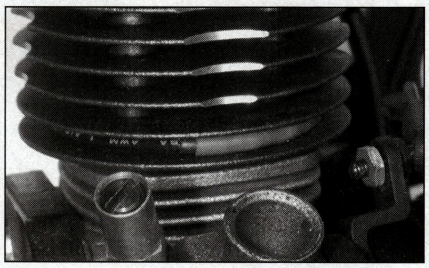
Testing

Bench Testing • There are two basic tests I do when it comes to temperature devices. The first is stick the probe under my tongue. The result was a reading of 98.2F. Very close to the 98.6 I was looking for. The second test was dipping the probe in a pot of boiling water. Water boils at 212° F. The Temp² gave me a reading of 206°. Off by six degrees but less than 3% off. I attribute this difference to the insulation surrounding the probe itself. Heat-shrink material is an imperfect conductor of heat, but needed to protect the sensor. After both of these tests I give the Temp² a passing grade.

Track Test • My next test was to install the gauge into a nitro vehicle, run it, and compare the reading to that of an infrared gun. Although the gun isn't absolutely accurate I was curious to see how close or far apart the two readings were. After the gauge was installed in the HPI Nitro MT Racer we had here in the office I ran the truck for a couple minutes and turned the gauge on. The reading read 220°F. I pulled out my Raytek gun and took a reading on the center of the engine head. The reading read 237° F. I also took a reading with the gun at a point adjacent to where the MIP sensor was mounted. The reading was 219° – a difference of 1°F less than .5% difference. The two gauges were dead on when measured at the same point.

The Specifics:
Part #: 2001
Suggested Price: $48
Manufactured in USA



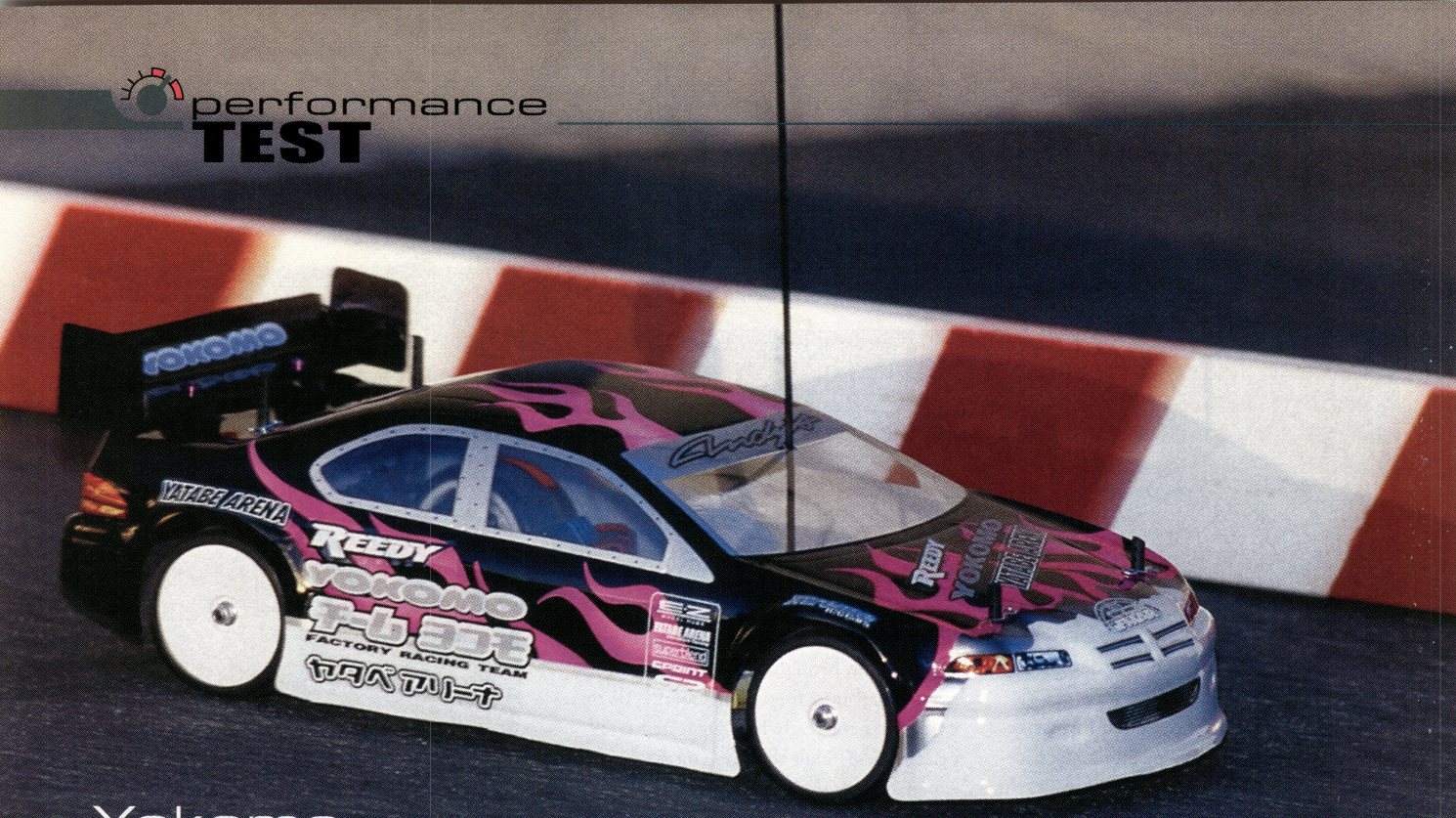


The gauge installs quickly and stays out of the way once wrapped around the engine head.

Conclusion

The MIP Temp Gauge has been a proven performer. Couple that with the new features and the Temp² is a winner again. Compared to a temp gun it will give you a different reading based on where the Temp² is measuring the temperature. Compared to a gun the Temp² is half the price. Plus, there's no worry of losing the Temp² to some guy constantly trying to borrow it from you. Which ever type of device you use to measure temperature the key is consistency. If you use the Temp², base all of your adjustments on the reading of the Temp². The same goes for if you're using a gun. The On-Board Temp² Gauge is a fine product. It gives you a consistent reading that is pretty accurate. It is also affordably priced and looks cool when it's mounted in your rig.

We think Nicole's hot. How hot? Let's get the gauge and see.



Yokomo MR-4TC World Champion Replica

Testing by Elliot Crabtree

CHAMPION MR-4TC WORLD CHAMPION

When a manufacturer wins a World Championship you know a World's Replica will soon follow. Call it a trend. In honor of this year's IFMAR On-Road Worlds, Yokomo is jumping on the bandwagon with a Worlds replica of Atsushi Hara's winning MR-4TC. Yokomo has left no piece un-replicated, from the two one-ways all the way down to the hand out tires marked with the official "W." Will this new kit update make a World's winner out of the average Joe Racer? Let's find out.

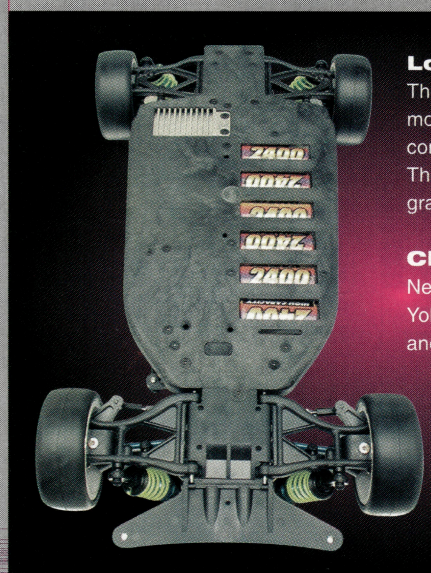
Hits:
- Handles great out of the box.
- Comes with every conceivable hop-up.
- True championship winning replica.
- Very, very fast.

Misses:
- Driving with one-way takes some getting used to.
- Instruction addendums are annoying.

Instructions	3
Parts Quality/Fit	4
Durability	4
Tunability	5
Overall Performance	4
Value	4

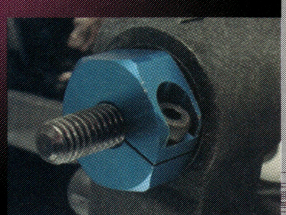
Features

Since it wasn't long ago that we reviewed the MR-4TC Pro (March 2000 Issue 5.6) we decided to focus on the new option parts that separate this new car from the rest of the pack.



Low CG Graphite Chassis
The Low CG Graphite chassis features motor and battery cut-outs to allow both components to sit as low as possible. The chassis is molded in super stiff graphite.

Clamp wheel hubs
Never lose an axle pin again thanks to Yokomo's new lightweight aluminum, blue anodized, clamp-on wheel hubs.

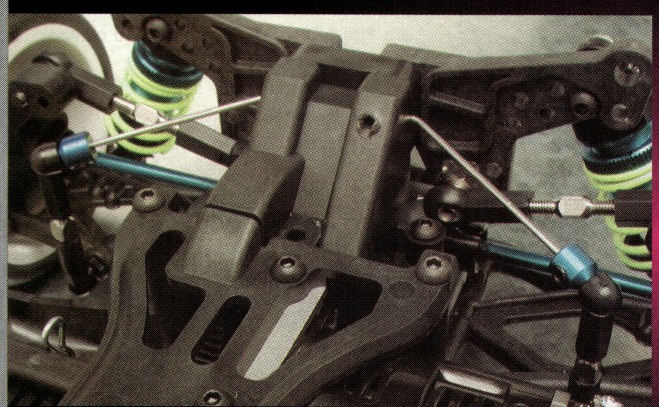


Thanks to Andy Jacobson for the killer paint.

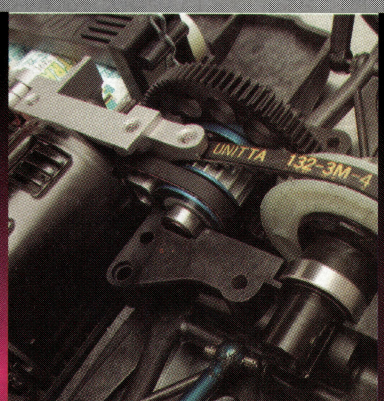
World's Spec Upper Deck
The graphite composite Worlds Spec Upper deck features large cut-outs for weight savings. When coupled with the graphite chassis, the two pieces make a very strong, rigid, and light-weight package.

MR-4TC **WORLD CHAMPION** MR-4TC **WOR**

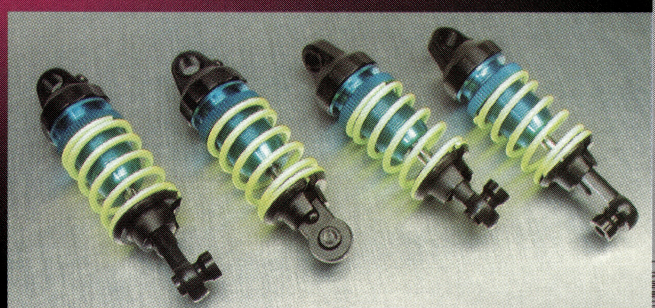
Front and Rear Roll Bar
Just as Atsushi Hara used on his car, the WCR comes complete with front and rear roll bars. The roll bars even featured the same anodized blue ball ends that Hara used.



Threaded Shock Bodies
For the most finite suspension adjustment the WCR comes with threaded aluminum shock bodies. Not only are these shocks very smooth working, they're smooth looking thanks to their blue anodized aluminum bodies and collars.



Front and Center One-Way
Due in part to the track design that Atsushi Hara faced in Japan, he used both a front diff one-way and a center diff one-way. Again, true to its name, the WCR comes with both. We'll see how difficult or easy this makes the car to drive.



One-way or another? Sure.

Other Features

Low Mount Aluminum Motor Mount • The car's motor mounts near the back of the car to a cast aluminum mount that features a lower deck that sits flush with the bottom of the chassis. The lower deck is vented to provide more heat dissipation.

Graphite Shock Towers • Both the front and rear shock towers are molded from graphite composite. None of the geometry has been changed, but the stiffer material does allow the suspension to work more closely to the way it was designed to work.

Graphite Suspension Arms • Like the other suspension components, the standard material suspension arms have been replaced with those molded from stiffer graphite material.

Low Friction Aluminum Drive Shafts • Power moves from the diff and one-way to the wheels thanks to lightweight, aluminum universal shafts. The universal joints are similar to CVDs in their design and their ability to be rebuilt. The dog bones on the universals are made from blue anodized aluminum.

24 Piece Ball Bearing Set • Every possible moving part has been bearing supported – steering and belt tensioner included.

Body, Tires, and Wheels

Andy's Stratus • At the Worlds, the A-main looked more like a Stratus IROC with Stratus bodies from Andy's and Protoform dominating the field. Hara won the race using and Andy's Stratus, so that's what you get. Andy Jacobson himself did the honors of paint us the Hara themed body you see in this review. Thanks Andy.

Belted 5G Medium Narrow • Medium compound 5G 24mm width belted tires comes standard. The tires are soft enough for any racing duty.

Aero Dish Wheels • Streamlined and light weight, the Aero Dish wheels are molded white and definitely race inspired.

Test Gear

Reedy Rage Type-R Stock Motor • I chose the Rage Type-R stock motor. The Rage is a high RPM motor and suites the car well with its one-way, high-speed design.

Novak Cyclone TC ESC • The Cyclone in the number one profile was more than enough to handle the voltage from the battery packs and the amp draw of the stock motor.

Futaba 3Pjs radio • Mike let me borrow his 3Pjs radio. What an awesome pistol! It has every available adjustment you can think of, and is very, very comfortable.

Futaba S9404 Servo • With a car like this the last thing you want to do is skimp on a servo. The S9404 has more than enough speed and torque for any TC.

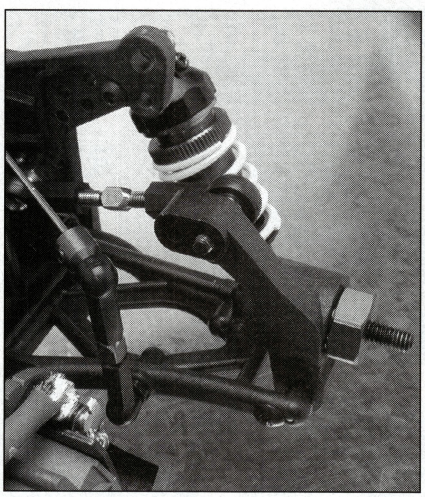
Trinity 3000 Sanyo Cells • What would an electric car be without the best Ni-MH cells you can buy?

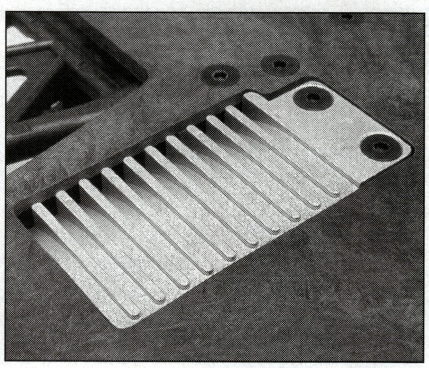
Race Testing

Along with lots and lots of parking-lot driving, I took the MR-4 TC WCR to Showtime Raceway in Riverside, CA for an evening of racing. Although my night didn't turn out as well as I had hoped, I was very impressed with the car itself.

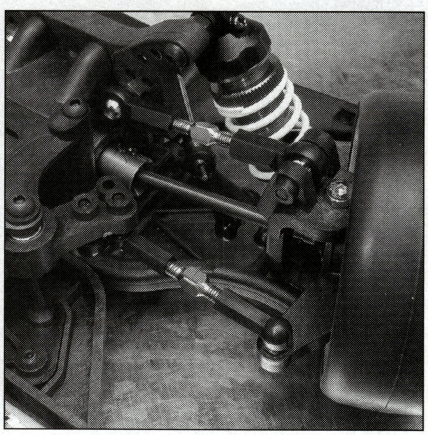
Acceleration • With the one-ways installed and the Reedy Rage Type-R geared with a 22 tooth pinion and the stock 78 tooth spur, the car was a rocket off the line. The steering is very sensitive and twitchy. A little bit of front toe-in helped to keep the car tracking straight upon acceleration.

Top Speed • Again, this car is very fast. The stock motor felt more like a mild modified on the track and on the parking lot. Judging against other stock cars that were on the track, the WCR was definitely





Left: The WCR rear hubs have two camber link mounting points.
Above: The fined motor heatsink allows air to flow into the chassis.
Below: Steering Ackerman is also adjustable.



Building Tips

Overall the WCR goes together very easily. The parts fit is great with very little modification needed. The instruction manuals are thorough, but thanks to a WCR supplement, you need to pay lots of attention. Setup advice is sorely missed in the instruction manual.

- Before you begin building, go through the main instruction manual and highlight all of the pages or steps that have an amendment in the supplemental book.
- Page 9 Step 6: When installing the belt tensioners, put a small dab of thread-lock on the M3x10 screw where it threads into the motor mount. Don't get any thread-lock on the bearings.
- Page 19: Make sure that you match up the dog bones and axles correctly.
- Page 33: When installing the wheel hubs indicated on the supplemental sheet, be careful not to over-tighten the small M2x5 screw.

We must give credit to Mike for coming up with such unfunny sidebar lines.

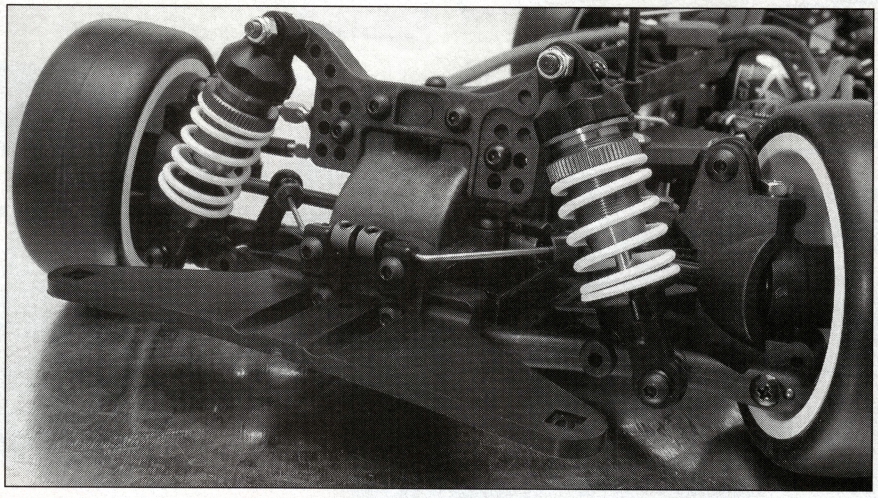
Set-Up Tips

Want More Steering...

- Move the rear camber mount from the middle inner hole to the upper inner hole.
- Remove the front roll bar.
- Move the front camber mount from the center inside hole to the lower inside hole.
- Go to -2 degrees front camber.
- Switch from the #2 pistons to #3 pistons in the rear.

Want Less Steering...

- Lower the rear ride height slightly.
- Place the front camber at 0º and the rear at -2º.
- Go with a softer rear springs.
- Switch from #2 pistons to #1 pistons in the rear.



The MR-4 TC's suspension geometry hasn't changed, it hasn't had to.

among the fastest and no slouch.

Braking • This is where I had some problems. The car tended to break loose upon hard braking. It was manageable after a while, but not advantageous on a track that requires lots of braking. The included parts come with the car to get rid of both the front and center one-ways. Making this change will definitely reduce braking distance and increase driveability.

High-Speed Handling • Coming in and out of the straightaway, the car handled beautifully. The one-ways definitely did help coming out of turns onto the straight sections. Halfway through every turn I was able to hit the gas hard and really hug the turns.

Low-speed handling • Off-power driving this car at low speeds takes a bit of getting used to thanks to the two one-way bearings. After a while I did get more comfortable but was struggling at times. On power at low speeds, the car is very agile and precise. Too precise at times. I had to tune down the steering sensitivity to really get comfortable.

Stability • At low speeds this car is extremely stable, especially on power through turns. It's when you're off the power or braking that the one-ways come in to play and affect how the car handles.

Damage Report • During testing and racing no broken parts to speak of. It wasn't until we were messing around during a photo shoot that Andy, our Art Director, decided to run the car though a large puddle. Bad Andy! Aside from that the car was perfect in regards to wear and damage.

Tunability • This car is amazingly tunable. Accessing all the major adjustments is very easy. Allen head screws throughout the car make it very easy to work on when compared to some other Japanese touring cars. This car comes with so many accessories that tunability also has a lot to do with removing and adding some of the kit included hop ups, like the one-ways.

The specifics

Yokomo MR-4 TC WCR
Part # MR-4TCW
Estimated Street Price: $270-$290 (estimate, not yet on the market at press time)
Manufactured in Japan

Chassis

Type: Molded tub with weight saving cut-outs.
Material: Molded graphite

Drive Train

Type: Rear diff, front one-way belt driven 4WD.
Drive Shaft: Aluminum universals
Diff: Rear adjustable ball.
Bearings: Included

Suspension

Type: Independent, molded graphite lower arms with adjustable upper titanium turnbuckles, molded shock towers.
Damping: Coil-over, oil-filled, aluminum threaded bodied shocks.

Wheels and Tires

One piece areo disk wheels with Yokomo 5G belted slick tires.

Other Items You'll need

2-channel radio with 1 servo and ESC, paint, 6-cell battery pack, motor, pinion gear, CA Glue, charger, tools.

Main Competition

Associated Factory Team TC3, Team Losi Street Weapon IWC, HPI RS4 Pro 2, Tamiya Evolution, XRAY, Corraly C4.1.

Conclusion

Yokomo did a great job by winning this year's worlds. Their cars have been making drivers happy for years where it really counts, in parking lots and race tracks across America. Yokomo did a great job in producing a very good facsimile of the car that beat the world's best. This car in its WCR form was tuned and setup to win at Yatabe Arena. Making some minor adjustments, like removing the two one-ways and few other tweaks here and there, can make it easily suitable to any track you need to tackle. No real complaints came to mind from the minute I opened the box to when I put it away at night. Great job, Yokomo!

Thanks, I'm glad my sharp wit doesn't go to waste.

HAVE SOME FUN IN THE DIRT WITH A COMPANY WHO KNOWS A THING OR ~~TWO~~ SEVEN ABOUT OFF ROAD

MR-4MT
4WD Monster Truck

- LOW CG 2-Belt 4-Wheel-Drive System
- Front and Rear Double-Wishbone Suspension
- Lightweight Molded Composite Chassis
- Limited-Slip Front & Rear Ball Differentials
- Long Stroke Oil-Filled Shock Absorbers
- Precision Bearings & Bushings
- Turnbuckle Tie-Rods
- Front Universal Driveshafts
- Aluminum Heat Sink Motor Mount
- 9-Spoke Lightweight Truck Wheels
- Toyota Tundra Body with Decals & Masking

- LOW CG 2-Belt 4-Wheel-Drive System
- Front and Rear Double-Wishbone Suspension
- Lightweight Molded Composite Chassis
- Limited-Slip Front & Rear Ball Differentials
- Long Stroke Oil-Filled Shock Absorbers
- Precision Bearings & Bushings
- Turnbuckle Tie-Rods
- Front Universal Driveshafts
- Aluminum Heat Sink Motor Mount
- Yokomo Lightweight Buggy Wheels
- Paint Scheme Decals Included

MR-4BC
Super Dog Fighter 2
4WD Off Road Buggy

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racer **PROFILE**

MARK PAVIDIS



***Xtreme*: What would you be doing if you weren't in to R/C?**

Mark: Probably be involved in some type of racing industry, maybe Motorcross or off-road racing development.

***X:* Is there such a thing as company loyalty?**

Mark: To a point. Loyalty is one of the key things that's good about the top level of racing in our industry. It's a small business. You can build a lot of credibility for yourself by being loyal to your sponsors. But at the same time, there are some friends of mine that have decided to make racing their livelihood, their income. They need to do what's best for them and I can understand that. For me things have worked out really well. I've been on both sides. I've been with Associated since '85 and I feel like I've done a good job for them and they've always stood behind me 110%.

***X*: What would you change about R/C racing?**

Mark: I would have more referees at the national and world level. Every race I've been to, there's always some type of controversy whether it involves me or someone else. There's nobody that stands up to the racers. Everyone gets away with murder. It happened in Japan and it happened at other races I've been to.

***X*: That goes both ways. There have been times when you should have been penalized.**

Mark: I'm not saying I'm the innocent one. I think I race a little more fairly than some of the other people out there. There have been times when I've been overly aggressive, but in all the years I've been racing I think I've been pretty fair.

***X*: What's the worst you've ever hammered someone?**

Mark: One time at AJB raceway in Covina, CA about fifteen years ago, there was this guy with a Hornet running around the track. All my friends and I wanted to see who could break it. I nailed it and broke it into a million pieces.

***X*:You must have been real proud, was it a kid?**

Mark: Yeah, I think it was. I was kid also at the time so it didn't seem that mean at the time. Looking back, I feel pretty bad.

***X*: What makes you better than the average driver?**

Mark: The amount of time I put into racing. Now it's my job.

***X*: Who do you hang out with at the races?**

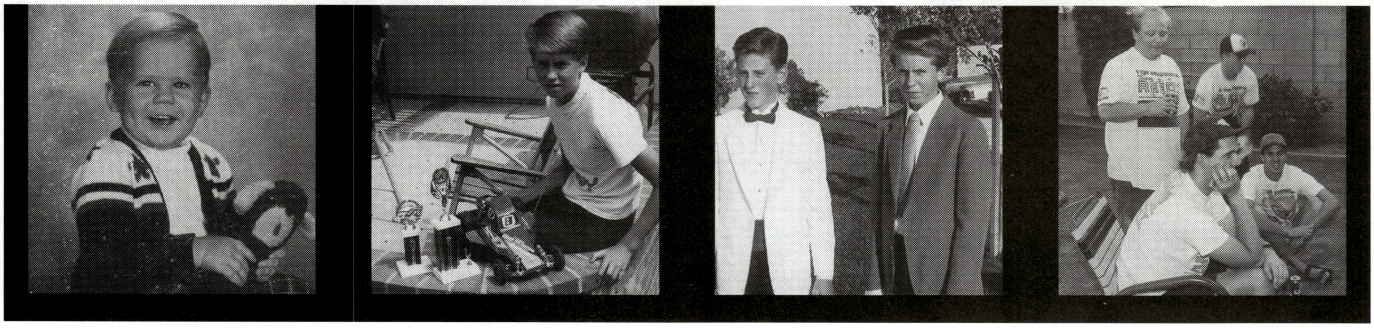
Mark: I mainly hang out with the people I travel with, usually Scott Hughes and Frank Gomez, who comes with me to some of the races to help me out.

Below: You thought champions ate Wheaties. Wrong, Fruit Loops.
Right: When Mark's not racing R/C cars he can be found at a number of motorcross tracks around Southern California.





Talk about a company man, on Sunday morning he's sporting the Pro-Line look.



***X*: Any superstitions?**
Mark: Not really. I just do normal preparation, nothing weird.

***X*: Who are the best drivers and why?**
Mark: Masami [Hirosaka] is the first that comes to mind. He's good at everything he races. Brian [Kinwald] is also on that list. We've always gone head to head at every race we've attended. Ever since we both started racing together, its always been that way.

***X*: Of all the countries and you've raced in, which was your favorite to visit and why?**
Mark: Probably Austria. My first 1/8-scale off-road worlds was there. It was in the hillside. It was probably the most beautiful country I've been in. I'd love to vacation there.

***X*: What's been the high point of your racing career?**
Mark: Winning the 4WD World Championship in Japan in '95.

***X*: What's been the low point?**
Mark: These last two Worlds were pretty bad. I was close, but not close enough. I wouldn't call those my low points but they were both heart-breaking.

***X*: Is there anything you would have done differently in either of those races?**
Mark: In Japan there were a couple things I could have done differently or at least say to myself, "What if" When I hit Spashett, I probably would have had TQ and wouldn't have gotten hit in the first race. Also in the third main there were a few turns I could have taken differently. In Vegas, I just didn't have my head screwed on right for the main. Knowing that all the other guys had that time on the track and I didn't messed me up. I wasn't completely in the racing mind set I like to be in.

***X*: Would you not shoot for TQ next time?**
Mark: I would definitely go for the TQ and just try to prepare myself a little better for the Main.

***X*: Worst speeding ticket?**
Mark: I got two speeding tickets in two months going to work in the morning. Both of them by the same cop – 85 in a 65.

***X*: Ever signed an autograph?**
Mark: Yeah, it happens. It seems like it happens more often on the east coast or overseas; it happens in Florida a lot.

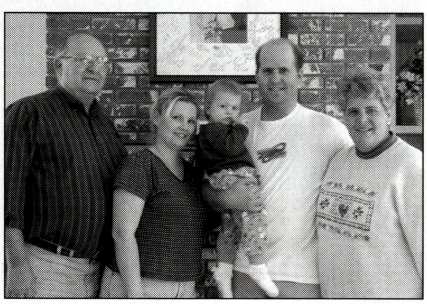
***X*: How does that make you feel?**
Mark: It's cool. You have to laugh at it a little bit. Not at the person that's asking you for it, but just at the situation. Here I am just racing R/C cars and I'm signing an autograph. The people or kids asking are looking up to me so that feels good.

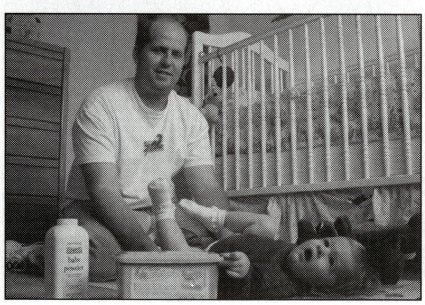
***X*: Made any weird bets with a buddy?**
Mark: Not really bets, but in Vegas I told everyone in my pit I'd take them to dinner if I won. But, that didn't happen.

***X*: Favorite rental car story?**
Mark: In Houston, I blew the transmission out of a Ford Econoline van. I did neutral drops for about a week straight. Just gunning the engine then dropping it into drive at every light. When I returned it I just told them I had been having problems with the transmission. When it broke, the entire drive shaft just dropped and hit the street. I had twelve people inside then when it broke we pushed it across the street until the rental car agency could bring me a new one. It was a white van, the next day I showed up at the track with a red van. Mike Reedy said he thought I was driving a white van. I told him, "No. I had a red van the whole time." But I don't suggest people do that. I don't do that any more.

***X*: Favorite night out at a race?**
Mark: I can't get into the details but let me just say Utah, club, Saxton, Francis. That's all I can say, the guys that know the story will know what I'm talking about.

Left: Mark, his wife Susan, daughter Alison and Mark's parents Harriet and Pete.
Right: When it comes to practicing pit stops Mark practices changing diapers on his daughter Allison.





Word Association

Rental Cars – Team Orion
Hack – Brian
Big Jumps – Hemit
Hotel Room – Cleveland
Strippers – Florida
Painful – Birth
Sports – Baseball
Squirrel – Crazy
Food – Pizza
Music – Mariah Carey. (You serious?) No, I'm not, I don't know that's all I can think of. I like everything.
Sports Team – Whoever's doing well. I'm a bandwagoner.
Website – Starting grid
Track – Hemit, The Dirt
Car – Ford F350
Race – '95 Off-Road Worlds in Japan

Mark still keeps his BoBo Dogy in his tool box for good luck.

NITRO FUEL FAQ

by Regan LeBlanc

We know you have questions, so we provide the answers.

What Is Nitro?

Nitro is mixed into fuel as an oxidizer. It actually creates oxygen in the combustion process. This reaction allows the engine to burn about two times more fuel than if just straight methanol was in the mix. More fuel burned means more power. Nitro also helps make engines run smoother and idle more consistently.

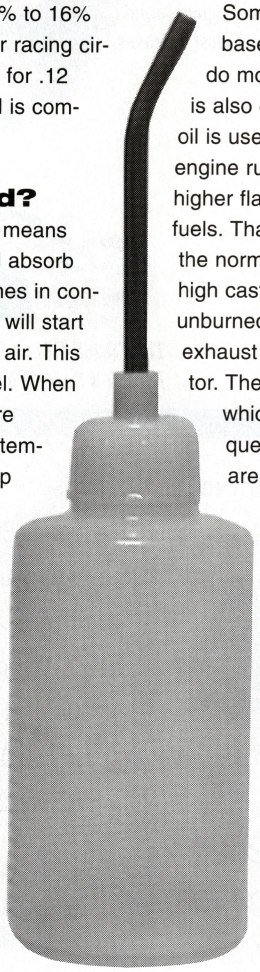
What Percentage Should I Use?

How much nitro to use depends on your needs. For backyard bashing or just cruising around the parking lot, 10% to 16% nitro is more than enough. For racing circumstances, 20% is the norm for .12 and .15 engines and 30% fuel is common in .21 size engines.

Does Fuel Go Bad?

Yes, fuel is hydroscopic. That means that the ingredients of the fuel absorb moisture. As soon as fuel comes in contact with the open air, the fuel will start to absorb the water out of the air. This can quickly ruin a bottle of fuel. When storing fuel, keep it somewhere that doesn't experience great temperature changes; this will help minimize condensation inside the fuel container. If you're going to keep fuel in the garage, wrap the tightly-sealed bottle in a towel or blanket.

Avoid setting your fuel bottle on concrete or asphalt. The temperature may vary a lot on these types of surfaces and will cause condensation in the bottle. Also, avoid setting your fuel in the sun for the same reasons.



A good fuel bottle will last you for a long time. Be sure to put the cap on the tip of the fuel bottle when not in use.

What's Fuel Made Of?

Fuel is made of three basic ingredients: methanol, lubricant, and nitromethane. Methanol is the base and usually accounts for between 80% and 40% of most fuel. Methanol is combustible, soluble in water, and evaporates quickly. Lubricants in fuel are typically a mix of different types of lubricants with different properties. Some lubricants are synthetic-based. These synthetics lubricants do more to reduce engine. Castor oil is also common in many fuels. Castor oil is used primarily to help keep you engine running cool. Castor oil has a higher flash point than most synthetic fuels. That means less will burn off during the normal use of an engine. Fuels with high castor content will have more unburned fuel exiting the engine's exhaust pipe versus fuels with less castor. The third ingredient is nitromethane, which was covered in an earlier question. Also present in most fuels are some other ingredients like coloring, anti-foaming, and anti-corrosion agents. These agents don't affect the fuel's performance but helps in other areas.

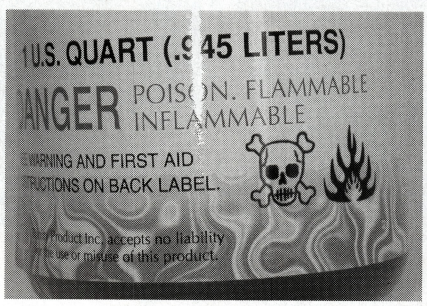
What do I need to do when I change fuel types?

If you change fuel brands or nitro content you'll need to make some adjustments to how your engine is tuned. Going to a lower nitro content will increase your engine's mileage, but will generally cause the engine to run slightly hotter. To increase your engine's bottom end with a lower nitro content fuel, you might be inclined to lean the low-speed needle. If you do, pay extra attention to your engine's temperature. To be on the safe side, richen the bottom end just slightly after changing fuels. If you're going to use a fuel with a higher nitro content richen the bottom end just a bit. Increasing the fuel-to-air mixture will keep the engine running cooler. If you're changing fuel brands richen the high-speed needle just a bit before you fire up just in case the new fuel has less lubricant than the old fuel. After any fuel change, you should re-tune your engine with the new fuel.

Below: Before you buy, be sure you know what percentage fuel your purchasing. Also make sure that the fuel is for a car and not an airplane or boat

Bottom: Caution should always be used around fuel. Put out that cigarette first and keep out of the reach of children and pets.

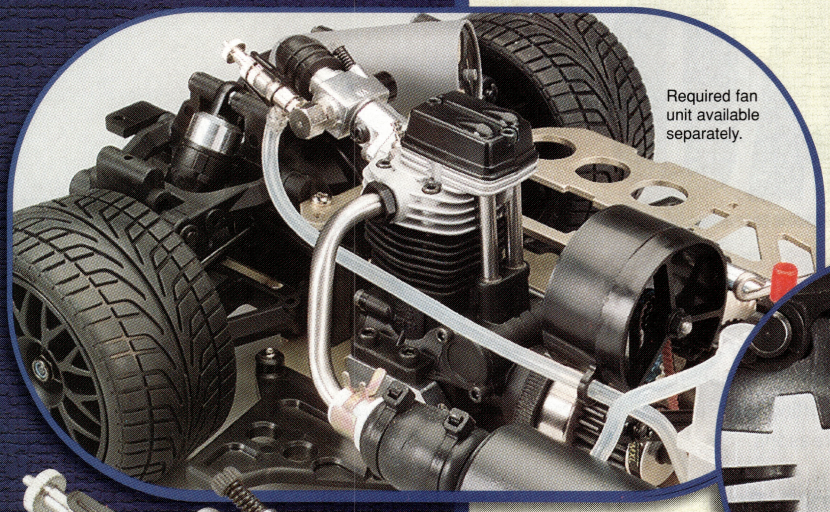




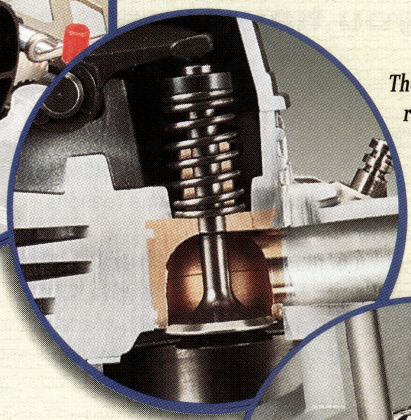
We get the skull and cross bones, but what does the burning Christmas tree mean?

Speak softly, but carry a big kick.

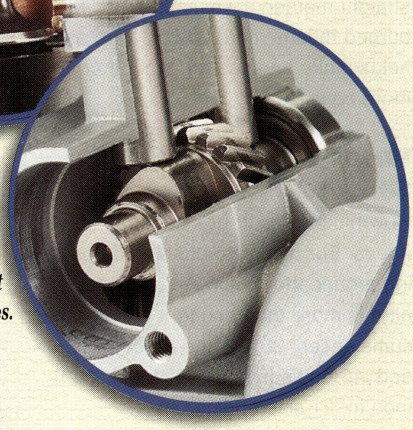
FS-26S-C 4-stroke engine for R/C cars



Required fan unit available separately.



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



This high-performance cam allows the FS-26S-C to reach higher output levels than most 4-strokes.





The FS-26S-C is an ideal engine choice for Kyosho®'s SuperTen GP series of nitro on-roaders.

Imagine the innovation of a *4-stroke* engine for R/C cars. A lower, quieter, more realistic sound than the high-pitched "whine" of two-strokes, along with better fuel economy and increased low-end torque that really benefits road course racing. Now it's here — the FS-26S-C — from the only manufacturer with the experience and expertise to successfully develop this technology: O.S. Engines. Once you've equipped your kit with this power plant, you'll realize just how much more life like R/C racing can be.

For the location of the dealer nearest you, please call 1-800-682-8948 and mention code number 2328J.

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for Quality, Dependability and Performance

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Displacement: 0.269 cu in (4.4 cc) • **Bore:** 0.728 in (18.5 mm)
Stroke: 0.648 in (16.4 mm) • **Practical rpm:** 2000-22,000
Output: 0.5 ps @ 17,000 rpm • **Weight:** 8.5 oz (243 g)
Includes: #F glow plug • **Requires:** tuned pipe, manifold, coupler

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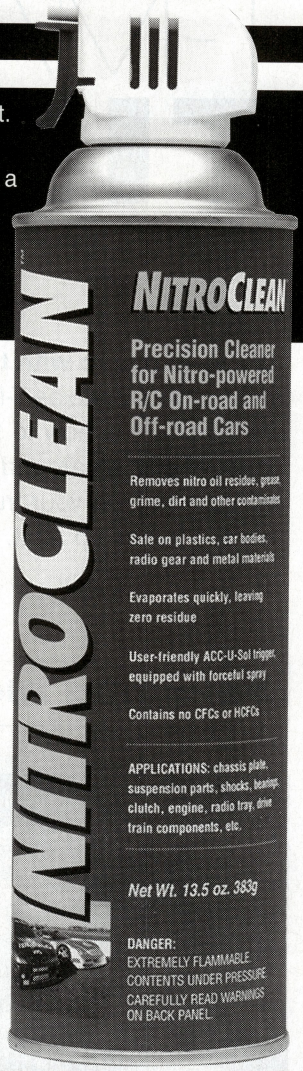
TA Emerald NITRO CLEAN

Nothing gets dirtier than a nitro car mixed in with some parking lot dust or potato-growing dirt. The mix of raw fuel being splashed around during a pit stop or oily exhaust acting as a dirt magnet can take its toll on any car. Veteran nitro guys have been using denatured alcohol in a spray bottle to clean their cars, but even then usually additional scraping and scrubbing is needed. TA Emerald, a companies known for Performance Plus electric motor cleaner, has come up with a new formulation designed specifically for nitro cars and trucks.



What It Is/What It Does

Nitro Clean is a cleaner designed to remove oil, dirt, grease, and other crap that accumulates on a nitro car or truck. Nitro comes with a 13.5oz. fill of cleaner in a 20oz. aerosol can. The can features an ACC-U-Sol trigger to provide a good blast of spray you can't get from conventional spray nozzles. The can also comes with a spray tube. On the can, Nitro Clean claims to remove oil residue, grease, grime, dirt, and other contaminants; it's safe on plastics, car bodies, radio gear, and metal materials; and it evaporates quickly, leaving no residue. We'll put all these claims to the test.

Testing

Grime Removal • The first and easiest test to perform was to actually see if it works. I grabbed two nitro vehicles we'd been playing with – the Schumacher Big 6 and the HPI Nitro MT Racer. The Big 6 had a ton of parking lot dust built up around the fuel tanks and the engine. Nitro Clean did a good job of remove almost all the grime. There was some dirt that had been moved around and pooled where the Nitro Clean settled. A dry paint brush was all that was needed to remove this. The MT Racer was filled with dirt. Dirt, not parking lot dust. With the dusty, dirty car, it was kind of a mess when I sprayed it down with Nitro Clean. You could see rivers of dirt where the cleaner was running. I shook the truck off and just wiped things down with a towel. After the surface dust was removed, I went ahead and got the real dirty and greasy areas with Nitro Clean. The Nitro Clean did a great job of blasting all that gunk off. After thoroughly cleaning off two cars, it felt as if have the contents of the can were used. The nozzle on the Nitro Clean can uses a lot of cleaner.

My next test was to inspect all the plastics on both cars including body. No problem. Even the chrome finish on the Big 6's wheels was fine and showed no sign of damage from the cleaner. I also sprayed the Nitro Cleaner directly in to the Hitec receiver on the Big 6. No problem again. The cleaner evaporated and the receiver worked flawlessly. Evaporation time was not instantaneous, but it was also not very long, about 20 seconds in 70° temperature weather with low humidity. The Nitro Clean left no apparent residue.

Conclusion/ Recommended Use

Nitro Clean worked great, just as the label said it would. But, because the can has so much force and so much cleaner comes out when you use it I recommend doing the following to help conserve. First, brush off your car with a towel or brush before using Nitro Clean. Next, limit your use to just greasy areas of your vehicle. If simple compressed air or a toothbrush can clean the dust or dirt that might be hanging out near your truck's steering, don't waste this stuff on that simple task. Nitro Clean works great on cutting through the greasy stuff, so save it for that.





Without using any brushes, compressed air or other cleaning compound Nitro Clean quickly and easily removed all the grime and dirt that surrounded this truck's fuel tank.

Vital Info:
TA Emerald Industries
1580 E. Edinger Ave #O
Santa Ana, CA 92705

Hits:
- Cleans great.
- Comes out with lots of force.
- Leaves no residue.
- Didn't harm any of the materials on which it was tested.

Misses:
- Evaporates longer than "Quickly."
- Thanks to high-volume spray, it is consumed quickly.

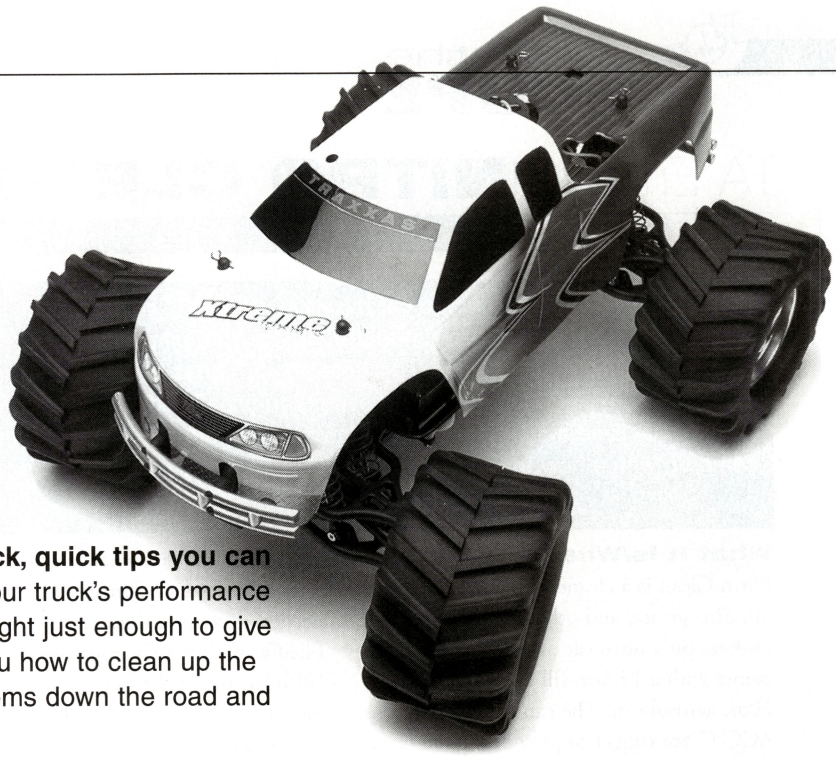


The Last Word
When used with other cleaning items Nitro Clean is the perfect last step in getting your nitro car or truck absolutely spotless.

The Specifics:
Part #: 4500
Estimated Street Price: $6.25
Manufactured in USA

As our gardeners found out, Nitro Clean has a damaging effect on plant life.

T-MAXX TIPS

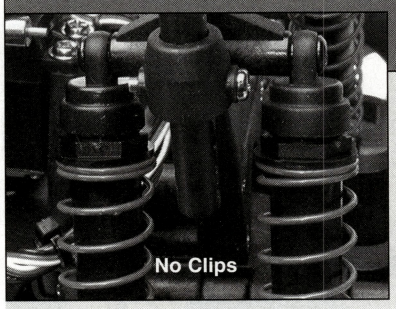


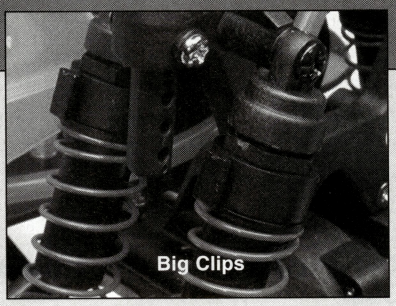
We've come up with two simple and quick, quick tips you can use on your Traxxas T-Maxx. To increase your truck's performance we'll show you how to simply lower ride height just enough to give you benefits all around. Also we'll show you how to clean up the wiring setup on your truck to prevent problems down the road and neaten things up a bit.

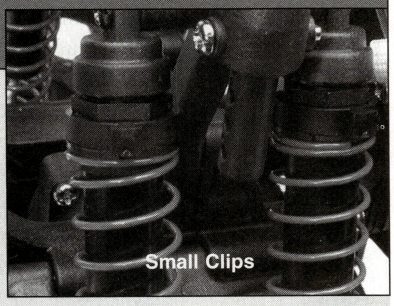
Adjusting Ride Height

Out of the box the ride height on the T-Maxx is set a little on the high side. That is so that the truck has maximum ground clearance and won't bottom out easily. Adjusting the ride height is easy. Simply removing or adding spring clips to each shock will move the ride height. To reduce chassis roll and make the truck handle just a little bit better on all surfaces a simple ride height adjustment will give you the ideal ride height for most situations.

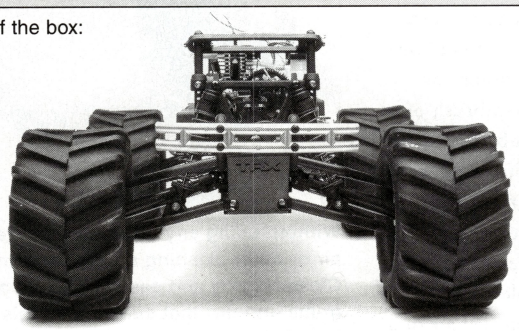
Start by removing all four of the thin spring clips that clamp onto the front shocks. Then remove the larger clips located on the rear shocks. Next install the thin clips that you had located on the front shocks onto the rear shocks. This will lower the overall height of the truck without changing the profile. Your truck will turn slightly better without as much chassis roll. If you plan to do lots of jumping with your T-Maxx gloss over this tip and keep things just where they are.


No Clips

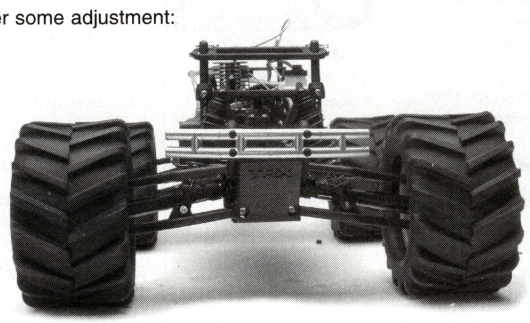

Big Clips


Small Clips

Out of the box:

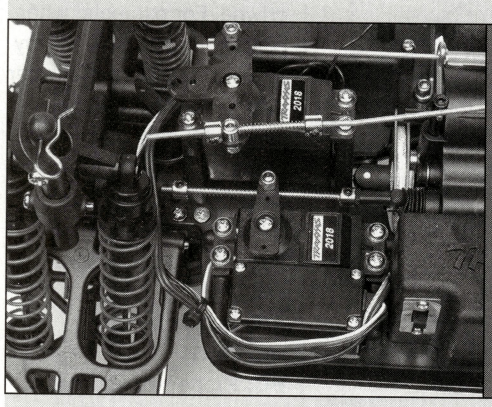


After some adjustment:

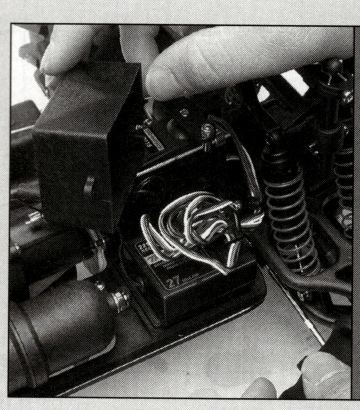


Send us your T-Maxx Tips. xtremerc@xtremerc.com

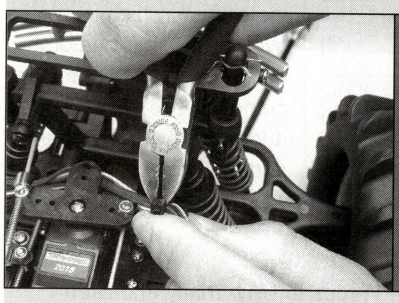
Tidying Up Those Wires



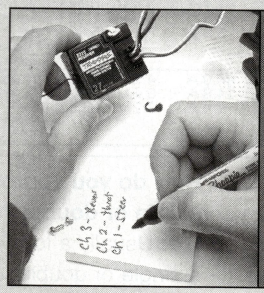
Out of the box the wiring on the T-Maxx is fairly neat. But, in high brush or debris the wiring could get caught on something. This tip will eliminate the chance of that happening plus make things look just a little more tidier.



First You need to remove the two screws that hold the receiver cover in place. You'll be exposed to a nest of wires and the receiver.

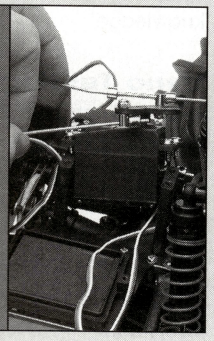


Using a pair of wire cutters carefully cut the tie-straps that hold the wires together. Be super careful and don't cut any wires, just the tie-strap.



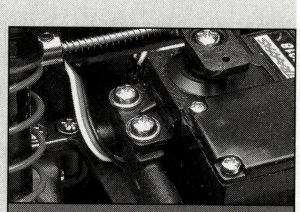
Before you go any further identify each servo wire and what channel it's plugged into on your receiver. Incase you don't we'll let you in on the secret; channel-1 is steering, channel-2 is throttle, and channel-3 is forward/reverse. Next unplug the wires connecting to the receiver.

Remove the screws holding the throttle servo. You don't need to remove the servo horn, you just need to be able to get under the throttle servo easier.

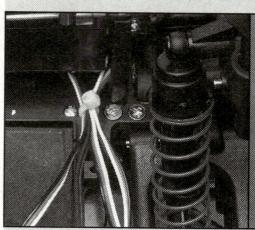




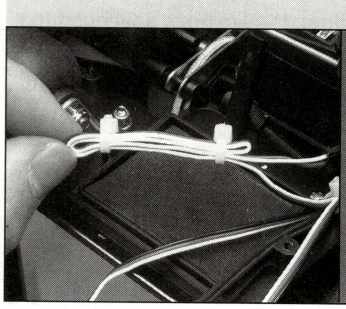
Now route the leads coming from the battery pack and the steering servo between the forward/reverse servo and the case. Make sure that the wires are low enough so that they're completely out of the way of the forward/reverse arm. Route the wires under the throttle servo.



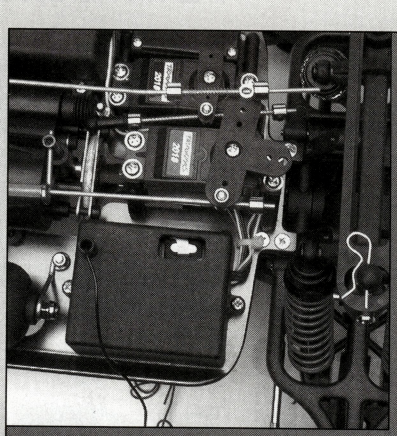
Route the forward/reverse servo wire underneath the throttle servo.



After all the wires have been routed underneath the throttle servo you can tighten the throttle servo down. Locate all the wires and place a small tie-strap around the bunch.



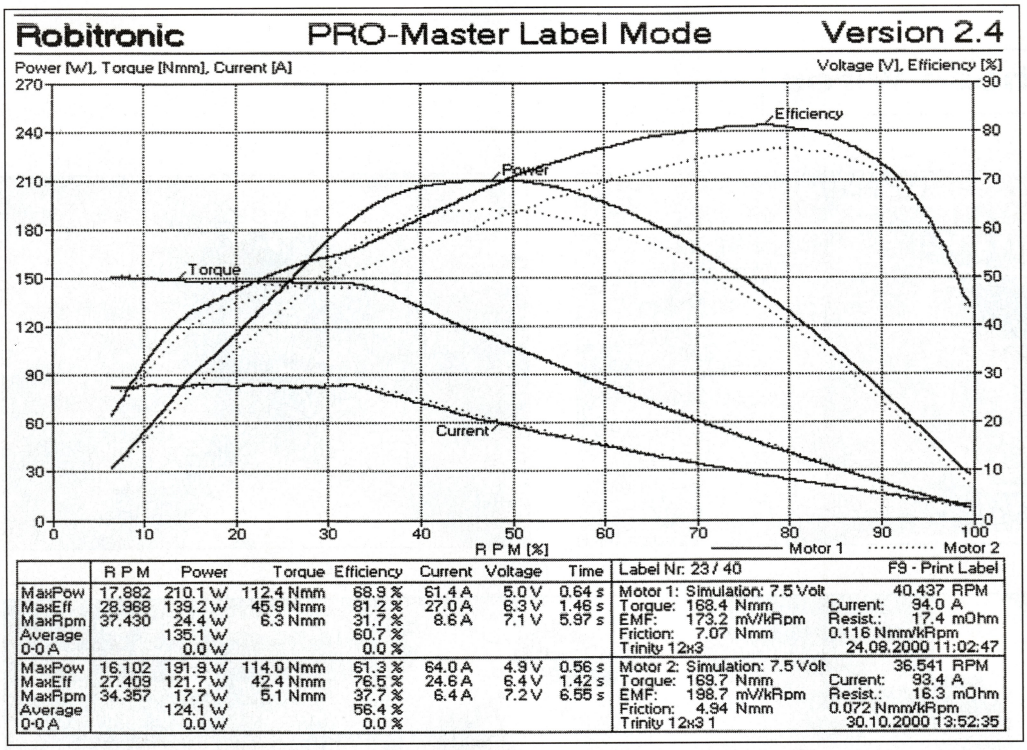
Take each individual wire and condense it by looping the wire over itself then using a tie-strap to keep the wire together as shown. Do this to each of the wires.



Reinstall the receiver cover by replacing the receiver with the excess wire stuffed between the receiver cover and the receiver. Make sure that there is a clear shot to the receiver crystal through the door located at the top of the cover.

You're done. You've got a cleaner setup that won't get caught on anything, is neater, and will be easy to navigate should you need to replace a servo or battery pack.

Continued from page 69



	R P M	Power	Torque	Efficiency	Current	Voltage	Time
MaxPow	17.882	210.1 W	112.4 Nmm	68.9 %	61.4 A	5.0 V	0.64 s
MaxEff	28.968	139.2 W	45.9 Nmm	81.2 %	27.0 A	6.3 V	1.46 s
MaxRpm	37.430	24.4 W	6.3 Nmm	31.7 %	8.6 A	7.1 V	5.97 s
Average		135.1 W		60.7 %			
0-0 A		0.0 W		0.0 %			
MaxPow	16.102	191.9 W	114.0 Nmm	61.3 %	64.0 A	4.9 V	0.56 s
MaxEff	27.409	121.7 W	42.4 Nmm	76.5 %	24.6 A	6.4 V	1.42 s
MaxRpm	34.357	17.7 W	5.1 Nmm	37.7 %	6.4 A	7.2 V	6.55 s
Average		124.1 W		56.4 %			
0-0 A		0.0 W		0.0 %			

Label Nr: 23 / 40 — F9 - Print Label

Motor 1: Simulation: 7.5 Volt — 40.437 RPM
Torque: 168.4 Nmm — Current: 94.0 A
EMF: 173.2 mV/kRpm — Resist.: 17.4 mOhm
Friction: 7.07 Nmm — 0.116 Nmm/kRpm
Trinity 12x3 — 24.08.2000 11:02:47

Motor 2: Simulation: 7.5 Volt — 36.541 RPM
Torque: 169.7 Nmm — Current: 93.4 A
EMF: 198.7 mV/kRpm — Resist.: 16.3 mOhm
Friction: 4.94 Nmm — 0.072 Nmm/kRpm
Trinity 12x3 1 — 30.10.2000 13:52:35

Check out the immediate results from making a timing change. The dark line is with the motor at 20° while the dotted line is at 0°.

amperage, and the battery will dump prematurely. Because trucks and 4WD cars cause the motor to work harder, run less timing to help avoid motor-fade.

What about track conditions?

BC: Generally, motors make more torque with less timing, and more top-end power with more timing. You may want to consider this if a track is loose or really hooked-up. But I try to look for overall power, which is directly related to torque, RPM and efficiency. Just remember to stay close to suggested settings for your motor/battery type.

How do you approach timing on a single or double vs. a quad or hex?

BC: Usually a low wire count motor, like a single or double, uses less timing. This is because they make their power at a lower RPM than a quad or a hex. Usually, quads and hexes need a little more timing to reach their optimum power/RPM range.

How does using more timing affect motor wear?

BC: Logically, if more timing usually leads to more power and RPM, but less efficiency, more timing will also cause the motor to wear faster. It also has a lot to do with what type of vehicle you're driving. For example, when I'm running my XX-4 or my XXX-T, I cut the motor after every two runs. I can put almost 10 runs on a motor in my XXX before I have to cut it. Any car that can just lay down power will go through motors faster.

Any last words of wisdom?

BC: Proper (or improper) motor timing can affect motor fade, which is often overlooked, and one of the major causes of premature dumping. The next time you dump or slow before the end of a race, check your motor. Don't be so quick to blame your batteries.

Mad props to Billy, Trinity and Brad "Wayfast" Williams for their help and knowledge!

Dyno Testing

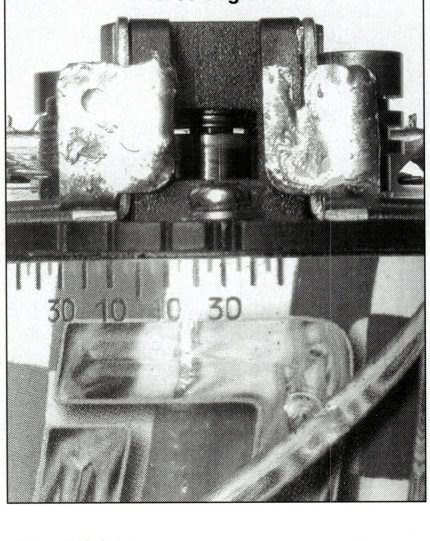
To help illustrate how timing affects the output of a motor, I did a few dyno pulls with a Trinity D4 12x3.

Pull #1 Timing set at 10 degrees. Maximum power is 204.5 watts at 17,130 RPM. Maximum efficiency is 79.7% at 28,133 and maximum torque is 166Nmm.

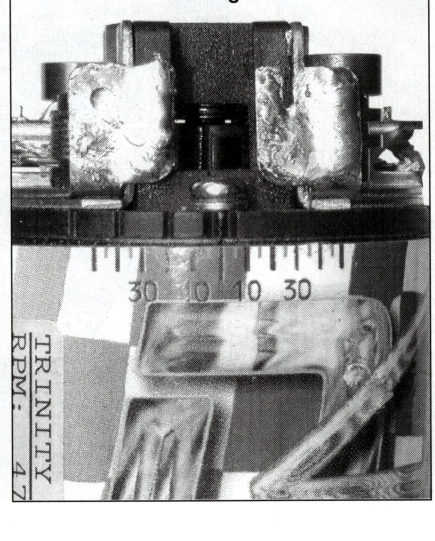
Pull #2 Timing advanced to 15 degrees. Maximum power jumps to 210.1 watts at 17,882 RPM. Efficiency is also up to 81.2% at 28,968. Torque increased to 168Nmm.

Result- Because the motor makes more power and torque, and the efficiency went up, this is a good setting for this motor. When the timing is advanced too far, the efficiency will begin to drop. Also notice the average power of the second dyno pull is also higher than the first.

At 30 degrees



At 0 degrees



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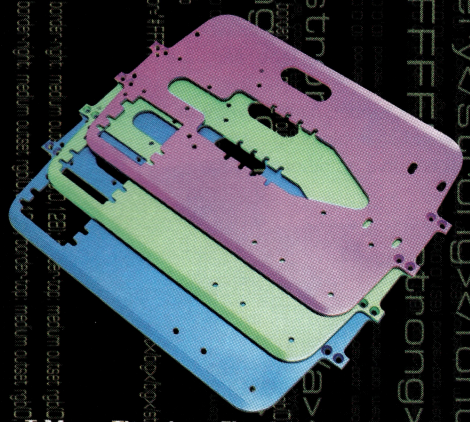


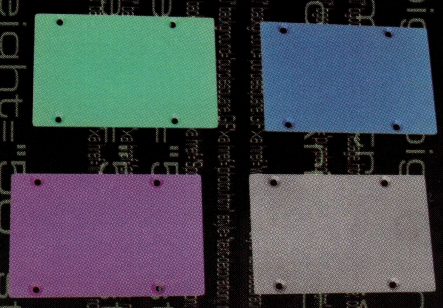
T-Maxx Titanium Chassis
HCR-00310 [.21 motor version]
HCR-00300 [.15 motor version]



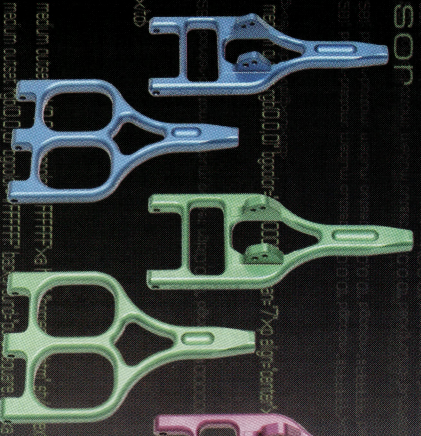
T-Maxx Titanium Front Skid
HCR-00308



T-Maxx Titanium Rear Skid
HCR-00309



T-Maxx Titanium Center Skid
HCR-00307





T-Maxx Aluminum Chassis Braces [pair]
HCR-00303



T-Maxx Titanium Pillow Balls
HCR-01504



T-Maxx Aluminum A-Arms
[full set includes hinge pins & e-clips]
HCR-00304



T-Maxx Titanium Rear Bumpers
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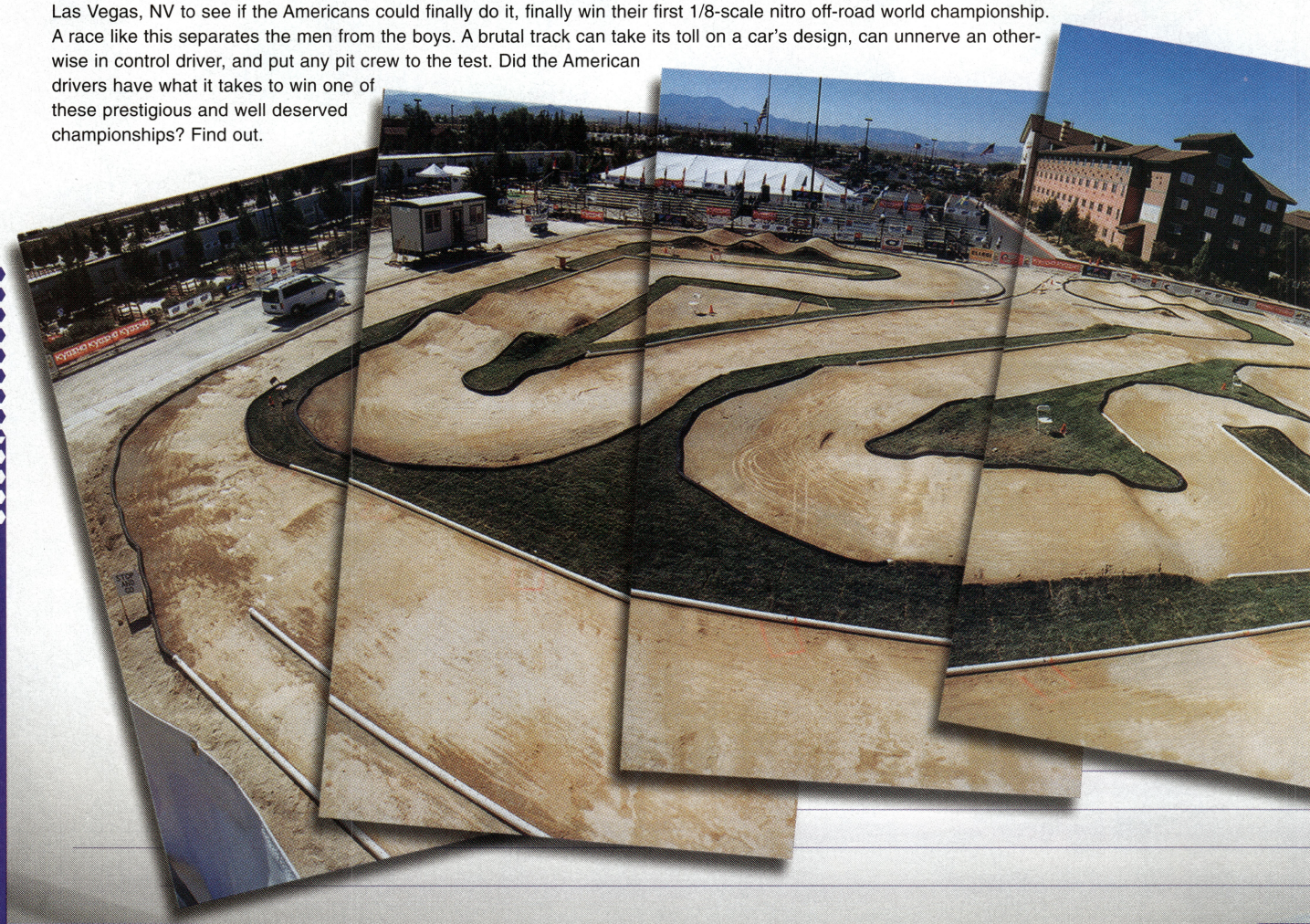
IFMAR Off-Road World Champs

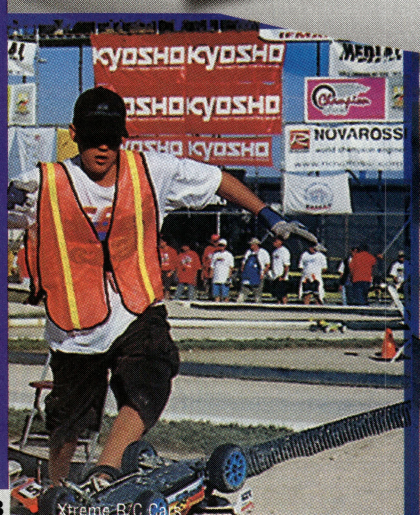
Sponsored by: Kyosho, GS Racing, and Thunder Tiger

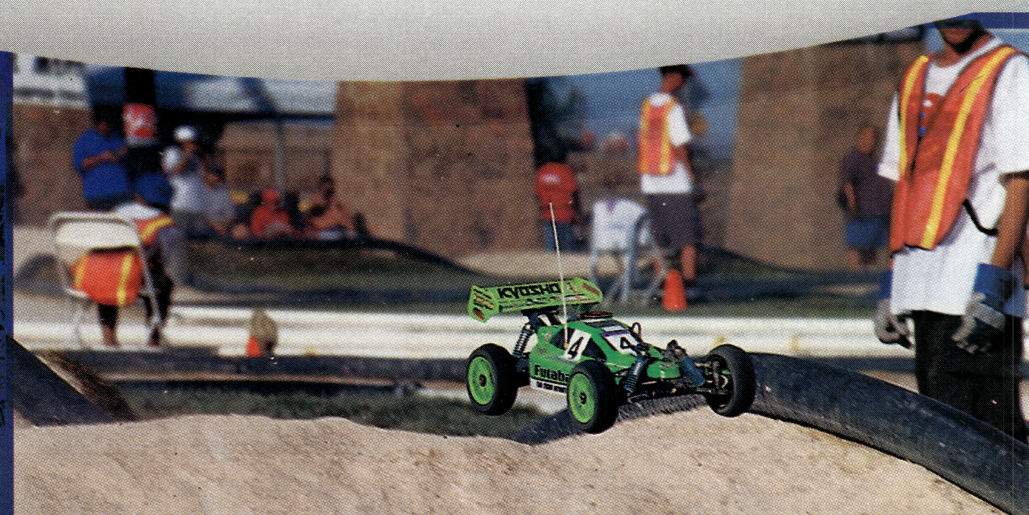
Text by Mike Velez, Photos by Elliot Crabtree

In the world of R/C cars, you could easily make an argument about American drivers being among the best in the world. When it comes to electric racing, champions like Jay Halsey, Joel Johnson, Brian Kinwald, Matt Francis, and Mark Pavidis come to mind. But when it comes to nitro racing on the Worlds level, in recent memory Americans are nowhere to be found. European and Japanese racers have dominated the nitro ranks for years. With this year's 2000 1/8 Off-Road World Championships coming to the States, it looked as if the Americans would have a better-than-average shot at bringing the world title home. Guys like Mark Pavidis, Richard Saxton, Brian Kinwald, Jarred Tebo, and Jeremy Kortz have all had recent success in the nitro ranks.

So, would this year's worlds be the one, the one to change things for the Americans? For five days in October, all eyes were on the track in Las Vegas, NV to see if the Americans could finally do it, finally win their first 1/8-scale nitro off-road world championship. A race like this separates the men from the boys. A brutal track can take its toll on a car's design, can unnerve an otherwise in control driver, and put any pit crew to the test. Did the American drivers have what it takes to win one of these prestigious and well deserved championships? Find out.

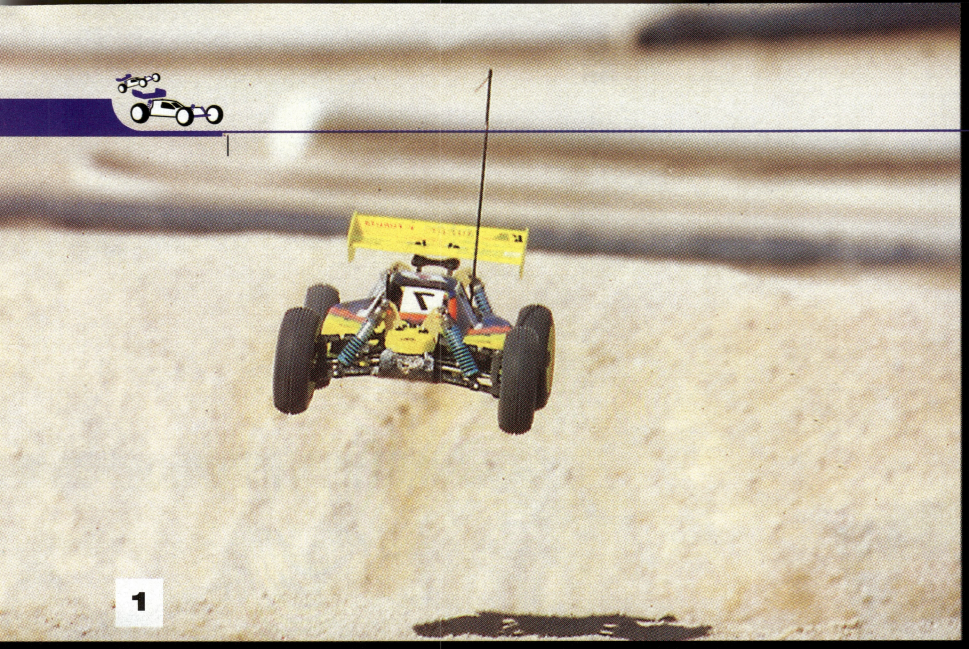


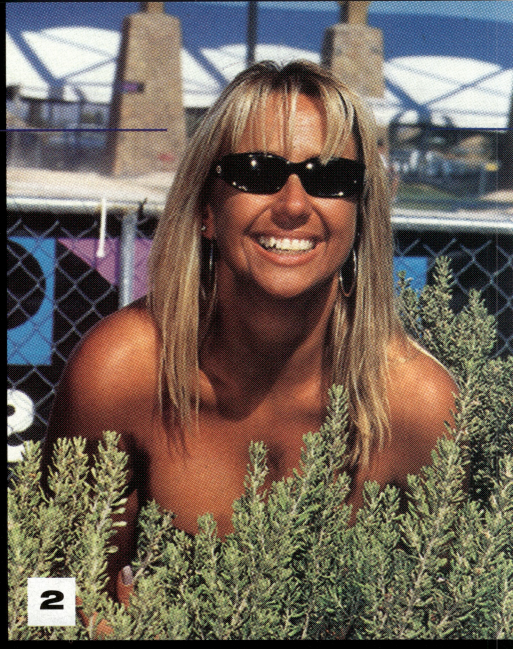


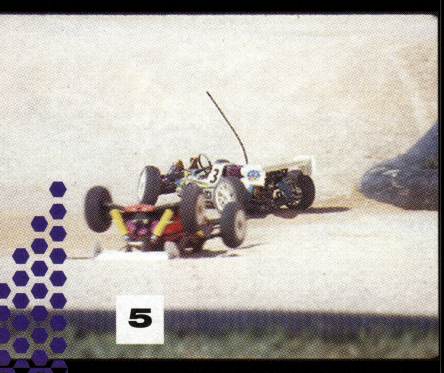


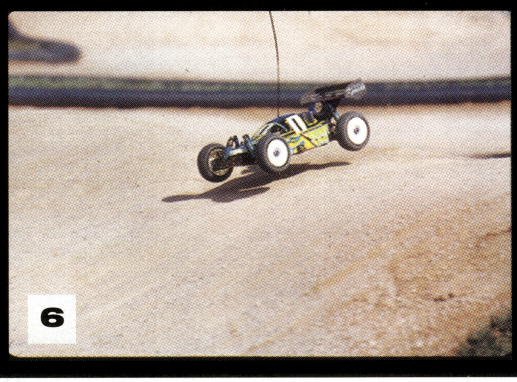
Give me Fifty down on the green car to win.

Now take a deep breath and hold it.







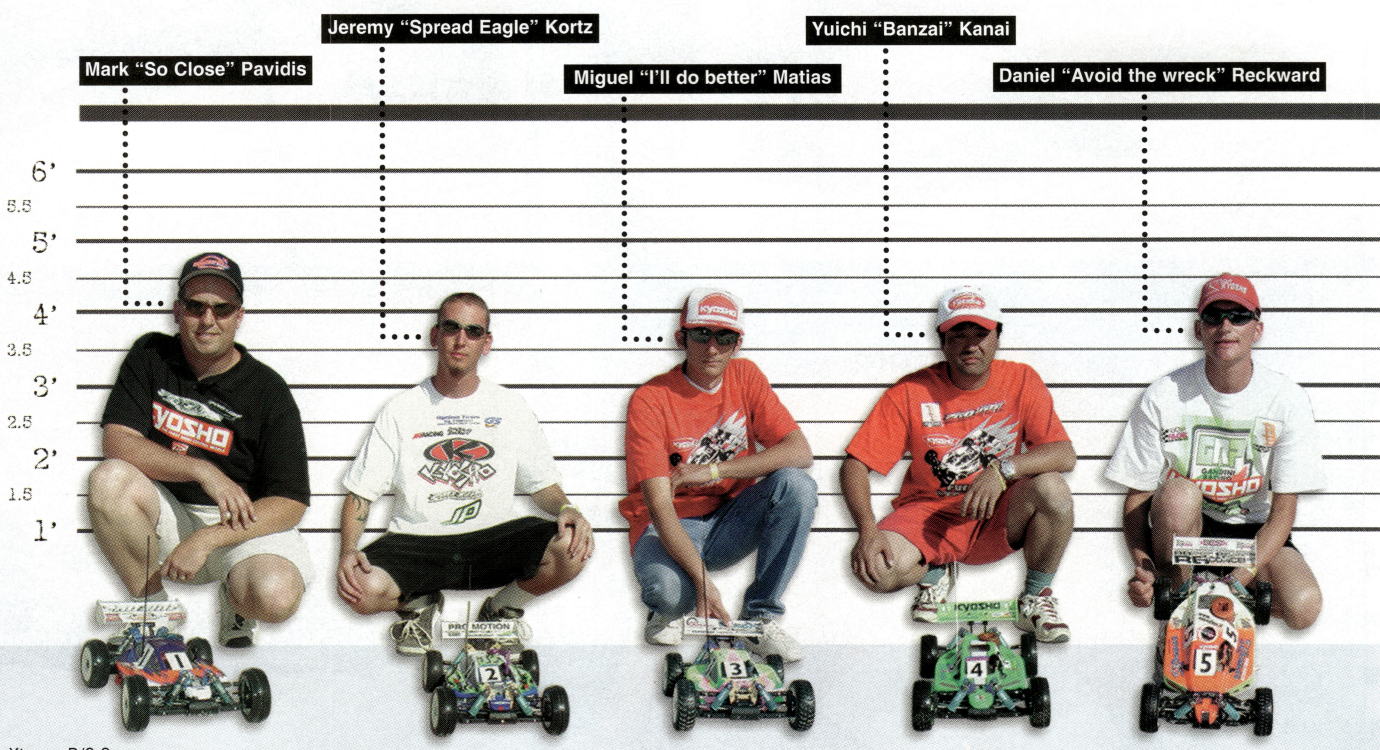




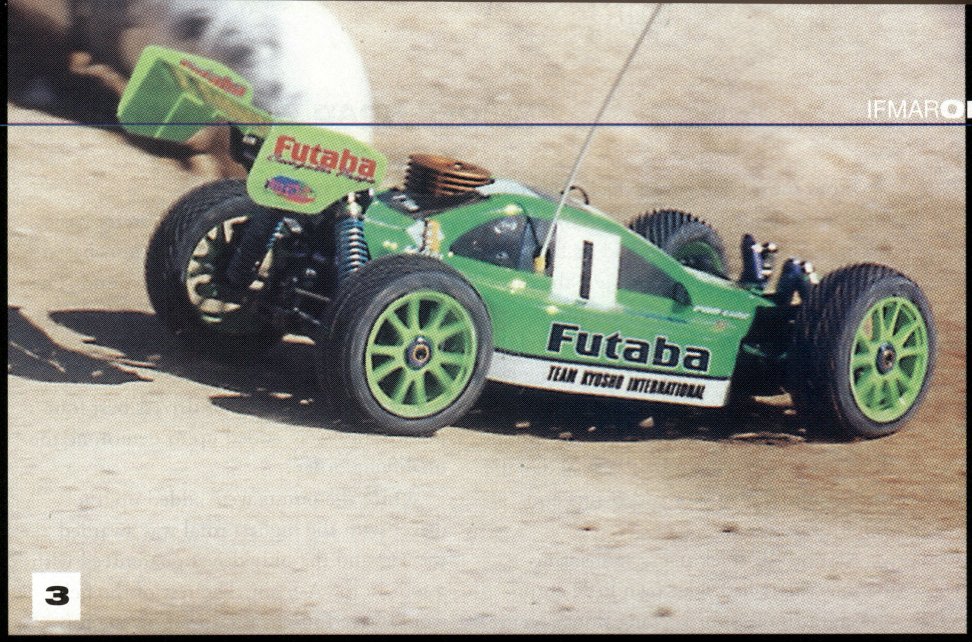
The World's TOP 10 Most Wanted

Violations:

1. Failure to yield to posted speed limits.
2. Gratuitous acts of using diff grease for other than intended purpose.
3. Careless disregard for the safety and well being of turn marshals.
4. Driving while under the influence of adrenaline and nitro fumes.
5. Stealing glory away from the competition.



The line-up chart is not to scale.



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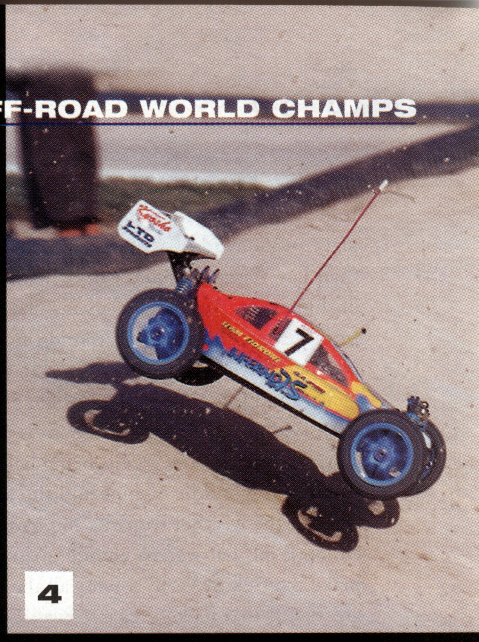

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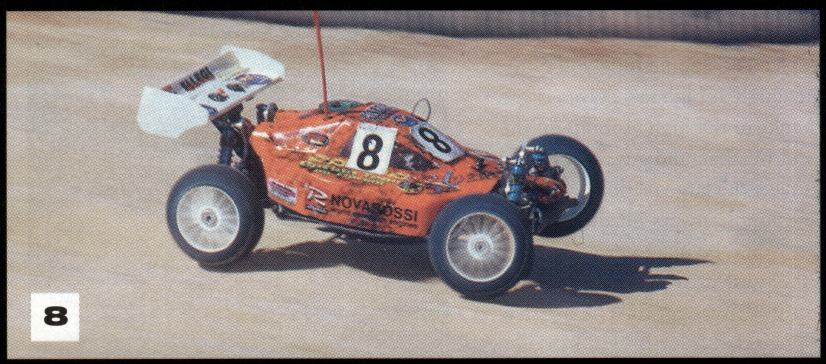
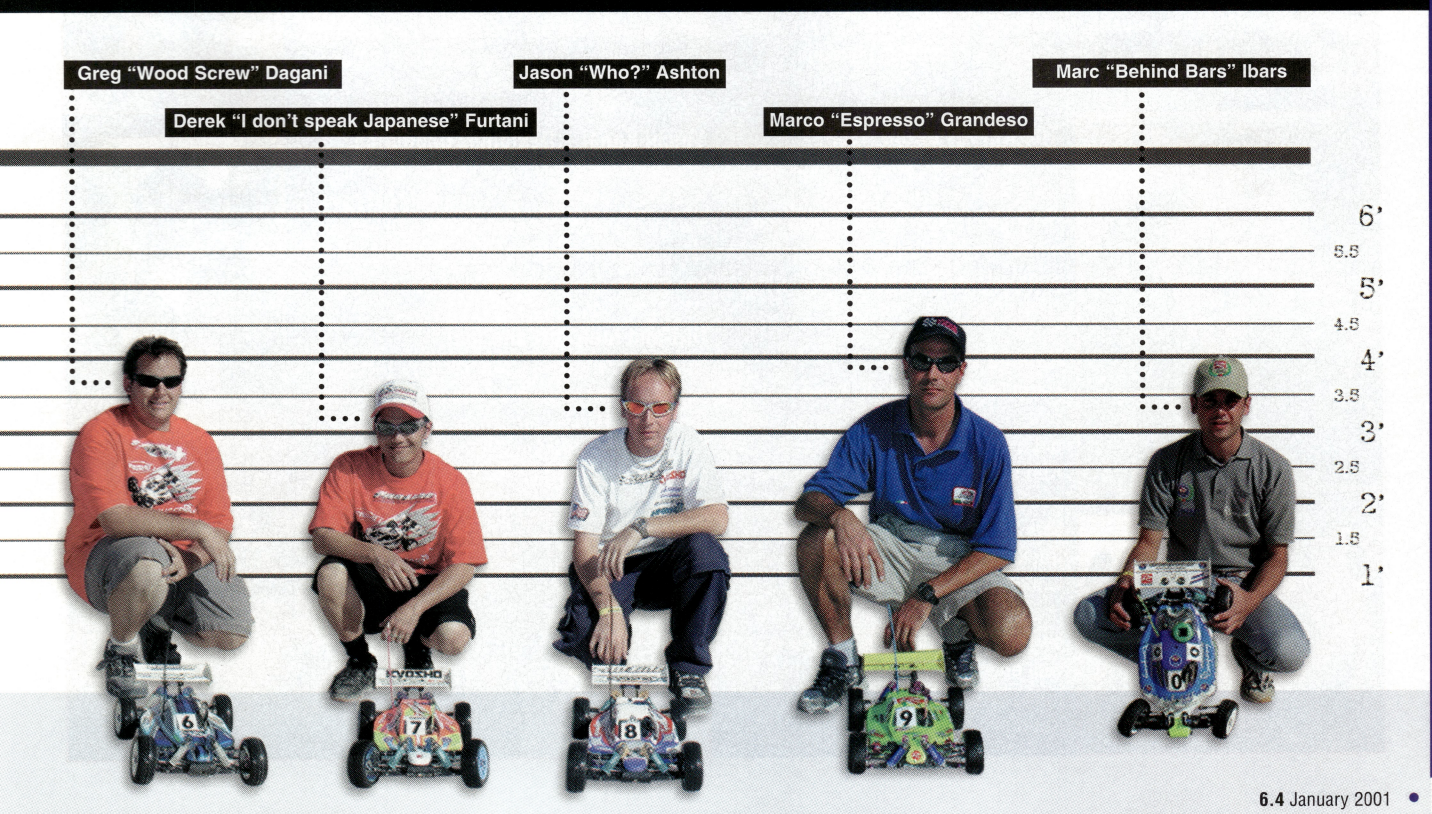


8


9

1. With big jumps all over the track everyone got to test their car's suspension. **2.** This young lady didn't heed to Jesse's warning to "Stay out the Bushes." **3.** Designer, Racer, he does it all. **4.** The the Final main the Kyosho Inferno 7.5 was definitely the car to be driving. **5.** As the track grew more and more rutted turn marshals got more and more of a work out. **6.** Although Brian Kinwald qualified very, very well he failed to make the Final Main. **7.** Thunder Tiger also had a very good showing with a number of cars placed in the top 30. **8.** It's the Great Pumpkin Charlie Brown. **9.** Towards the end of the Final Main one of Mark's crew decided it would be better if he ran with Mark's car around the course and over the jumps.



Some of the names are funny, while others aren't.

Vegas Baby, Vegas

In my humble opinion there's no better place in the world (well, maybe Hawaii) than Las Vegas to hold a world championship event. Airfare is relatively cheap from just any destination around the world. No matter what your tastes, from in-room Jacuzzi and wet bar to just the bare essentials, finding an inexpensive room is pretty easy. And, unless the race is being held between the middle of June and the end of August, the weather won't be too bad either. If all that weren't enough reason to make the trek to Vegas, there's all the other great stuff that makes Vegas, Vegas. Lots of gambling, free drinks, show girls, Sigfried and Roy, and Wayne Newton. Vegas is the entertainment capital of the world. After a long day of inhaling nitro fumes and getting your daily dose of ingested dirt, it's nice to go catch a show, do some shopping, or blow $100 bucks at a blackjack table quicker than Darryl Strawberry in a crackhouse.

The Track

The host of this year's Worlds was the Silverton Hotel and Casino just off Interstate 15, the main highway that goes right through Vegas. Over twelve tons of dirt was brought into the parking lot of the Silverton.

From the asphalt rose a track huge track measuring about 160' by 150'. As you can see in the photos the track had its fair share of massive jumps designed to test the drivers' skills and their testicular fortitude. Along with the big „Super Cross‰-style jumps, the track was kept dry for some serious desert simulation. Thanks to lots of high-horsepower 1/8-scalers buzzing around the track all week long, by the final day the track featured plenty of added ruts and rough spots.

Around the track many sponsoring manufacturers had their own little corporate suites/trailers for keeping things secure and organized. A huge circus tent kept the rest of the pit area shielded from the sun and other elements. Something you don't see often enough at big races events is spectators. Thanks to the high visibility of the venue, good weather, and guys waiting for their next race, the large sections of grandstands were almost always filled. Ever wonder what it would be like to drive an R/C car from the third story of a building? Well all the Worlds drivers got to. The massive, temporarily-erected (Hey Beavis, he said erect, huh, huh, huh.) drivers' stand towered over the track at three stories in height. When the winds roared. drivers could feel the stand sway with the wind.

The Format

Qualifying for this race used a pretty basic system. Drivers were awarded points based on their qualifying time in each round. The TQ for that round was awarded 155 points the second driver 153 points, the third driver 152 points, and so on. After six rounds of qualifying each drivers best four point totals were added up to determine the qualifying order.

Once the points were added up, the driver with the highest total was awarded the TQ and the only driver guaranteed with a spot in the A-main. The rest of the field would have to fight for a spot on the top

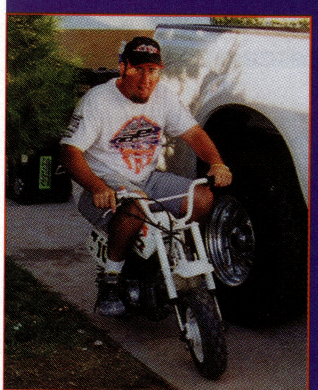


Things got a little hairy when the wind would gust and the three story drivers' stand swayed in the wind.

Behind the Scenes

Strange illness

All week long a number of drivers and pit crew were reporting some strange symptoms like nausea, headache, and dehydration. No word exactly on what the cause of this strange ailment was although alcohol was suspected.

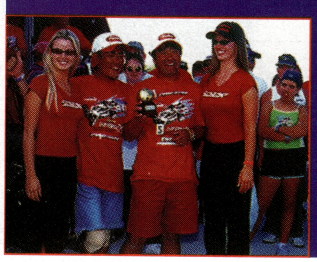


The Heroes of the Race

Richard Saxton and Jim McKenna were the heroes of the race. They did an incredible job of putting the whole race, including ponying up some of their own cash to get the race underway.

Kahuna's Colors

Barry Baker and Big Kahuna took care of the announcing chores and did a great job. During the race, Kahuna would announce "Kahuna's colors." Those in the know would look around the grandstands or track and spot Kahuna's colors. But wouldn't you know, it would just so happen that Kahuna's color would be worn by particularly attractive or well endowed ladies around the track. What a funny coincidence. Kahuna's color is red.



Pavidis Radio Problem

During Pavidis' practice before the final he experienced severe radio problems. The ammunition was out there for a conspiracy to be brewing. Officials check the frequency range for possible conflicts.



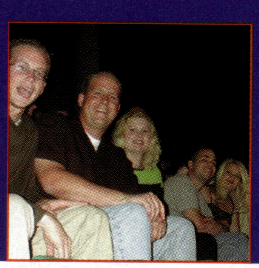
Yuichi Kanai – Designer/ Champion

Yuichi was actually the chief designer of Kyosho's new MP-7.5. So no only did he win the race, but his creation did, too. It actually dominated the race by taking eight of the top ten spots.



Dirt and fuel, dirt and fuel.

No matter what the scale, racing's racing. A number of drivers were reportedly on hand to witness Ricky Carmichael win the U.S. Nationals indoor Motorcross race at the MGM Grand Garden.





Richard is the current AMA 50cc National Champion in the 25 and over class.

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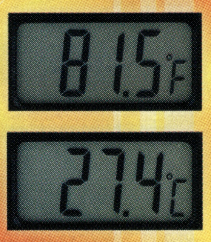

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ten. The Main structure was made up of two "Christmas Trees." The two Christmas Trees are set up so that a lot of drivers start at the bottom and work their way up to the A-main. There's an A set and a B set. After qualifying is finished each driver is given a qualifying number. Drivers with odd numbers are in the A tree while drivers with an even qualifying number are in the B tree. The mains are set up so that each main has seven drivers starting from the top down. As each main is run the top three in each main bump up to the next race. As the mains are run you end up with a 1/2 A and 1/2 B. These two races boil down to the top 21 drivers. The top four in each of the 1/2 races move up to the A-main along with the 5th place driver in the two 1/2 races with the best time. Those nine drivers join the TQ in the A-main. Qualifying order in the A is determined by the finishing times in each 1/2 race. Sound confusing? It is. But, it gives every single driver a shot at the A-main no matter how bad they qualified.

Qualifying

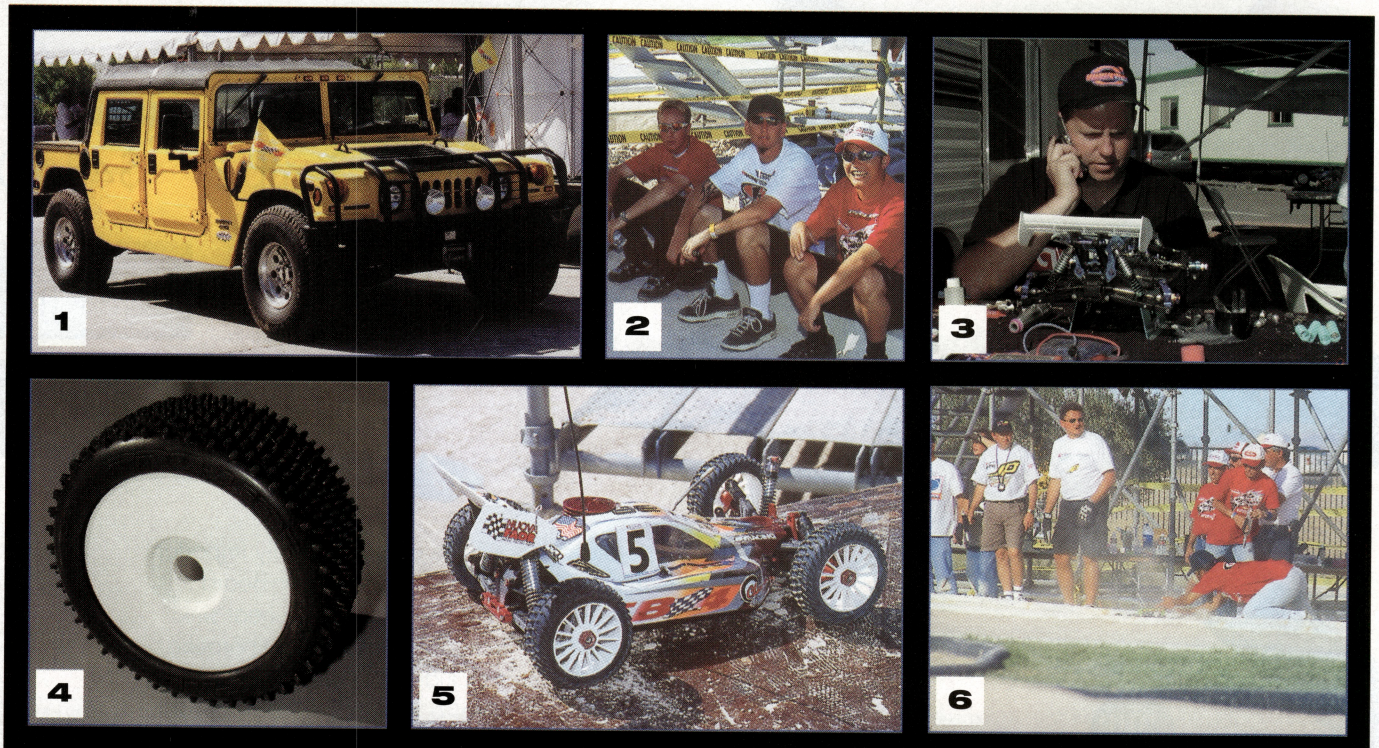
Qualifying took place over three days with six complete rounds for every driver. The qualifying races were ten minutes long. The star of the show was Mark Pavidis who wrapped up the TQ spot in the first four rounds of qualifying with four straight round wins. He had the maximum total of 620 points sewn up. If a conventional "top ten in the A-main" format was used, the top ten would look more like the U.S. Nationals rather than a world championship event. The top ten consisted of seven Americans and three Japanese drivers. But with the Worlds format in place it's not the top ten that count, it's more like the top thirty or at least top twenty who have good shot at making the number one main. When you factor in the top twenty or even top thirty the field is very mixed with drivers from the U.S., Japan, Canada, Spain, Finland, Germany, Sweden, Italy, Portugal, France, and Britain - a truly international field.

The Semis • Two semi-main races determined the Final race field. The top four drivers in each semi were directed to the Final along with the fifth place semi driver with the best time. In Semi A the top four were Jeremy Kortz of the U.S., Daniel Reckward of Germany, Greg Degani of the U.S. Marco Grandesso of Italy, and Marc Ibars of Spain. Marc Ibars had the best time of the two fifth place finishers in the two semis. Marc was the Cinderella story of the Final. Marc qualified in the 63rd spot. He placed in the top three in five races to make it into the Final.

In Semi B, the top four were as follows: Miguel Matias of Portugal, Yuichi Kanai of Japan, and Americans Derek Furutani and Jason Ashton.

From the two semis there were a number of heart breakers. Brian Kinwald, who qualified third over the three days, broke after only two minutes of racing in his semi race and didn't make the Main. Billy Easton met a similar fate after qualifying fifth overall.

A-Main • At the start of the buzzer Mark Pavidis and Jeremy Kortz both walked away from the pack. By the third lap Kortz plugged a corner and dropped back a few positions. This was just after Kortz passed Pavidis. At about the three minute mark, Pavidis was in the lead and starting to stretch it. A minute later Pavidis rolled it on a turn allowing Yuichi Kanai and Miguel Matias to get into the first and second position. By the six to eight minute mark, I could see what type of fuel strategies the drivers were using. Mark Pavidis



1. When it looked as if things weren't going their way Team Thunder Tiger threatened to park their Hummer in the middle of the track. **2.** The American team talked strategy before the Final Main. Unfortunately they were talking about black jack and not the race. **3.** "For information on your love life press 1. For information on your finances press 2. To find out if you'll win your next race press 3." **4.** Pro-Line's Dirty Hairy was the tire of choice. **5.** Richard Saxton had to call it a day after breaking a front shock screw. **6.** Despite being in the Red, Kanai's pit was flawless.

The entire Thunder Tiger team got a Hummer.

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C0579
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C0568
Damper Cap

C0569
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C0570
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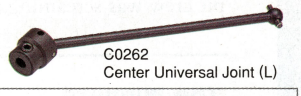
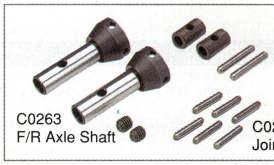
C0260
F/R Universal Joint Set



C0261
Center Universal Joint (S)



C0262
Center Universal Joint (L)



C0263
F/R Axle Shaft

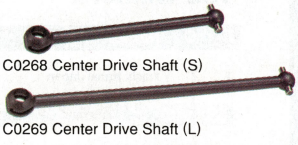
C0264
Joint Shaft

C0265
Joint Pin



C0266
Joint Cup

C0267 F/R Drive Shaft



C0268 Center Drive Shaft (S)

C0269 Center Drive Shaft (L)

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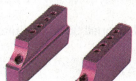


T0702 Al. Engine Mount



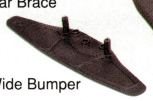
T0116 Anti-Roll Bar Link Parts



T0117
Rear Anti-Roll Bar ϕ 2.0



T0120 Al. Rear Brace



T0405
Front Wide Bumper

T0121 Al. Wheel Hub

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OPTION

came in after only six minutes while Billy Easton and Kortz were on seven minute strategies. Kanai was out the longest and was running an 8-minute strategy. This would mean that over the course of the race Pavidis would need at least eight stops while Kanai could make only seven stops.

Luckily for Pavidis he had a mean pit crew. He would come into the pits balls out and Scott "The Squirrel" Hughes would grab the car by its wing like an F-14 Tomcat's tail hook hitting the deck of an aircraft carrier. Once the car was in Scott's grasp, fuel guru Steve O'Donnell would fill him up. Pavidis' pit crew was definitely among the fastest in the field. After fifteen minutes into the race Pavidis, was definitely pushing it. His driving went from fast and composed in qualifying to raged and over the edge in the Main. Kortz surprised many by driving extremely fast and smooth at times. By the thirty minute mark both Kortz and Pavidis were gaining on Kanai. But, Kanai had lots of luck and composure on his side. Every time Kanai's car would hit a jump funny and tumble, it would end up on all four. As the race wore on Kortz broke his right front shock. With twenty minutes left in the race Matias, through patience and persistency, was in the lead with Kanai not far behind in second. Kortz was in third and Pavidis in fourth. With about fifteen minutes to go Kortz's car sustained serious injury which caused him to get off the track for almost four minutes. With eight minutes to go Kanai took back the lead. At this time Pavidis was definitely fast, his lap times were over a second faster than first place Kanai, but over the top driving kept Pavidis out of contention. With four minutes to go in the race Pavidis' pit crew was screaming for him to pit but Pavidis thought he could go further and ended up running out of gas in the middle of the track. In the last laps of the race Kanai showed himself as a champion and drove smooth to keep the pack at bay. Kanai won the race with Daniel Reckward in second, and Matias in third.



The Dirty Dozen - Minus One. Look for these guys turn-marshalling at a track near you.

Conclusion

From first sight of the track a number of non-American drivers were complaining about the track conditions, i.e., the large jumps, the difficult sections. First off, the track was world class and the same for everyone. Just because large jumps are as rare as deodorant in some parts of Europe doesn't mean the track should be flattened to accommodate European drivers. Also, American drivers don't run on grass, but they compete on grass tracks in Europe all the time. What was perceived to be a home track advantage proved not to be given the results. Despite this complaint overall all that made it to the race had a good time.

Yuichi Kanai ended up showing he was truly a champion in the way that he won the race. His patience and persistence paid off. Aside from the race on the track Vegas proved to be a great venue for this event. A number racers actually brought along family and made a vacation out of the event. Our hats of to Yuichi, all of the racers, Richard Saxton and Jim McKenna, the sponsors, GS Racing, Kyosho, Thunder Tiger, and everyone else who made this race possible.

The Winners

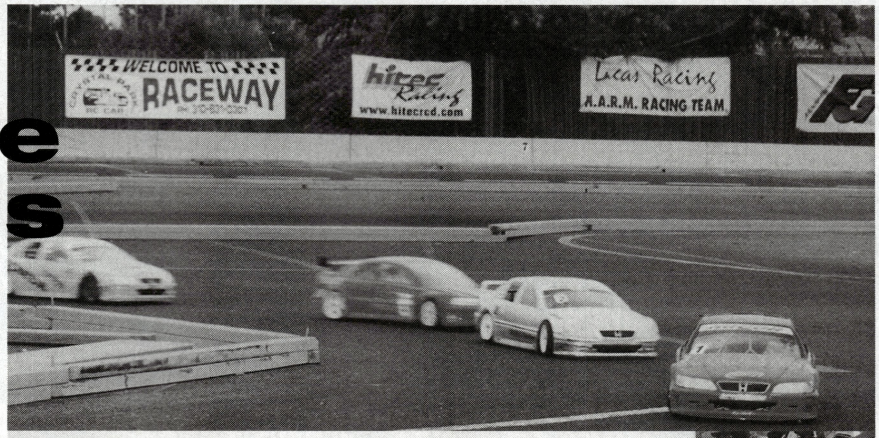
F	Q	Name	Chassis	Engine	Pipe	Fuel	Radio	Tires	Sponsors
1	4	Yuichi Kanai Japan	Kyosho MP7.5	RB 57 World	RB063	Kyosho 30%	Futaba 3VC Stick	Pro-Line Crime Fighter	Kyosho, Futaba, RB, Pro-Line
2	5	Daniel Reckward Germany	Kyosho MP7.5	RB 57 World	RB063	RB Concept 30%	KO Propo	Ellegi GRP	Kyosho, GRP, Nova Faur, RB Engines
3	3	Miguel Matias Portugal	Kyosho MP7.5	O.S. 2000 RBZ	NovaRossi 9853	Cosmo R/C 25%	Futaba 3PJS	Ellegi Cosmics	Kyosho, OS, Cosmo Fuel, Ultimate, ORCA Distributing
4	1	Mark Pavidis USA	Kyosho MP7.5	O'Donnell/Nova	Nova Rossi 9086	O'Donnell 30%	Airtronics M8	Pro-Line Crime Fighter	Pro-Line, Kyosho, O'Donnell
5	6	Greg Degani USA	Kyosho MP7.5	O.S. 2000 RBZ	Kyosho	O'Donnell 30%	Futaba 3PJs	Pro-Line Crime Fighter	Kyosho, Pro-Line, Futaba, O'Donnell, MIP, Fiorni, Lunsford,
6	7	Derek Furtani USA	Kyosho MP7.5	O.S. 99 RZO	Kyosho 35	Trinity 30%	Airtronics M8	Pro-Line Crime Fighters	Fiorni, FTD
7	10	Marc Ibars Spain	Crono	Nova/Crono	NovaRossi 9053	Ultimate 30%	Sanwa	Atomics Elligi	R/C Company, Ultimate, Nova Rosi, Crono
8	2	Jeremy Kortz USA	Kyosho MP7.5	JP	JP	Byron 30%	JR Racing R-1	Pro-Line Crime Fighters	Promotion, Kyosho, JP, JR Racing, Lunsford, MIP, Pro-Line
9	8	Jason Ashton USA	Kyosho MP7.5	O.S. 99 RZB	Picco 069	O'Donnell 30%	N/A	Pro-Line Crime Fighters	Lunsofrd, GP, Progressive, FTD, OS, Kyosho, Brick Bodies
10	9	Marco Grandesso Italy	TTR EB-4	Nova Rossi	NovaRossi 9853	Nova Rossi 25%	Sanwa M8	Champion	Nova Fure, Thunder Tiger Racing, Champion, Nova

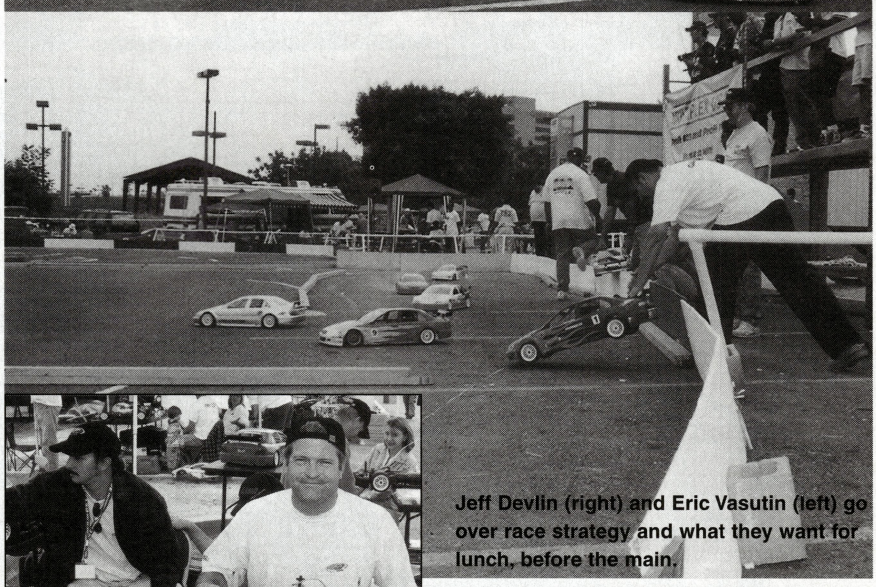
Correction: The tire pictured on page 94 is actually a Crime Fighter, not Dirty Harry.

ROAR 1/5-Scale Nationals

by Mike Velez

Crystal Park Raceway, straight outta' Compton, CA, is a big track. The permanent track is situated in the unused portion of the Crystal Park Casino. The track itself is a huge movable track design that can accommodate 1/5-, 1/8-, and 1/10-scale cars. In fact many of the Associated team drivers practiced here in preparation for the 1/10-scale Worlds in Japan. On the weekend of November 4th and 5th Crystal Park Raceway became the site of this year's ROAR 1/5-scale Nationals. Just as you'd expect at a race of this caliber the field on hand was comprised of some of the best 1/5-scale racers in the country. Along with drivers who primarily race 1/5-scale, this year's race was more crowded than ever with ringers err... pro drivers from other scales. Last year's champion, Rick Hohwart along with other accomplished racers including Tony Neisinger, Billy Easton, Barry Baker, David Jun, and Tim Bump. Would these ringers err... new fans of 1/5-scale have an impact? That was the big question all weekend long.





Jeff Devlin (right) and Eric Vasutin (left) go over race strategy and what they want for lunch, before the main.

The Classes

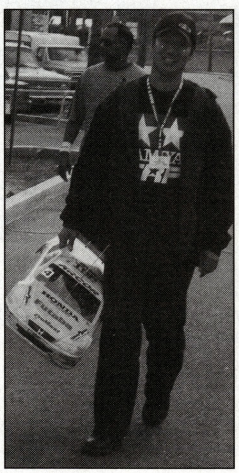
Super Touring is the big class to be in. This year this class is a Worlds qualifier for the 1/5-scale world championships next year in Austria. The majority of drivers entered in this class. Forty-four drivers entered in Super Touring. Expert GT uses basically the same car platform but with a super car body. Only eight drivers were entered in Expert GT. Sportsman, which uses some power limitations to keep costs down and the racing close, drew twenty-six entries.

Qualifying

Qualifying took place Saturday with the top 9 qualifiers making it to the A-main. The winner of the B-main would bump up to the A-main. After four rounds of qualifying the mains were set for racing action all day sunday.

Super Touring A-Main

David Jun ended up working his way through the pack during the B-main to take the B-main win and the last spot on the grid in the A-main. In the A-Main second place qualifier Eric Vasutin lead for most of the race. The positions behind him shuffled a bit, but when it was all over Eric held on to the lead and finished two laps ahead of the field. Four of the top ten ended up not finishing the race including Billy Easton and Barry Baker.



David Jun gets ready for his B-Main run.

Congratulations to the well deserved winners. With the popularity of this class growing every year look for more 1/5-scale racing action and reviews in the year ahead.

Super Touring

Finish	Q	Name	Chassis
1	2	Eric Vasutin	FG
2	7	Gary Gundesen	FG
3	6	Dana Smeltzer	FG
4	8	Holli Bechard	FG
5	10	David Jun	Harm
6	3	Tony Neisinger	SVM
7	5	Paul Smith	Harm
8	1	Barry Baker	Harm
9	4	Jeff Devlin	FG
10	9	Billy Easton	SVM

GT Expert

Finish	Q	Name	Chassis
1	5	Frank Killam	FG
2	7	Alan Trump	FG
3	4	Karlton Spindle	SVM
4	8	Ken Watkins	FG
5	6	Eric Poholsky	SVM

Sportsman

Finish	Q	Name	Chassis
1	1	Scott Jarrett	SVM
2	3	Chuck Howell	Harm
3	9	Lee Smith	FG
4	7	Richard Cleary	FG
5	4	Fred Baggerman	Solo

Check out the smirk on Jeff. Hey, where's that other hand?

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2. Entries are limited to one per person. All entries must be postmarked by Feb 2, 2001. Prices will be awarded in February 2001.
3. Winners will be selected in a random drawing, and all decisions will be final. The winner will be notified by mail. Any prize returned as undeliverable will be awarded to an alternate winner. The chances of winning will be determined by the total number of entries received.
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Site: 15540 E. Batavia Dr.
Aurora CO 80012
303 343 - 0151

Jim Miller
2100 W 100 Ave #71
Thorton, CO 80260

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K/N RC Speedway, Inc.
PO Box 231
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Moodus CT 06469
860 684 - 9896

R/C Madness Inc.
PO Box 64
Site: 640 Enfield St.
Enfield CT 06083
860 741 - 6501

Keep It Tight
c/o Aces 1125 North Ave.
Site: Alice & Sedgewick
Bridgeport CT 06604
203 330 - 1788

Florida
River City R/C Car Club
9711 Sharing Cross Dr
Jacksonville, FL 32257
904-268-1948

Georgia
Anthony's Victory Lane
PO Box 486
Site: 129 E. Hwy 80
Pooler GA 31322
912 748 - 0847

S.C.O.R.E
4 Pinehurst Ln.
Site: Lake Mayer Park
Pooler GA 31322
912 748 - 1988

Dalton Raceway
3036 Parquet Rd
Dalton GA 30720
706 226 - 6699

Dixie Racing Club
1815 Vintage Dr.
Site: Exit 36 I-85N
Snellville GA 30078
770 972 - 7967

Hawaii
Big Island R/C Assoc.
806 Kilauea Ave.
Hilo HI 96720
808 935 - 4714

Garden Isle RC Racers
5855 Ahakea St.
Site: Wailua Adj. Golf Course
Kapaa HI 96746
808 823 - 0856

Radio Control Association
1005 Lehua Ave.
Site: Keehi Lagoon Pk.
Pearl City HI 96782
808 456 - 1279

Illinois
Central Illinois RC Racers
415 E. Delwood St.
Site: Pekin Mall
Morton IL 61550
309 263 - 1175

Chicago Radio Car Club
1119 Langley Cir.
Naperville IL 60563
630 983 - 1190

Rector's R/C Raceway
RR3 Box 104
Albion IL 62806
618 446 - 3282

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Site: 26049 S. Ridgeland, Monee
Flossmoor IL 60422
708 799 - 5597

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Bolingbrook, IL 60440
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Baltimore MD 21229
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410 360 - 6405

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Merrimac MA 01860
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Great Lakes R/C Racers
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Site: 3810 Chaffee, Gr. Rapids
Hastings MI 49058
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R & L Hobbies
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Portage MI 49002
616 323 - 3686

Village Hobbies
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Hesperia, MI 49421
231 854-1374

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Northwoods Hobby Raceway
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Brainerd MN 56401
218 829 - 9257

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Meridian MS 39302
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816 896 - 5272

N. Missouri R/C Raceway
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Chillicothe MO 64601
660 646 - 1120

Real R/C Speedway
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Pleasant Hill MO 64080
816 358 - 0238

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O.N.R.O.A.D.
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402 556 - 8674

New Mexico
Albuquerque R/C Off Road
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Albuquerque NM 87106
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Southern Pines NC 28388
910 245 - 4450

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Wickliffe OH 44092
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Mt. Juliet TN 37121
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Site: Walmart Center
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San Antonio TX 78209
210 930 - 2663

RCRC of North Texas
11312 LBJ Frwy # 500
Site: Texas Motor Speedway
Dallas TX 75238
214 349 - 2847

T & T Racing
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Plano TX 75074
972 633 - 2470

Comanche Trail R/C Park
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915 263-4241

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Chatham VA 24531
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West Bend WI 53095
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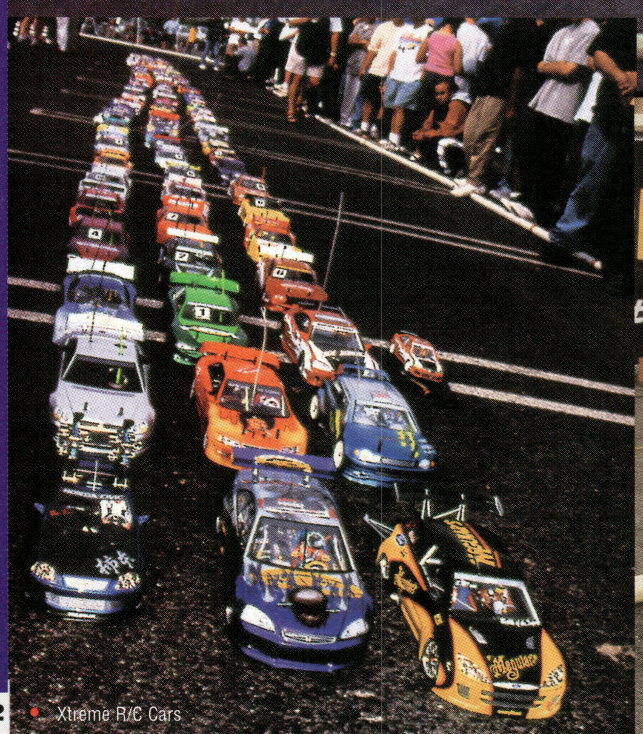
- ❑ 1/12-Scale
- ❑ Touring
- ❑ Mini

If you don't see your track here let us know.

HPI Challenge World Finals

by Elliot Crabtree

The HPI Challenge World final recently took place in Irvine, CA near HPI USA's headquarters. The race is a culmination of US, Japanese, and European series. Along with drivers from Europe and Japan being onh and drivers from as far away as New Jersey, Ohio, and Washington took part in the racing action. Over 200 drivers in total.



More than 200 entries came out to race.







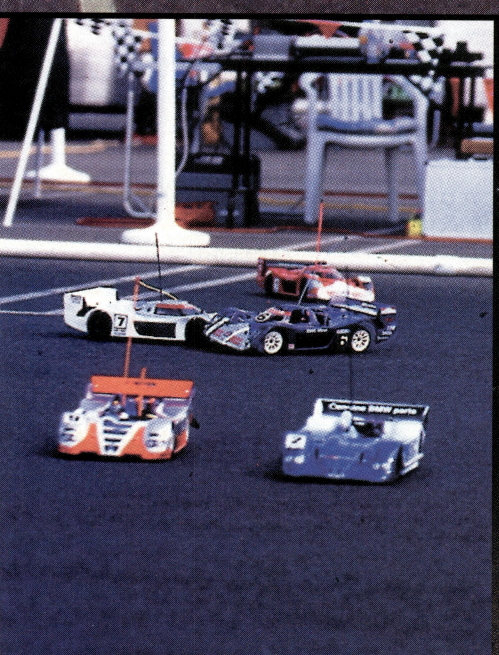
The Track

The HPI Challenge World Final was held in the parking lot of the Irvine Spectrum, a major Southern California shopping and recreational complex. The track measured 140 feet long by 90 feet wide with thick PVC piping carving out a complex race course. Even though this was a parking lot race all the racing amenities were on hand; AMB lap counting, AC power, lots of lighting, and a huge covered pit.

The Format

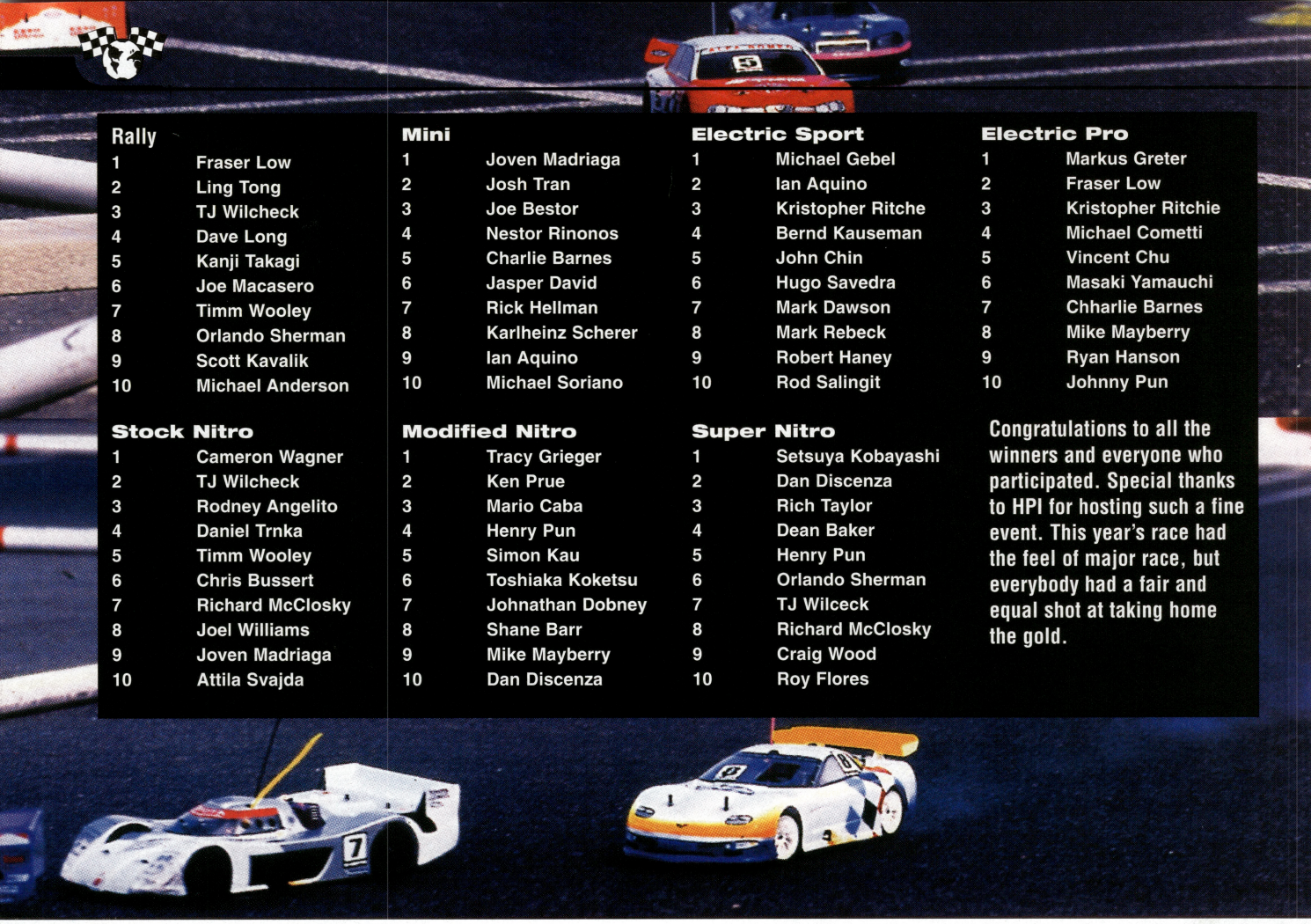
The format was set up with three rounds of qualifying total. Four rounds were scheduled, but thanks to a generator mishap, Saturday saw only two rounds of qualifying with the third and final round on Sunday. Qualifying order was based solely on times. There were no points systems employed, just good old parking lot racing where the fastest guy around goes straight to the A-Main.

Both nitro and electric races were five minutes in length. To ensure that everyone in electric would make the five minute mark spec gearing was mandated. On sunday the electric mains were also five minutes in length while in Box Stock Nitro the A-main was ten minutes long. Pro Electric and Rally both used triple-A Main setups. In Modified and Super Nitro the A-main was twenty minutes in length. **Results on the next page.**





Check out the guy in the middle with the Xtreme shirt. He got the karma.



Rally	
1	Fraser Low
2	Ling Tong
3	TJ Wilcheck
4	Dave Long
5	Kanji Takagi
6	Joe Macasero
7	Timm Wooley
8	Orlando Sherman
9	Scott Kavalik
10	Michael Anderson

Mini	
1	Joven Madriaga
2	Josh Tran
3	Joe Bestor
4	Nestor Rinonos
5	Charlie Barnes
6	Jasper David
7	Rick Hellman
8	Karlheinz Scherer
9	Ian Aquino
10	Michael Soriano

Electric Sport	
1	Michael Gebel
2	Ian Aquino
3	Kristopher Ritche
4	Bernd Kauseman
5	John Chin
6	Hugo Savedra
7	Mark Dawson
8	Mark Rebeck
9	Robert Haney
10	Rod Salingit

Electric Pro	
1	Markus Greter
2	Fraser Low
3	Kristopher Ritchie
4	Michael Cometti
5	Vincent Chu
6	Masaki Yamauchi
7	Chharlie Barnes
8	Mike Mayberry
9	Ryan Hanson
10	Johnny Pun

Stock Nitro	
1	Cameron Wagner
2	TJ Wilcheck
3	Rodney Angelito
4	Daniel Trnka
5	Timm Wooley
6	Chris Bussert
7	Richard McClosky
8	Joel Williams
9	Joven Madriaga
10	Attila Svajda

Modified Nitro	
1	Tracy Grieger
2	Ken Prue
3	Mario Caba
4	Henry Pun
5	Simon Kau
6	Toshiaka Koketsu
7	Johnathan Dobney
8	Shane Barr
9	Mike Mayberry
10	Dan Discenza

Super Nitro	
1	Setsuya Kobayashi
2	Dan Discenza
3	Rich Taylor
4	Dean Baker
5	Henry Pun
6	Orlando Sherman
7	TJ Wilceck
8	Richard McClosky
9	Craig Wood
10	Roy Flores

Congratulations to all the winners and everyone who participated. Special thanks to HPI for hosting such a fine event. This year's race had the feel of major race, but everybody had a fair and equal shot at taking home the gold.

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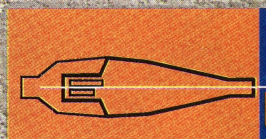

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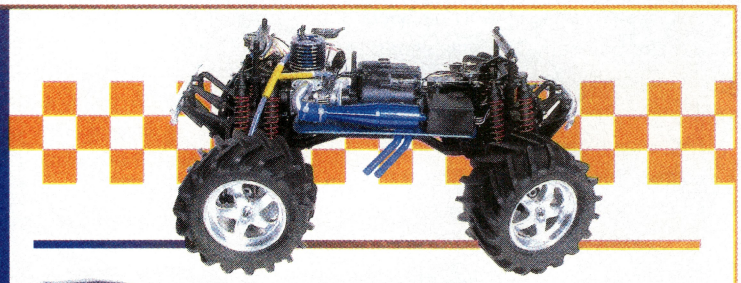

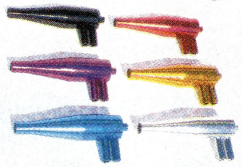

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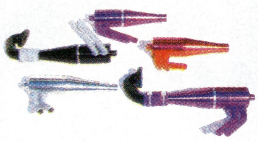

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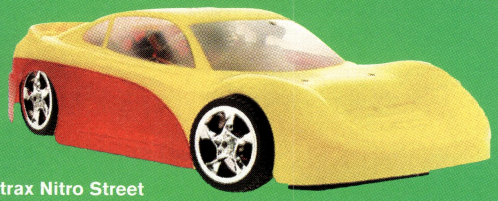

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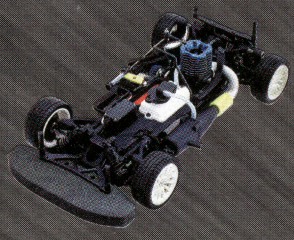

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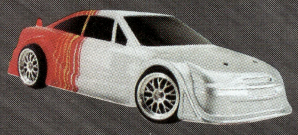

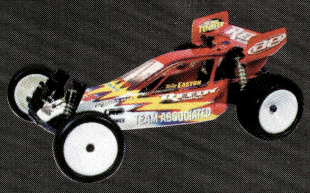

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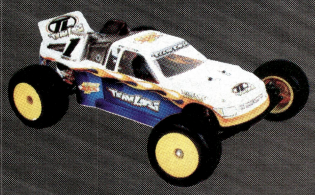



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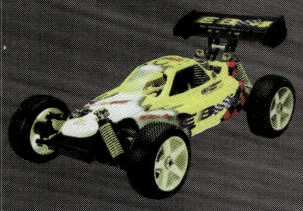



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PARTS & ACCESSORIES

Item #	Description	Manufacturer	Price
1004-5707	True Lathe 2 Pro	Trinity	179.99
1004-1613	Minitemp Temp Gun w/ Laser sight	Raytek	99.99
1002-9679	Monster Hauler Bag, Black	Trinity	39.99
1004-0587	1/8 Buggy Torque Pipe, for .21	Paris Racing Products	36.99
1004-0582	Racing Turbo Ring Pipe, 1/10 Scale	Paris Racing Products	27.99
1002-6877	Track Corner Markers, Set of 5	Tamiya	22.99
1002-7877	Maximizer Fuel Filter	Kyosho	17.99
1002-5719	Racing Fuel Bottle	HPI	15.99
1003-0836	Thorp 1/16" Hex Driver	Moore's Ideal Products	14.99
1003-0842	Thorp 1.5mm Hex Driver	Moore's Ideal Products	14.99
1003-0844	Thorp 2.5mm Hex Driver	Moore's Ideal Products	14.99
1003-0746	Six Pack Pinion Gears ODD 15-25	Robinson Racing	12.99
1003-0928	Blue Crystal Case	RPM	7.99
1000-1453	Nitro R/C Car Cleaner	HPI	4.99
1003-0402	Front, Rear 1/8 M2 Multi-Spike	Pro-Line USA	19.99
1003-0400	Front, Rear 1/8 XTR Multi-Spike	Pro-Line USA	17.99
1002-9140	Rear Truck Sprint, (Red)	Team Losi	17.99
1002-9146	T-2000 Truck Tire, (Red)	Team Losi	17.99
1002-9152	LST T-90 Street Truck Tire, (Red)	Team Losi	17.99
1003-0372	Rear 2.2" Gladiator 2 Truck Tire, M2	Pro-Line USA	17.99
1003-0356	Rear Hole Shot low-pro M3 cmpd	Pro-Line USA	13.99
1003-0307	Rear Bow Tie M2, 2.2"	Pro-Line USA	12.99
1004-6060	Low Pro Sedan Slick,24 mm H13	Pro-Line USA	10.99
1004-6062	LP Slick 2, 26 mm Sedan Tires	Pro-Line USA	10.99
1004-6067	LP Slick , 26 mm Sedan Tires	Pro-Line USA	10.99
1004-6057	Sprint 24mm Tires, Firm cmpd	Yokomo	7.99
1004-6058	Sprint 24mm Tires,Medium cmpd	Yokomo	7.99
1004-6070	10 Spoke Wheels, 24 mm sedan	Yokomo	3.99
1004-6071	10 Spoke Wheels, 26 mm sedan	Yokomo	3.99

BATTERIES, CHARGERS, ESC'S

Item #	Description	Manufacturer	Price
1002-6096	Millennium Digital D/C Charger	Novak Electronics	139.99
1000-0563	Cyclone Programmable Spd Control	Novak Electronics	129.99
1002-6095	N-Power, Power Supply 10 amp	Novak Electronics	129.99
1000-0565	Super Rooster Speed Control	Novak Electronics	115.99
1002-6088	2400 V-Max Plus Batteries TM	Team Orion	69.99
1000-0564	Rooster Reversible Speed Control	Novak Electronics	69.99
1002-6090	2400 VIS Extra Batteries Race 6C	Trinity	58.99
1002-6094	3000 MAH NiMh Batteries Stick Pk	Trinity	46.99
1002-6727	Black Box2 Discharge Cutoff Device	Deans W.S. Co.	25.99
1000-0632	Discharger	Deans W.S. Co.	24.99
1000-1353	900 AC/DC Auto-Charger	Hobbico	24.99
1004-5459	Dyna-Sport 1700 6 Cell Flat Batt.	Dynamite	22.99
1004-5695	1700 MAH 6 Cell 7.2V Battery	Racers Edge	17.99
1002-6343	Twisted Gold Connector Set	Team Orion	9.99

RADIOS & SERVOS

Item #	Description	Manufacturer	Price
1004-0474	3PJFS FM Surface Radio System	Futaba Corp.	299.99
1000-1401	M8 3CH FM Radio System	Airtronics	269.99
1002-9840	Lynx 3D 3 w/Spctra Mdle FM75MHz	Hitec	264.99
1000-1270	3PD FM Radio System	Futaba	199.99
1000-1400	Airtronics CX2P FM 2 CH Radio System	Airtronics	164.99
1003-9391	2PEKA	Futaba	114.99
1004-0522	High Torque Alum. Gear Servo	Airtronics	109.99

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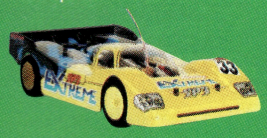

▲ **MRC SP3 Extreme 1/12 Scale R/C Car**
by MODEL RECTIFIER CORP
eHobbies price: $139.99
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▲ **Traxxas Bandit Kit Combo Pack w/3 Batteries**
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▲ **Tamiya Rover Mini Cooper(M03) R/C Car**
by TAMIYA
eHobbies price: $89.89
Item #1002-6980



▲ **Tamiya King Tiger Tank**
by TAMIYA
eHobbies price: $389.99
Item #1000-0609

ENGINES & MOTORS

Item #	Description	Manufacturer	Price
1004-0650	.21 RZ-V99B Buggy Engine	O.S. Engines	279.99
1000-0302	FS-26S-C R/C Car Engine	O.S. Engines	189.99
1004-0991	.21 RG-X (P) Engine, Pilot Crank	O.S. Engines	189.99
1002-6380	Picco .12 engine, Rotary w/pull	Trinity	144.99
1004-5524	CX 12 Non Pull Start Engine	Nova Rossi	139.99
1002-6379	Picco .12 Engine, Rotary Carb	Trinity	124.99
1000-0296	.12CV-X RC Car/Buggy Eng. w/ Rec	O.S. Engines	119.99
1002-6167	Chrome Modified Motor 12x2	Team Orion	49.99
1002-6143	P2K Paradox Pro 2000 Stock Motor	Trinity	28.99
1002-6026	Reedy Rage Type R Plus Stck Motor	Associated	27.99
1002-6284	Chrome Stock RS (rebuildable)	Team Orion	24.99

BODIES

Item #	Description	Manufacturer	Price
1002-6844	Calsonic Skyline Body Set	Tamiya America	29.99
1004-1599	200mm Toyota Celica Sedan Body	HPI	22.99
1004-1604	200mm Alfa Romeo GTV Sedan Bdy	HPI	22.99
1004-1609	200mm Cougar Sedan Body	HPI	22.99
1002-5687	1/10 Mercedes CLK-GTR Bdy (200mm)	HPI	22.99

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- new Super Xipp Xapper DCX -
- high power 110VAC magnetizer -



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.

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Build it and it Will Run.

Dear Extreme,
When I was thirteen, I'm now 28, my mom bought me my first R/C car. It was a Tamiya Grasshopper. It was so much fun. I loved building it running it, breaking it, and fixing it. After I graduated high-school I didn't touch my R/C cars throughout college. I'm not out of school married, and have a baby on the way. I picked up your magazine at the grocery store and loved it. I really want to buy a T-Maxx but would rather build it myself. Does Traxxas make a T-Maxx kit that I can build myself? I love playing with cars but, I'd also like to build my new car myself. What do you suggest? Keep up the good work. I especially like your reviews and cool photos.

Sincerely,
Jim Owens
via the Internet

Thanks for the complements. I'm glad to see that you've come back to R/C. And just a quick correction, it's Xtreme – not Extreme. But that's besides the point. Anyway getting back to your question. Traxxas does not make a T-Maxx kit. But, the T-Maxx along with any other type of RTR kit you would purchase from a hobby shop is completely rebuildable and fixable. There are a number of hop-ups available for the T-Maxx that will allow you to get your building fix by just replacing pieces. Check out Issue 6.2 for our T-Maxx hop-up buying guide. Also in Issue 5.9 there's an article on simple mods that you can make to get more from your T-Maxx. The idea of purchasing your car preassembled might take a little getting used to for someone who likes to build. But, as a reader once put it – he likes to work on his Chevy Tahoe, but wouldn't want to get a box of parts from GM when he bought it. Good luck with your new truck.

They've Got it Too Good

What's going on with all of these "Pro" drivers? These drivers change teams like I change my underwear. Don't these guys know how good they've got it? If I had a factory ride I'd be so grateful to the company that took a chance on me that I'd never switch. I'd love to hear what you think on this subject.
Thanks,
Dave

This complaint is very similar to the complaint of pro sports stars that hold out for that extra million. How much is enough? But, just like a pro athlete, if you put yourself in their shoes you'd probably hold out for that same extra million. At first glance you might say no way, but if you think about it for a while you might consider. It's just as if your boss offered you a raise, would you say no? Probably not.
Getting back to the R/C car drivers. It's really the manufacturers who are to blame when it comes to drivers playing musical chairs. If opposing companies wouldn't dangle the carrot in front of their competing drivers there would be no problem. Some racers have found a way to make a living out of doing something they love. You can't blame them for wanting to make as much as they can. Not to imply that they do it simply for the money, but look at drivers like Barry Baker, Mark Pavidis, and Brian Kinwald. Their performance on the track translates into money made for their respective sponsors. Shouldn't they be compensated for their talents?

Things do get out of hand however with companies that sponsor a ton of drivers just to sponsor them. You have these "B" and "C" class drivers going to local tracks running they're best batteries, motors, and tires at club races. These guys make their sponsors look bad, they crush the competition (the customer) and create a losing situation for everyone involved. Rather than worrying about the top guys consumers should be more perturbed at these second and third tier drivers throwing sponsors' products and money down the drain.

Biased Author?

I just read Mike Velez' report from the worlds in Japan. I liked the article a lot. The Roach Motel thing along with a number of the other side columns were very funny. I did notice a bit of a bias on Mike's part. He seemed to favor Mark Pavidis on each of the calls Mike made during the coverage of the touring car A-Mains. Maybe I'm reading more into his assessments than is actually there but I'd love to hear what Mike or someone else there has to say. Thanks a lot
Bill Carpenter

Hi Bill, glad to hear you liked the article. As far as my assessment of the main, I call it like I see it. As an American I guess I would have a bias in that I'd like to see an American win, but I'm sure in Japan or in Europe there were reporters on hand that would have like to have seen their countryman win as well. I think I did a fair job of reporting everything just as it went down. All three of the Main races had their fair share of controversy but in the end I think the right guy won. Atsushi Hara won that last race fair and square. All of the drivers that had a shot at winning had a fair shot in that last race. Ask Mark himself and he'll tell you that he made some mistakes in that last race that caused him to finish where he did. I reported each of the controversy just as they happen. If there appears to be a bias I guess I can't argue that. You need to make that call. Let me just say I was there. Thanks for your letter. It's nice to see that readers are actually paying attention and would take the time to express their concerns.
Mike

Chicken Balls?

Were those things everybody was eating in Japan really chicken testicles?
Mike Duran
No, they weren't actually chicken testies. At least I don't think they were. I wasn't brave enough to give them a try. I believe they were more like chicken nuggets in the shape of a ball. Now what part of the chicken made the nugget inside who knows.

Should I Wait?

When is the Losi Street Weapon Part II coming out? I want to get a new touring car and I wonder if I should wait for the Losi one. Any advice you can give me would be greatly appreciated.
Carlos Gonzalez
Merced, CA
Hey Carlos, no word on when the new Losi ride will hit the streets. We're lead to believe sometime in early spring of next year. Given Losi's track record I'm sure it will be a car worth waiting for. However there are a number of great touring cars on the market currently if you just can't wait. Good Luck.

We're Number One!

[Editor's Note] In prisons that is. A few months ago SEI Racing placed an ad in

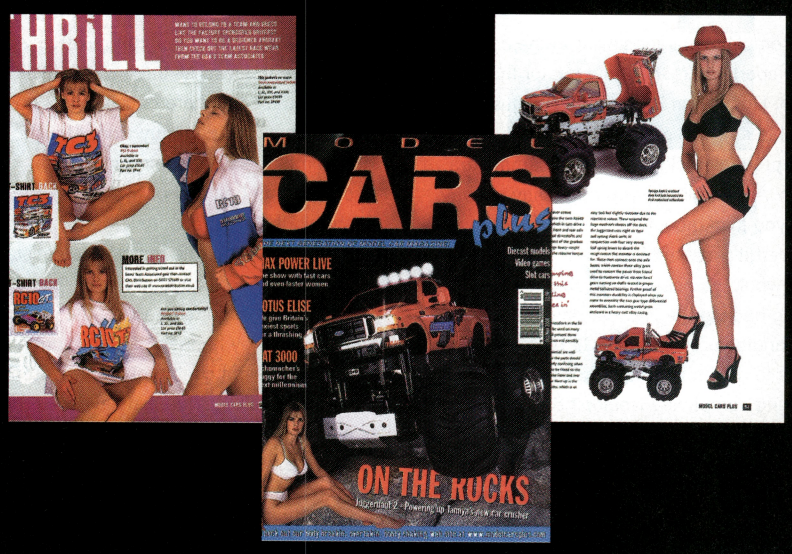
If you think Chicken Balls are good, wait until you try the Bull Balls.

Robb Report. In the ad was a copy of an *Xtreme R/C Car* cover and some contact information for *Xtreme*. Since then they've received more than a few requests from prison inmates looking to get a subscription of copy of *Xtreme R/C Cars*. We're told that on the cell block or out in the yard a copy of *Xtreme* is good for a carton of smokes and an extra serving of Jello.

More Ladies Please

What is up? Where are all the chicks? You need to put more chicks in the magazine. Don't wimp out, give me more babes.
Adam
via the Internet

We had planed a photo shoot with some babes that we could call our own. Unfortunately we couldn't get everything together in time for this issue. You'll have to just wait until next month. In the mean time we've found these lovely ladies to drool over and think to yourself that they'll never, ever go out with you or give you their phone number.



A MAG AFTER OUR OWN HEARTS

In Chicago we picked up a copy of a new British magazine. The editors must be fans of *Xtreme R/C Cars* because it fits the "R/C cars and babes go together mold." However thanks to more relaxed standards in Europe *Model Cars Plus* definitely pushes the limits. Some bare Arse shots made the cut. Cheers to our brethren on the other side of the pond.

In leu of the Babe of the Month spread we had planned for this month we've compiled this collection of bathing beauties.



These photos are only here in an attempt to gain readership. No other reason.

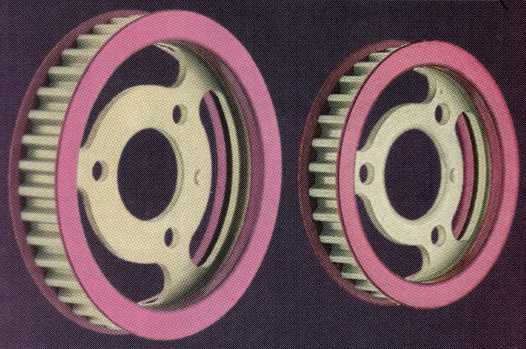
PERFORMANCE

HPI RS4 Nitro Aluminum Brake Kit



New, variable braking system. Lightweight aluminum. RRP 1575

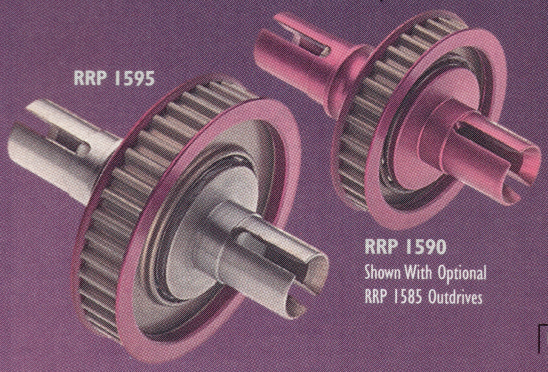
HPI RS4 Front One Way Diff Pulleys



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

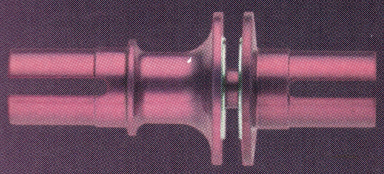
Performance from Precision

HPI RS4 Complete Ball Diff Units



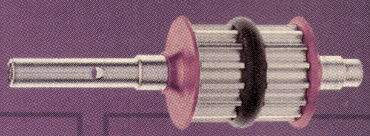
Hardened steel outdrives, ground and polished thrust washers, 2 5x8mm ball bearings, and aluminum pulley. RRP 1590 for RS4 Electric, and RRP 1595 for RS4 Nitro

HPI RS4 / Pro / Pro2 / Nitro Lite Aluminum Outdrives



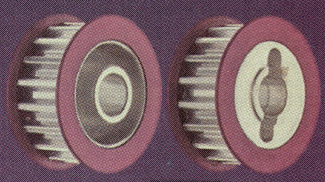
Purple anodized and 40% lighter than stock ball diff outdrives. RRP 1585

HPI RS4 Top Shaft Pulley



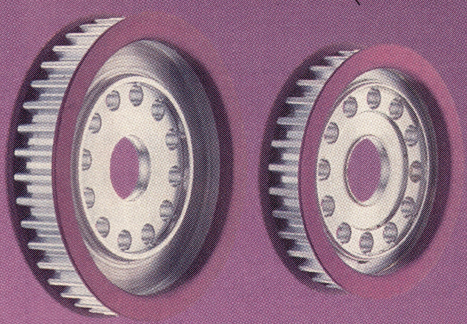
HPI RS4 Top Shaft Pulley: One piece pulley and shaft are precision cut and hard anodized. Purple anodized side flanges are pressed on. RRP 1527

HPI RS4 Nitro Small Drive Pulleys



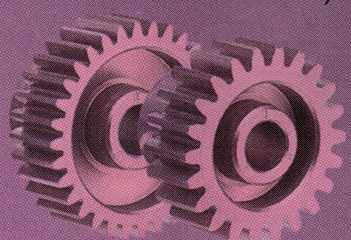
Drive pulleys sold in pairs. RRP 1538

HPI RS4 Diff Pulleys



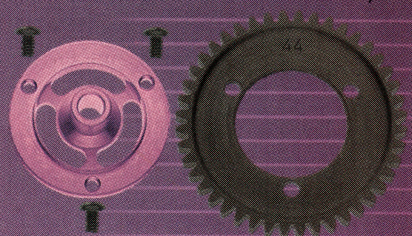
Precision machined, hard anodized aluminum diff pulleys. RRP 1539 fits HPI Nitro sedans. RRP 1528 fits HPI electric sedans.

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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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

4.5 January '99
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

4.6 Feb-Mar '99
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.

4.7 April '99
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!

5.0 July-August '99
Tested: Tamiya Juggernaut, Associated 10L3 Touring, Yokomo Mr-4 Touring Car, Trinity 12SB "Spashett Edition." How-To: Rebuild and Bleed Shocks, Driving Strategies and Techniques, Engine Break-In. Hook-Up: Associated RC10GT. Reedy Truck Race Coverage and more.

5.1 September '99
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.

5.6 March '00
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

5.8 May '00
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

5.9 June '00
Tested: HPI RS4 Sport 2, Associated FTB3, Kyosho GP Ultima, Tamiya TB-01. Learn How-To: Tune your Nitro Engine, Take your sedan from mild to wild, Pait like a pro with Thunder. How It Worx: R/C Oils. Features: Cactus Classic, Silver State Nitro Challenge.

6.0 July/August '00
Tested: Associated RC10FT, HPI RS4 Racer 2, Schumacher CAT 3000, Tamiya Stadium Raider. Learn How-To: Clean your Nitro, T-Maxx tips, XXXT Hook-ups, Race Coverage: Reedy TC Race.

6.1 September '00
Tested: Losi XXX-NT, Tamiya Juggernaut 2, Mugen MBX-4RR, Tamiya F103-LM, Buyers Guide: Budget FM Radios, How It Works: Becoming a Nitro Clutch Master, Race Coverage: On Road Nats.

6.2 October/November '00
Tested:Yokomo GT-4, HPI Nitro Rush, Associated Factory Team T-3, Atlas YM-34, T-Maxx Hop-ups from HELL!, How To: Take Care of Your Airbrush, Adjust Your Ride Height, Race Coverage: Off Road Gas Nats.

6.3 December '00
Tested Kyosho MP7.5, Ultima RB Type-R, Tamiya TGR, TA-04 Pro. Features: IFMAR On-Road Worlds Coverage. How To: Glow Plug Mania, Gear Soup, Track Etiquette, Touring car foam. Race Coverage: ROAR Modified Nationals

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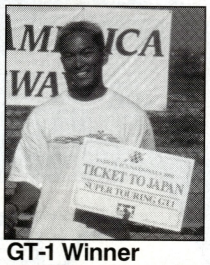


GT-1 Winner
Rodney Clemente



TCS National Finals winners

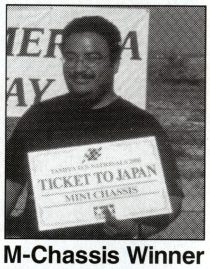


F-1 Winner
David Beale



GT-2 Winner
Benny Chou

The winners in the F-1, GT-2, GT-1, and M-Chassis classes have each won expense paid trips to Japan to compete in the 2000 Tamiya World Championship from November 18-19. Tamiya would like to thank the many competitors that came from across the country to compete in the TCS National Finals, and we would also like to thank everyone that participated in TCS events around the country this past year.



M-Chassis Winner
Miguel Macias

F-1

1st	David Beale
2nd	Marty Hageman
3rd	Chen-Hwa Chen
Best of Show	Dan Pozel
Top Qualifier	Chen-Hwa Chen

GT-2

1st	Benny Chou
2nd	Matt Pozel
3rd	Lee Passehl
Best of Show	Ian Aquino
Top Qualifier	Benny Chow

GT-1

1st	Rodney Clemente
2nd	Peter Robinson
3rd	Kevin Michellick
Best of Show	Brad Palmer
Top Qualifier	Derek Hung

M-Chassis

1st	Miguel Macias
2nd	Jeff Olmstead
3rd	Chou-Hang Iun
Best of Show	Dan Munoz
Top Qualifier	Chou-Hang Iun

B-Main Winners

F-1	Ray Meek
GT-2	Dude Pozel
GT-1	Sean Wu
M-Chassis	Larry Olmstead

C-Main Winners

F-1	Kurstin Hardy
GT2	Charles Aggenbach

Visit Our Website at www.tamiya.com

Mail in attached form to: Tamiya America, Inc., Attn: Customer Service, 2 Orion, Aliso Viejo CA 92656 or Phone: (800) TAMIYA-A or Fax: (949) 362-6852 Hurry! ***Registration for Race #76 closes November15, 2000.***

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☐ **TCS Race #77**
January 21, 2000
Trackside Hobbies
Glendale, WI

Name_____ Age _____

Address_____

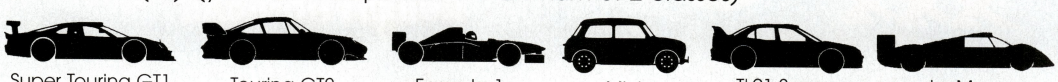
City_____ State _____ Zip _____

Phone #( ) _____

Frequency (1)_____ (2)_____ (3)_____

(Minimum of 2 frequencies required)

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



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1999-2000



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1st BRIAN KINWALD
•STOCK•(8 of 10)
1st CHRIS BRIDGEWATER(TQ)

'2000 ROAR NATIONALS
•MODIFIED•(9 of 10)
1st BRIAN KINWALD(TQ)
•STOCK•(6 of 10)
1st Chris Bridgewater(TQ)
•JUNIORS•(9 of 10)
1st Shaun Dunlap



'2000 EURO-CHAMPION
HUBERT HONIGAL

XXX

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'2000 ROAR NATIONALS
•MODIFIED•(7 of 10)
1st MATT FRANCIS(TQ)
•STOCK•(7 of 10)
1st CHRIS BRIDGEWATER(TQ)
•MASTERS•(9 of 10)
1st STEVE BENTON



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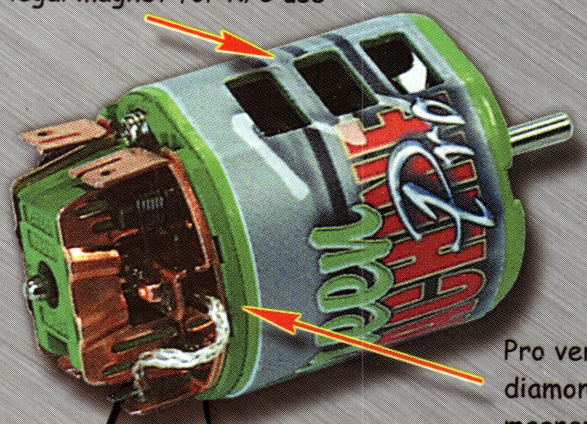

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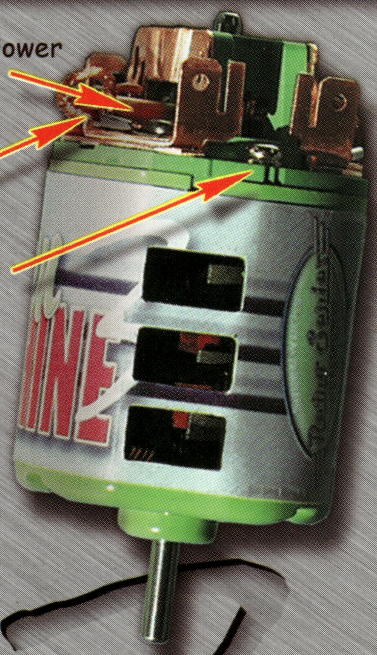

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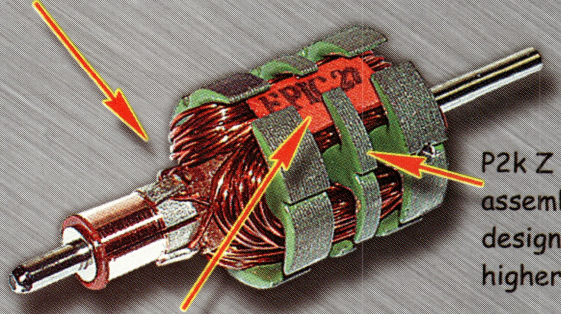

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