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NOVEMBER 2005

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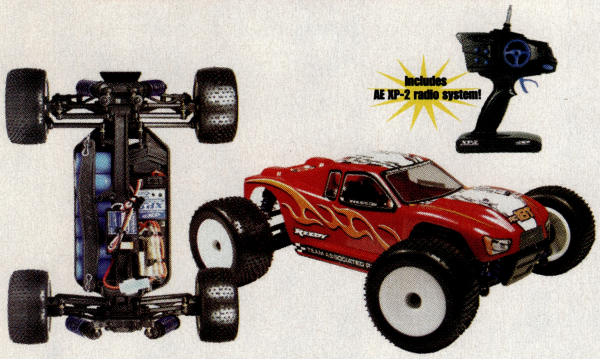


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NOVEMBER 2005, VOLUME 8, NO. 11




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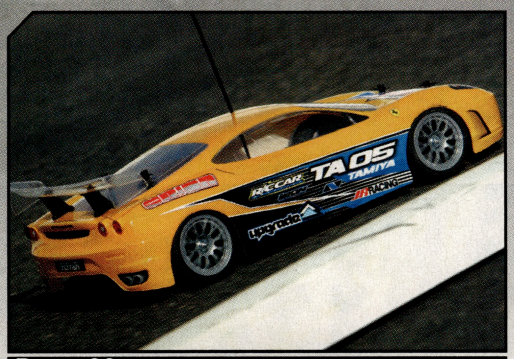


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***This page:*** **Nitro sedan takes flight (photo by Lump)** ***On the cover:*** **X-5 in action (photo by Frank Masi), Hi-Voltage buggy (photo by Mike Basher)**

# ESTABLISHING DOMINANCE IN THE R/C JUNGLE...

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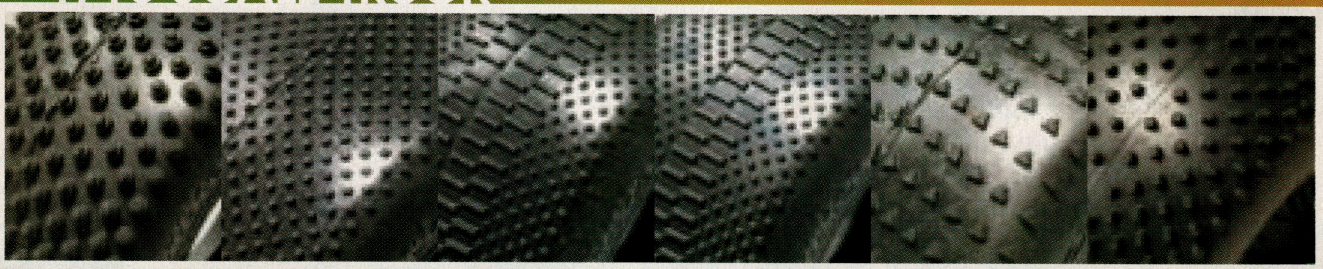
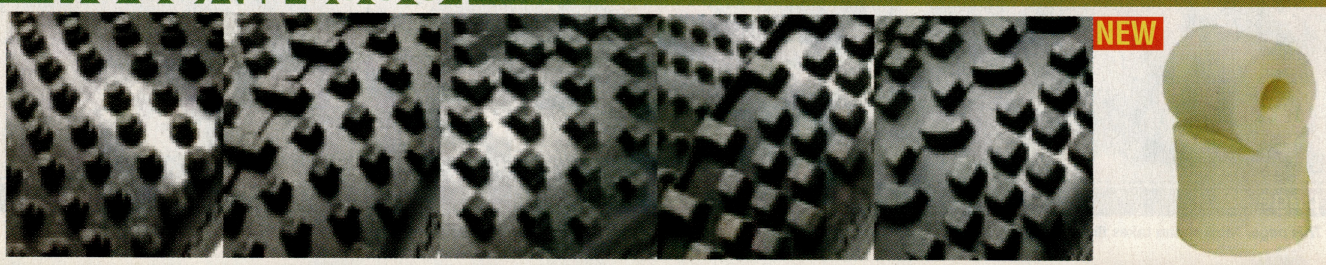


T300 Step Pin SS, S, MS | T310 Stinger S, MS, C | T320 Switch S, MS, C | T330 Wookie S, MS, C | T400 Diamond Back SS, S, MS, M | T340 Panther Stud S, MS

## 1/8 SCALE BUGGY



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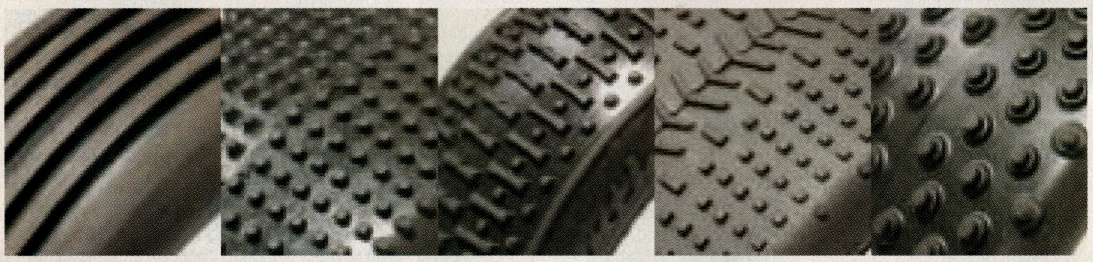
# 1/10 SCALE BUGGY



T700 Lynx (front)
S, MS

T710 Puma
SS, S, MS, C

T720 Bobcat (front)
S, MS, C

T750 Cheetah
SS, S, MS, C

T760 Tiger
SS, S, MS




T450 Burner Slick

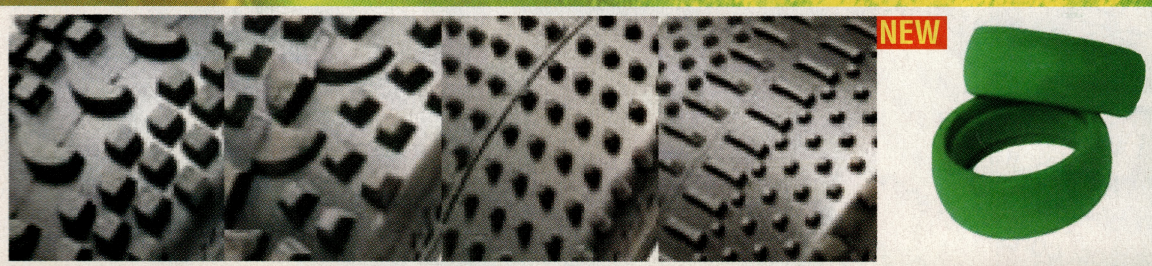
T475 Razor

T470 Paddle

T480 Cobra

T550 Micro Rib
S, MS, C

T553 V- Rib
S, MS, C






T935 Chameleon II
S, MS

T940 Gecko
S, MS

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S, MS, C

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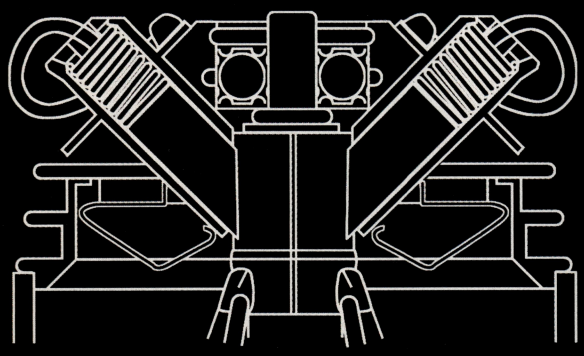

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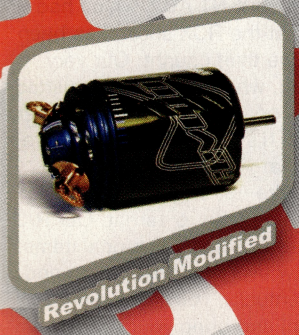

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# - DRIVERS' STAND -



BY FRANK MASI

## FOUR-WHEEL-DRIVE GAINS MOMENTUM

Interest in 4WD electric buggies always spikes prior to an IFMAR World Championship event, but this is ridiculous. Consider this: The 2WD buggy category, which has enjoyed greater popularity than 4WD since the first gold-tubbed RC10, is comprised of just two manufacturers.

It's a two horse race. As I write this, the Worlds is taking place in Collegno, Italy [*spoiler alert: Ryan Cavalieri won the 4WD portion*], and there are no fewer than eight manufacturers represented in the 4WD class. What's even more interesting is that three of the cars (JConcepts, X-Factory and Durango) are produced by aftermarket firms [*spoiler again: The JConcepts BJ4 is the 2005 World Champion*]. As the majority of the X-Five's parts are made by Losi, and the Durango and BJ4 have quite a bit of Associated hardware, do they share the champagne?

What's really great about these so-called "aftermarket" cars is that they demonstrate the potential of smaller firms to overcome the tremendous costs of mass-production manufacturing. In the case of the BJ4, Jason and Brad of JConcepts took various parts from Associated's bin and created a car where none existed. The BJ4 may use B4 suspension pieces and TC4 drivetrain bits, but the design is all-original. Associated has stated on numerous occasions that it would never produce its own 4WD buggy, but thanks to the clever minds at JConcepts, 4WD fans no longer have to wish.

This month's cover car, the X-Factory X-Five, is perhaps the greatest testimony of love for the 4WD class we've seen. The father and son team of Chazz and Paul Sinclair fulfilled a "what if" dream of extraordinary magnitude, splicing together what they felt were the best features of two buggies (the XX-4 and XXX-4) to create their own dream car. They even beat Team Losi, the X-Five's "source material," at the recent ROAR Off-Road Nationals to win the title in the 4WD class. Of course, a lot of credit must go to Greg Hodapp, but the fact remains that the X-Five is the first "non-factory" machine ever to win a ROAR National.




**At the IFMAR Worlds in Italy, several Losi drivers, including Travis Amezcua, were running a prototype buggy based on the JRX-S touring car's drivetrain.**

There has always been a very loyal cadre of 4WD racers. They often remain hidden, sometimes participating in the more popular classes, yet yearning. You'll know them by an errant part, perhaps by a driveshaft from an XX-4 poking out of a parts drawer, or a Yokomo bulkhead mixed in with their Allen drivers. Rest assured, they're in your midst. New hardware usually causes them to surface, and the excitement of an upcoming Worlds is the catalyst for a renewed interest in the 4WD class at the local track.

We're pretty observant fellas when it comes to R/C, and during our last trip to the track we noticed five 4WD buggies in the pits. The owners always have that "Do you think there'll be a class today?" look in their eyes, searching with great hope for kindred souls. On this day they got their wish, and we found ourselves overrun, the X-Five we sought to test torn from our hands and uncovered, suspension worked, tires turned, questions flew.

Yes, it's fairly assured that the 4WD class will be around for quite some time.

## ATTENTION THIEVES: GO ELSEWHERE

There will always be those who seek to separate you from your hard-earned money, and from your most beloved possessions. However, if you're pondering taking someone's R/C car or truck, we have some advice for you: Laboring for minimum wage is a lot more appealing than laboring for community service. It might be easy to get away with the initial crime, but the odds are you'll soon be caught. There has been a rash of thefts recently in the southern California R/C community, and nearly every perp has been nabbed. Adam Drake's beloved Losi XXX-NT AD2, which had been stolen at the RCX show, has been recovered, the thief caught. Our very own Hot Rod, whose oval car was lifted from his pits not too long ago, has been reunited with his coveted ride. Why are we certain that you'll be caught? Because you're not bright: you'd rather steal something than to earn it. Our R/C machines are extremely personal items, and we know every screw, scratch and diff ball. Eventually, you'll do something dumb (again) and bring your hot rig to a hobby shop for repair or advice (the genius who took Drake's ride took it to a shop to buy a radio for it), and it will likely be recognized. Never mess with a person's car.

By: TEAM INTEGY

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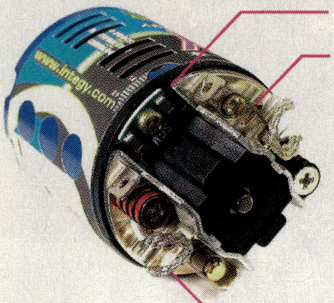

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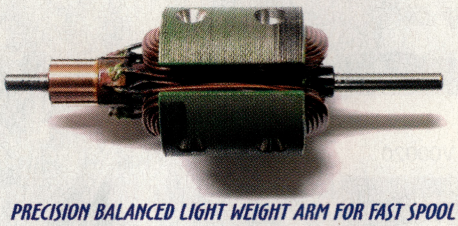

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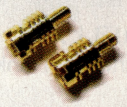

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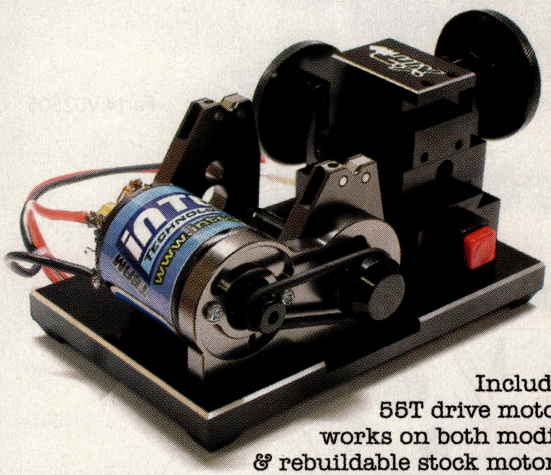

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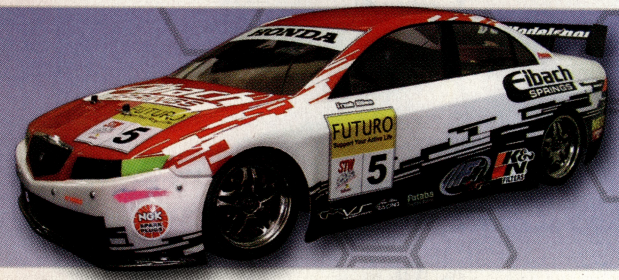


**Acura FX**
Designed By: Frank Killam
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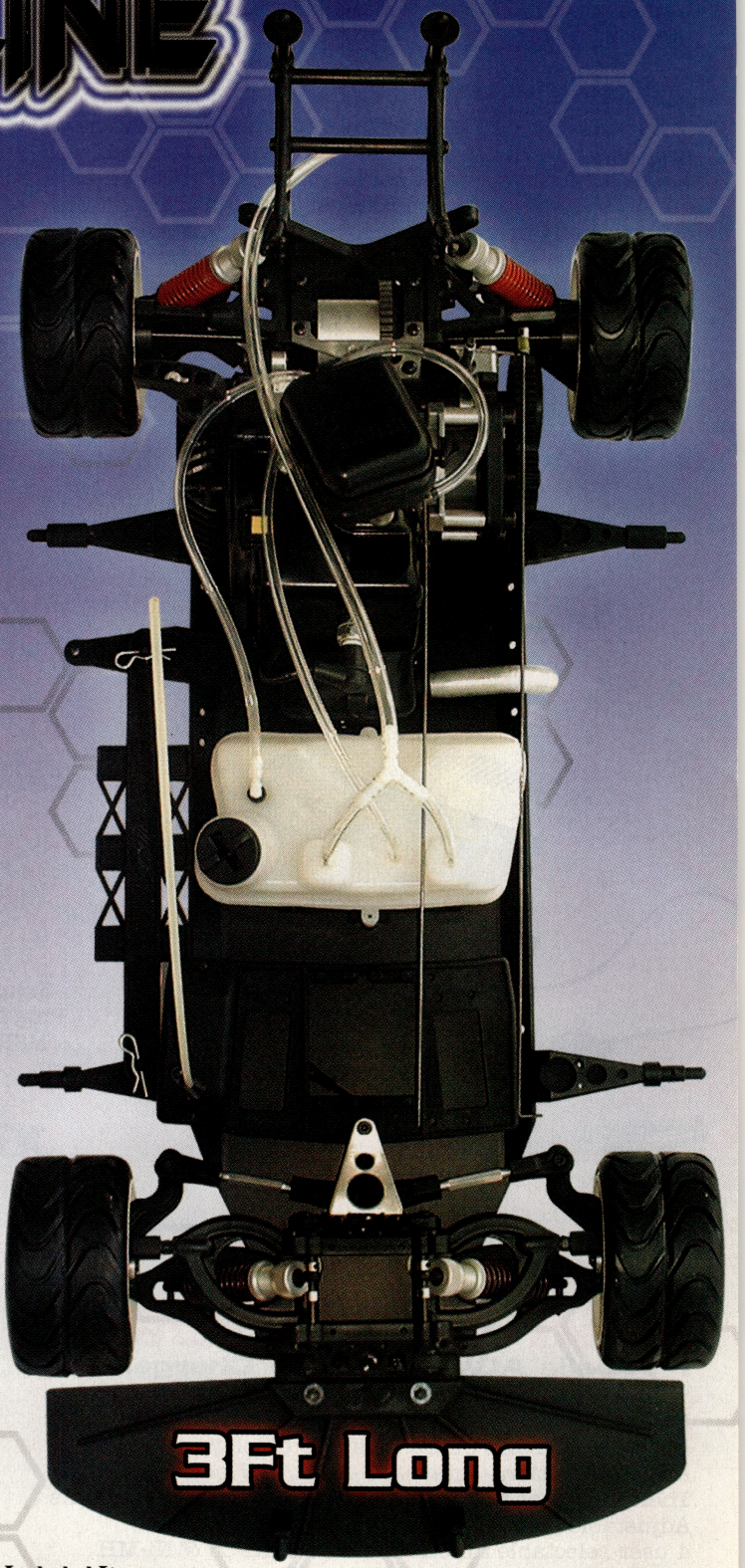
**SP535**
Designed By: Frank Killam
Part# V02505

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**Racing Air-filter**
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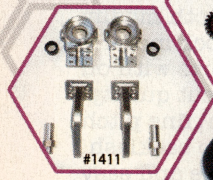
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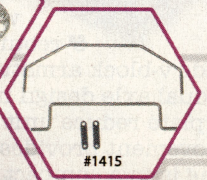
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NEWSFLASH [PAGE 16]




BENCH RACING [PAGE 24]

# - READERS' RIGS -






## REALLY COOL RC18MT
**Rick Umipig**
**Chino Hills, California**

Rick chose the RC18Mt over the 18T because it more resembles his MGT, and he started to trick it out after only two weeks. He went to the Team Associated Factory Team billet-aluminum upgrade kit, Ti turnbuckles, blue graphite battery strap, 11-tooth pinion, carbide diff balls and gold springs. Then Rick hit the aftermarket and installed an Integy alloy steering bellcrank set, servo cover and motor heatsink, Lunsford Ti hingepins, MIP shiny CVDs and super diffs, and an RPM front bumper. For electrics, Rick went with a Reedy Minimax motor and Venom NiMH battery packs. He's not done yet and plans to install a Mamba brushless motor and ESC, Trinity adaptor and 1/10 touring car wheels, and an Airtronics M8 radio with Spektrum DSM. Sweet!




## STYLIN' SAVAGE 25, EH?
**Kevin Kamminga**
**Rockwood, Ontario, Canada**

Kevin tricked out his HPI Svage 25 with steel brake discs, Tsais Bad Boy pipe, HPI six-spoke black-chrome wheels, a Pro-Line LST body, Hi-Tec steering servo and custom-made, 6061-T6 aluminum skidplate and fuel tank cover. Kamminga also did a fine job of photographing his tricked-out Savage, too.

## RAGIN' RS4 PRO 2 & MIGHTY MINI-T
**John Vasquez**
**Slidell, Louisiana**



John, the Ragin' Cajun, tricked out his HPI RS4 Pro 2 and Losi Mini-T to the max. The Pro 2 got HPI's aluminum and graphite optional parts, Orion Rush 19-turn motor, Novak XXL receiver and 610-HRV ESC, along with HPI super V-groove tires on Pro-Line Gumby wheels. He painted the BMW 3-series body himself with two-tone ghost flames. Vasquez maximized his Mini-T with Full Force aluminum chassis, Integy aluminum Evo-X conversion kit, GPM shocks and Ti turnbuckles, full ball bearings and aluminum tranny gears. He also went with the Mamba brushless motor and ESC, Novak XXL receiver, H-Tec metal-gear servo, MIP CVDs, lightweight axles and top tranny gear, and ball diff. He finished it off with Trinity Monster wheels, an aluminum wheelie bar and Pro-Line Escalade body. These rides are hotter than Tabasco sauce!

Send in photos and information on your R/C creations to Reader's Rigs, c/o *R/C Car* magazine, P.O. Box 958, Valencia, CA 91380-0958 or email to *timt@hi-torque.com*.

If we feature your rig, we'll send you a year's subscription to Hi-Torque's *R/C Car* magazine.

## ROBIN HOOD & THE BOUNTY HUNTER
### Paul Naison/Gee Dee Models
### Nottingham, England

Paul tricked out his Tamiya TXT1 to look like the famous Bounty Hunter Monster Truck and customized the chassis to run two 17X2 Team Orion Modified motors. These are controlled by an F1 Pro Reverse digital ESC (they call them "Speedo's" in the Old Country), so the Tamiya can rip through Nottingham Forest in search of Robin Hood. To deal with the forces the Imex Truck Pull tires put on the steering, Naison upgraded to two JR 591 servos with custom mounts and thicker steering rods. The Bounty Hunter has full ball bearings, custom dummy exhausts and shocks, a Parmer blown dragster engine cut to fit the battery strap, endless cup washers and cap-head screws, custom sponsor plates and planetries, and is topped off with HPI's Bounty Hunter body.





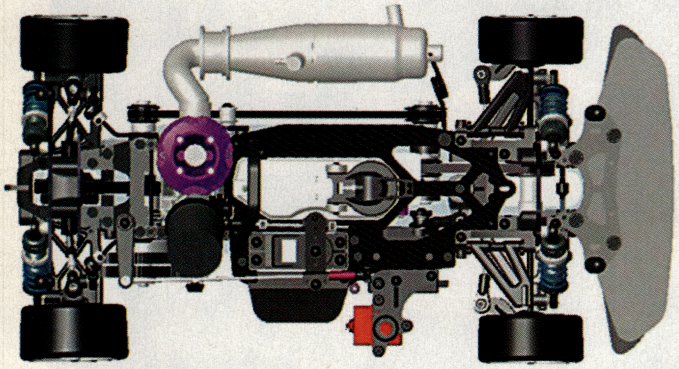

## MATCHING T-MAXX AND SAVAGE
### Eric Nieves, Jr.
### via the internet

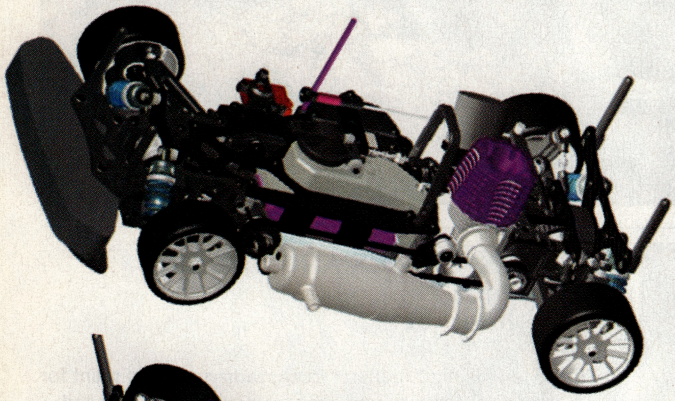
Eric styled his nitro monster trucks with matching paint for the big-rig and Hummer bodies, and they're equally styled under the lexan. His big-rig T-Maxx has a 2.5 conversion, Motor Saver airfilter, HPI 5-cell receiver pack, Ritter carbon-fiber pipe, RPM skidplates and bumpers and a Hi-Tec high-torque steering servo. The Savage .25 RTR has a 3-speed tranny, HPI 5-cell pack, high-flow airfilter, side-pipe exhaust, dual-disc conversion and servo-saver upgrade, plus a Hi-Tec steering servo and reverse module. Nieves also has five other R/Cs - a Losi LST, CEN GT1, Traxxas Nitro Sport, Nitro Stampede and an Electric Stampede.

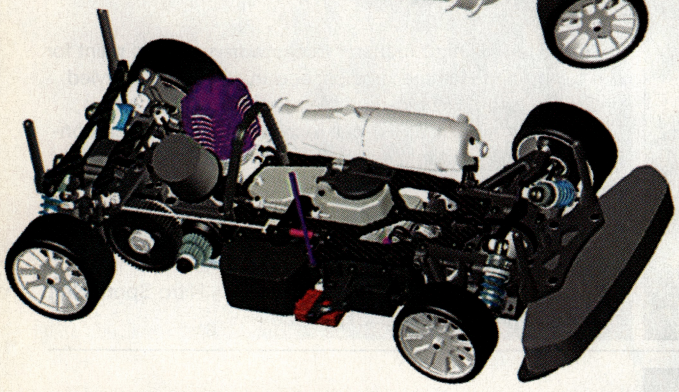


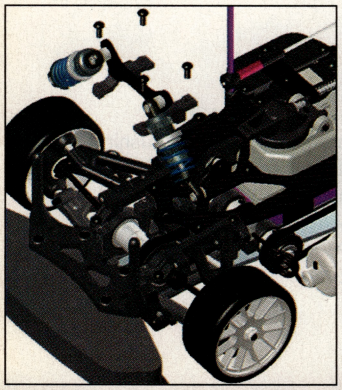

## RACING REVO
### Josh Godsey
### Kingsport, TN

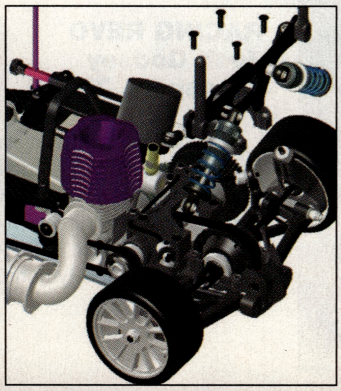
Josh had his buddy at Rare Air Custom Airbrushing paint his Revo's body, and he races it at Kilby's Extreme R/C. His Traxxas has an RB TM323 engine, titanium shock ends, a K&N airfilter and Futaba servos. He uses P2 rockers, RPM A-arms and Hurrican wheels shod with Panther Pythons.











# FIRST LOOK: MUGEN SEIKI MTX-4

## The World Champion's little brother

Mugen Seiki has been teasing us with just a glimpse of its upcoming MTX-4 nitro sedan on its Website (*www.mugenracing.com*). Well, we finally had enough and demanded some additional information, and to our surprise, we got our wish. The MTX-4 replaces the current MTX-3 as Mugen's top-of-the-line 1/10-scale nitro touring car, and as the previous car has proven one of the winningest designs of its era, we can only expect great things of the MTX-4.

### NEW FEATURES

Highlights of the MTX-4 include a new 3mm 7075 T-6 aluminum chassis, a new wide-span rear body mount to more evenly distribute downforce from the rear of the body and wing to the rear wheels, new 5.5mm-longer rear lower suspension arms, an all-new front suspension design, new front and rear bulkheads that make it easier to remove the diffs, and a new lower-CG fuel tank, on which the cap is located towards the front for easier refilling.

### ADDITIONAL FEATURES

Other features found on the MTX-4 include a belt-driven full-time 4WD system, a shoe-type two-speed transmission, an adjustable blade-type front stabilizer bar, adjustable front suspension bump and rebound stops, adjustable rear suspension rebound stop, a low-CG battery holder, carbon radio plate, and carbon damper stays. Also included are a turnbuckle steering tie-rod, adjustable servo-saver mechanism, adjustable belt tensioner, front one-way drive and a rear bevel-gear diff.

### CAN'T WAIT?

The MTX-4 should be available within a few weeks of this issue's on-sale date, and we expect to receive a test sample in time for a review in the December or January issue. Using all it's learned from its World Champion MRX-4 1/18-scale on-road racer, Mugen appears to have created a powerful entry into the super-competitive nitro touring car class.

### SPECS

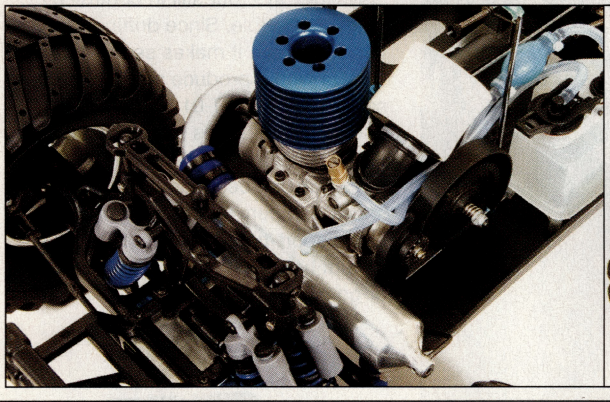
**Price** .....TBA
**Length** .....15in/380mm
**Width** .....7.8in/199mm
**Wheelbase** .....10.2in/259mm
**Track (f;r)**.....6.8in/173mm; 6.7in/169mm
**Caster** .....7.5 to 15.4 degrees adjustable
**Gear ratio**.....7.49 (first), 4.97 (second)

### SOURCE

**Mugen Seiki Racing,** 20525 Crescent Bay Dr., Lake Forest, CA 92630 • (949) 707-5607; fax (949) 707-5614

## TEAM ASSOCIATED MGT RTR 4.60SE

Let the monster-truck horsepower wars grab another gear with the introduction of Team Associated's Monster GT 4.60SE. The Special Edition was created to give the CEN 46LE (tested in this issue) a run for its money, and the Ready-To-Run's pull-start 4.60ci engine has a 33 percent increase in displacement over the original MGT. The 4.60SE comes with steel gears in the two-speed tranny for durability under monster loads, a three-shoe clutch, and CVA center-drives. It will also boast a heavy-duty, high-torque steering servo and an XP-3 radio, in addition to standard MGT features like eight piggyback-reservoir shocks, inboard exhaust, spur/pinion-gear cover and fuel-primer. MSRP is $839.99, but street price will be below that, so let's get ready to rumble!







## THE MONTH IN RACING

R/C racers take to the dirt and the pavement this month, with ROAR holding on-road electric nationals in Florida and off-road stock nationals in Arizona. Nitroheads get track time, too, with the Sidewinder Nitro Explosion going off in Southern California. Time to carve up the track before carving the Halloween pumpkin!

| Date | Event | Host | Location | Contact |
|---|---|---|---|---|
| Oct. 6-9 | ROAR On-Road Electric Nat'ls | Speedline Hobbies | Holiday, FL | (727) 536-7223; *speedlinehobbies@aol.com* |
| Oct. 8-9 | Sidewinder Nitro Explosion | Jimmy Babcock RCRL | Sun Valley, CA | (661) 255-2404; *jimmybabcock.com* |
| Oct. 16 | Babcock Off-Road Series Rd#8 | Hot Rod Hobbies | Saugus, CA | (661) 255-2404; *jimmybabcock.com* |
| Oct. 20-23 | ROAR Stock Off-Road Nat'ls | Scottsdale R/C Speedway | Scottsdale, AZ | (480) 945-2186; *scottsdalerc.com* |
| Oct. 28-30 | Reedy Truck Race of Champions | Hot Rod Hobbies | Saugus, CA | (661) 255-2404; *jimmybabcock.com* |

## LRP MICRO-ELECTRICS GO BIG

LRP is set to boost your 1/18-scale R/C's power bigtime with its new Fusion Micro-Modified motor and VTEC battery packs. The Fusion Micro-Mod shrinks 1/10-scale technology to micro-size but not micro-power. The Fusion (LRP52018) has an 18-turn armature with 2mm shaft, lay-down brushes, full ball-bearings, adjustable timing and an MSRP of $44.95. LRP also has four new VTEC 1200mAh battery packs for 1/18s. The LRP75210 pack for the Mini-T is a six-cell, non-matched, non-pushed, 1200mAh unit that goes for $43.99. LRP also makes a non-matched, non-pushed pack for the RC18T/MT and other 1/18s that's assembled lengthwise so owners can adjust weight bias forward or backward, for $39.99 (LRP75230). A matched and pushed version (LRP75330) goes for $49.99, or you can go with a matched/pushed standard-length pack (LRP75310) for the same price.



# - NEWS FLASH -




## HIGH PLAINS DRIFTER

Japan loves all things American, like Clint Eastwood westerns and the Pikes Peak Hillclimb, which had a "drifting" exhibition this year. If you haven't heard of drifting, it's an off-shoot of rally-car racing where the sole purpose is to stay sideways (but still in control) as long as possible. Since drifting was born in Japan, it makes sence that Tamiya would produce a drifting version of its 4WD TT-01 Subaru Impreza. The TT-01D features rubber/plastic drifting tires, redesigned suspension arms, full ball-bearings, CVA mini-shock dampers with short, soft springs and a sport-tuned motor with aluminum heat-sink mount. Go sideways, or go home!

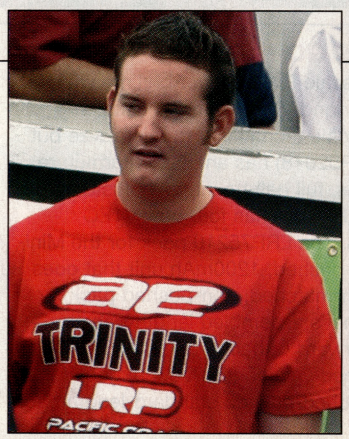
## CROWD PLEAZER 2.0 FOR THE JATO

Pro-Line Racing has morphed its National Championship-winning truck-body design to the innovative Traxxas JATO and produced its Crowd Pleazer 2.0 JATO (3202-00). The JATO 2.0 is constructed of .040 Lexan and includes a decal sheet and paint-then-peel overspray film, and it has an MSRP of $25. Slam your JATO and get ready for lift-off.



## CAVALIERI AND CRAGG WORLD CHAMPIONS

Team Associated's Neil Cragg, hot from his recent win at the off-road Euros, has won his first-ever IFMAR World Championship in the 2WD buggy category. Cragg, who hails from Great Britain, drove his Reedy-powered B4 to edge out Associated teammates Ryan Cavalieri and Ryan Maifield. Cavalieri repeated his performance in 2003 by winning his second-straight 4WD World Championship, this time driving under the JConcepts/Trinity tent. Cavalieri's Trinity powered BJ4 featured a redesigned chassis and a new LRP QC3 ESC.





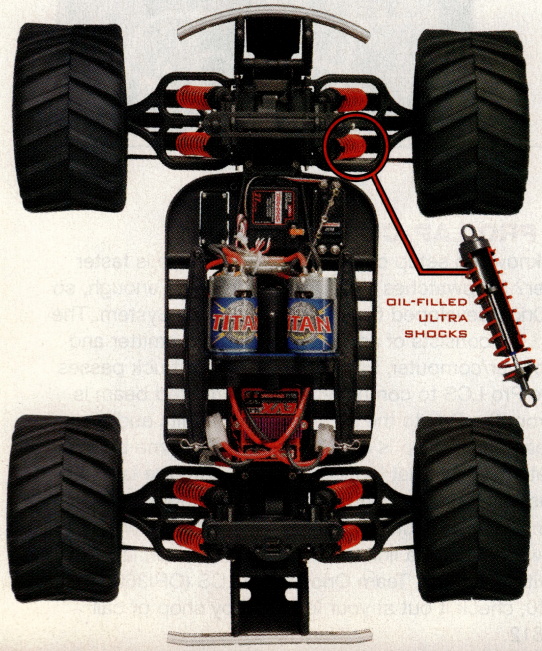

# MAXX VOLTAGE




# E-MAXX™

## THE MOST POWERFUL RTR ELECTRIC MONSTER

The electric E-Maxx has all the great suspension, driving, and upgrade capability of the T-Maxx but with our exclusive 14-volt electric power system. Twin Titan® fan-cooled 550 motors are fed over 14-volts by dual 6-cell battery packs in series. The Novak designed and built EVX programmable electronic speed control delivers smooth forward, reverse, and braking control. Blister the earth with wheelie-popping launches, then shift the transmission into second gear with your TQ-3 transmitter for incredible top speed, and finally stop on a dime with the EVX's powerful brakes. E-Maxx allows you to upshift or downshift the transmission at any time!




### TITAN® 550 MOTORS

The twin Titan fan-cooled 14.4V 550 size motors output monster torque thanks to oversized armatures that are 30% longer than a standard 540 size motor.

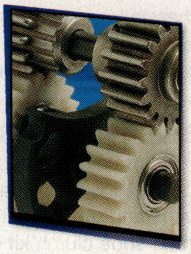



**Truck of the Year!**
R/C Car Action, 2001



### 2-SPEED TRANSMISSION

Shift-on-the-fly between monster torque or blistering speed. Upshift or downshift the transmission at any time from the transmitter. Only E-Maxx has it.






**14.4v**

### EVX ELECTRONIC SPEED CONTROL*

Designed and built in the U.S.A. by Novak Electronics, the EVX features three drive profiles, Smart Braking™†, One-Touch Set-Up™†, Efficient Polar Drive™†, Thermal Shutdown Protection, and gold-plated battery connectors. It's backed by the exclusive Traxxas Lifetime Electronics Warranty.




- Twin Titan® fan-cooled 550 size motors
- 14-Volt EVX Electronic Speed Control
- 2-speed transmission "shifts-on-the-fly" from the transmitter
- Eight, adjustable oil-filled Ultra Shocks
- Up to 10 shock mounting positions
- Adjustable caster, camber, and toe
- Hi-torque steering servo with bellcrank steering

MODEL 3906 READY-TO-RACE®

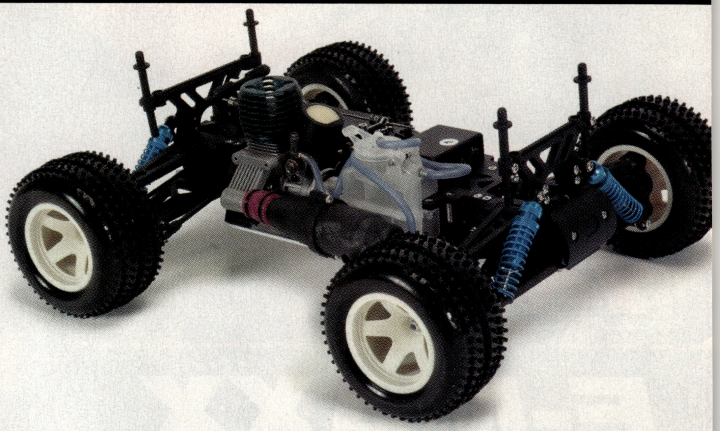
TRAXXAS®

WHERE POWER MEETS TECHNOLOGY™

© Copyright Traxxas 2005. Batteries and charger not included. Specifications subject to change. Ready-To-Race is a registered trademark of Traxxas. The EVX is manufactured for Traxxas by Novak Electronics, Inc. *Novak and the Novak logo are © Novak Electronics Inc. †Trademarks of Novak Electronics, Inc. **Speed measured with calibrated radar using two 7-cell battery packs.

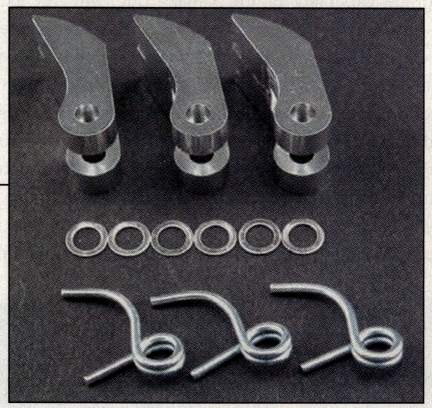
# - NEWS FLASH -



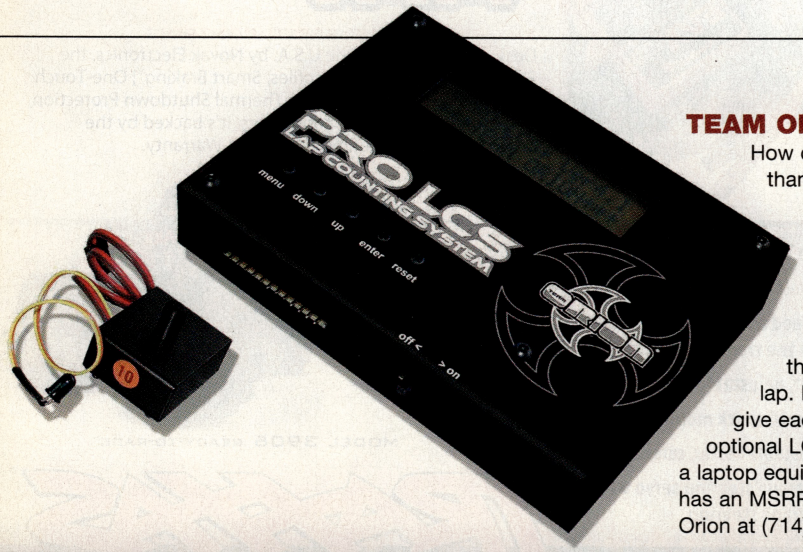
## IRC RACING 4WD 1/10-SCALE NITROS

IRC Racing enters the 4WD, 1/10-scale, off-road nitro market with its Condor .15-.18 buggy and Conquistador Aggressor .18 truck. Both are RTR and come with an RC Sport 2-PY pistol (or stick) AM radio, receiver and RS-1 servos. They also share many chassis (servo-saver steering), drive-train (bevel-gear front/rear diffs) and suspension components and feature pillow-ball adjustable camber and toe, and plastic or aluminum shocks with threaded preload adjusters. The Condor buggy is available with .15 or .18 pull-start engine and with one- or two-speed transmission. It also has anti-sway bars, front and rear, and adjustable wing. The Aggressor truck comes with a .18 pull-start engine, single-speed tranny and X-pin truck tires. Both come with either ball-bearings or bushings, and there are many hop-up options like CVDs, adjustable tie-rods and aluminum clutch shoes. Prices range from $250 to $260; contact IRC Racing at *www.internetrc.com*.



## BILLET SHOES FOR THE LST

Team Losi introduces its aluminum clutch shoe and spring kit (LOSB3323) for the LST. Precision-machined, billet-aluminum shoes were developed to withstand the pounding of high-powered nitro-racing without fading. The three-shoe clutch kit includes springs and six shims to prevent friction or galling with the aluminum flywheel, and has an MSRP of $19.99.

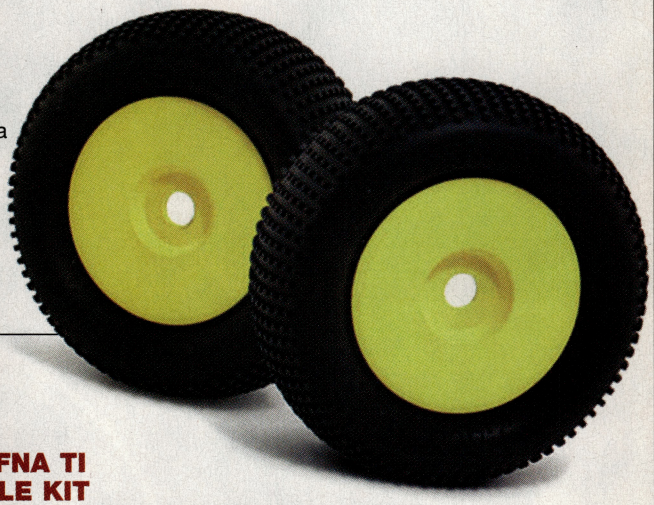


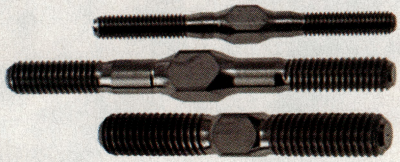

## TEAM ORION PRO LAP-COUNT SYSTEM

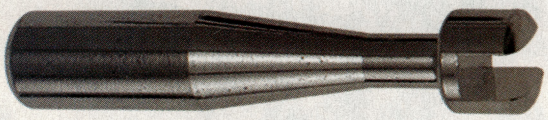
How do you know if a setup change or particular line is faster than another? Stopwatches simply aren't accurate enough, so Team Orion developed the Pro Lap-Counting System. The Pro LCS consists of an R/C-mounted transmitter and a receiver/computer. Each time the car or truck passes by the Pro LCS to complete a lap, an infrared beam is sent from the R/C to the receiver, which emits audible tones each time a lap is counted, when a laptime beats the predetermined target lap, or when you turn the fastest lap. It's adjustable for length of run from 1-10 minutes and will give each laptime after the run. The Pro LCS also works with optional LCS software and data link to save, log and graph laps on a laptop equipped with Windows. Team Orion's Pro LCS (ORI36001) has an MSRP of $330; check it out at your local hobby shop or call Orion at (714) 694-2812.

## HPI NUBZ TRUGGY/MT TIRES

HPI Racing introduces pre-glued Nubz monster truck tires, which are some 35 percent lighter than Savage tires. Nubz have a smaller (143mm x 68mm) size, rounded profile, internal ribs, contoured foam inserts and a new soft compound rubber (XS, also available on Dirt Bonz). They're $46 a pair and come mounted on white (4925), black (4926) or yellow (4928) rims, which have 17mm hex-hubs to fit most truggies or Savages with HPI's 17mm conversion kit (87229) or universals with 17mm hex (87230). Get better acceleration, handling and braking with your MT or truggy with Nubz, which also have a horizontal wheel groove to isolate centrifugal force, so that the tire and wheel stay glued.

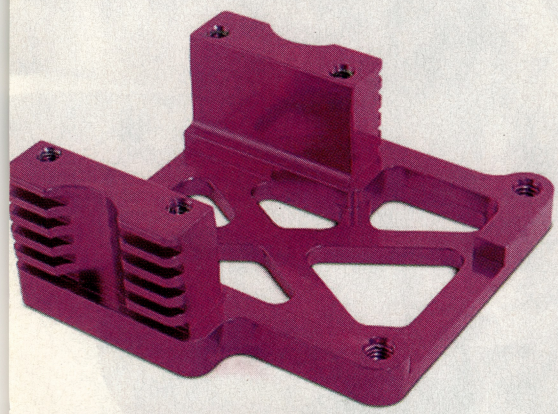






## JAMMIN'/OFNA TI TURNBUCKLE KIT

Jammin' Products has a new titanium turnbuckle kit for Jammin'/OFNA buggies. The kit (No. 40670) includes Ti turnbuckles, tie-rods, and linkage and adjustment wrench, and Ti-magnate Lunsford manufactures the pieces for Jammin' Products. MSRP is $59.95, but street price will hover around $45-50. Lighten and toughen your OFNA/Jammin' 1/8-scale.



## SAVAGE HEATSINK ENGINE MOUNT

HPI Racing has developed a new heavy-duty heatsink engine mount for its popular line of Savage monster trucks (and the yet-to-be-released ATV). The one-piece aluminum mount (86399) has cooling fins and is anodized HPI purple to decrease engine temps and increase the coolness factor, respectively. This option comes with mounting hardware and instructions and lets your Savage run cooler for $50.



## STAFFORD TAKES 4WD EUROPEAN CHAMPS

Europe's 1/10-Scale Electric Off-Road Championships were held in Montigny le Brettonneuy, France, and more than 150 competitors made the show, with most hailing from Great Britain. Team Losi and Orion hotshoe Ellis Stafford was TQ in 4WD, and he had a spectacular battle with fourth-qualifier Richard Cree for the European Championship. In the three-main finals, Stafford took the lead in the first round but had a technical problem and handed the win to Cree. Ellis again took the point in the second main but biffed back to second behind Cree, who rolled it himself just meters from the finish. Ellis won the second main, then he wisely finished behind Neil Cragg in the final main to secure the title over Cree. It was a double-bridesmaid weekend for Cree, who finished second in 2WD behind Losi's Hubert "Hupo" Honigl.


hpi-racing
LONG TRAVEL SUSPENSION
Helps soak up the bumps and huge jumps that come with the territory!
ALLOY TUNED PIPE
For looks and high performance
DIRT BONZ TIRES
High grip Dirt Bonz tires mounted on chrome 6-spoke wheels
3 SPEED INCLUDED!
You get more punch and higher top speed, the best of both worlds! Faster track times, easier wheelies, blistering top speed . . . this is the ultimate Savage upgrade and it's standard equipment!
DUAL DISC BRAKES
For maximum stopping power!
4 GEAR DIFFS
Front and rear "4 gear" differentials with updated gears are included for added durability.
CAM SERVO SAVER
The steering has been upgraded to an accurate cam-type servo saver, delivering quick steering response and added servo protection.

NOW AVAILABLE . . .

# LIMITED EDITION SAVAGE 25 with 3 SPEED TRANNY!

# LIMITED EDITION

*The RTR Savage 25 Limited Edition comes with several of the most popular upgrade parts pre-installed, including the popular 3 speed transmission! The 3 speed tranny adds an extra shift for improved power and efficiency, and it's also beefed up internally for improved durability. To extract the most out of the S-25 engine we added a polished aluminum dual chamber tuned pipe, delivering a smooth and wide power band. For extra tuning choices, the truck comes standard with 15T/49T gearing and we include optional 19T and 47T gears. The dual disc brake system gives the truck the ability to stop time after time with no brake fade. We also added shiny chrome 6 spoke wheels and a special metallic paint job for the GT-1 body. The included Dirt Bonz tires give the truck incredible handling and performance for off-road driving. Several of the latest Savage upgrades are pre-installed: Cam-type servo saver for more accurate and responsive steering, 4-gear diffs for extra durability, improved throttle and brake linkage, rear tie-rod washers, 3 shoe clutch for quick acceleration, and our new high performance air filter. Get the Limited Edition Savage today!*




**Pre-Built!**
*No need to build it, we did that for you. Buy it at your local hobby shop. Ready to go out of the box!*

*#852 RTR Savage 25 Limited Edition Truck with 3 Speed and Nitro GT-1 Truck Body*

hpi·racing

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WWW.HPIRACING.COM



# - BENCH RACING -

## FOOD FOR THOUGHT!



Americans on average eat 18 acres [780,000 sq. ft.] of pizza a day, not including what R/C racers eat at the track.




You find the most interesting stuff on the road—bet you didn't know I make ice cream sandwiches?





## TRIGGER PULLING ON MY WAY TO CHINA

No matter if I'm on the clock or off, I always try some trigger pulling at various tracks around the country or the world. On my recent trip to China, I stopped off in San Francisco to visit Power Racing. We had half a day before we left for China, so I asked Cameron if Delta Raceway was still around and racing. As luck would have it they were, and I found out that the facility had been recently bought by Don and Craig and had undergone major changes; that was good enough for me.

As we pulled up to the new Delta Raceway, I could see that changes had been made. The same quaint atmosphere was still there, but now there was a huge off-road track and a sweet dirt oval track under construction. I was lucky, because they had just made the changes, and it's a good opportunity to tell you all about it. When the new Delta is completed, this will be a great facility, and you have to check it out. I knew this was Tyler Vic's home track, and I was hoping to see him. Mainly, I wanted to steal his car and race in one of the heats; sure enough I found Tyler sitting in the pits, and, with the help of Tyler's pop, Tyler reluctantly let me pull some trigger with his buggy.

The track is huge and has some interesting sections; when it's done, this will be one fine track, and I can't wait to attend a race here. After my half-day of racing, I was ready for my mission to China and to pull trigger on the Great Wall; I had to be in tip-top shape if I were to pull off being the first person to ever pull trigger on the Great wall.Thanks, Vic and the boys at Delta, for letting me sneak in on some racing fun.

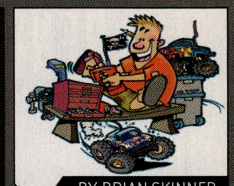
Contact: **Delta R/C Raceway & Hobby Shop;** 1201 West 10th. Street, Antioch, CA 94509; (925) 778-2965
*www.deltarc.com*




This is Don and Craig, the new owners of Delta R/C; they wanted me to tell you there'll be some big races coming up, so come out and visit Delta.

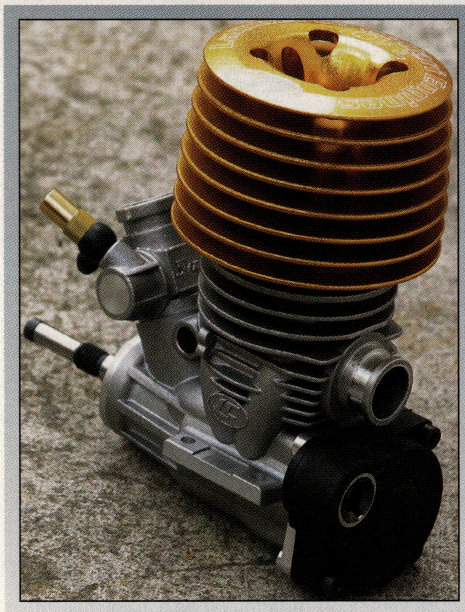


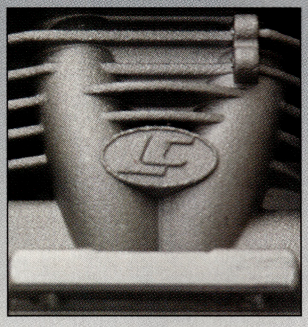

These two just wanted to get in the magazine, so, my two friends, here you go.



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

## MONSTER POWER FOR MONSTER TRUCKS!



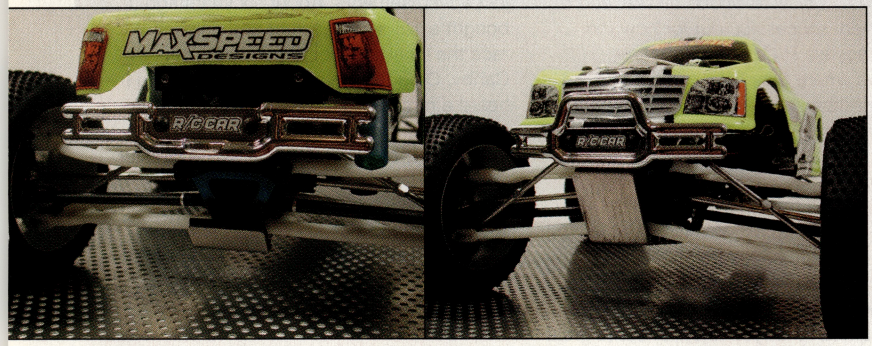


One of the features of the new Collari engine is the new engine case; the tubular transfer ports look pretty cool coming out of the case and look more like what you would see on a full scale two-stroke engine.

I spy, with my little eye, this sweet new Collari .32 engine for truggies and monster trucks. I spotted this little baby while I was in San Francisco. At the time, it was not ready for release, but now this new engine will be available and sells for around $229 street price. It's meant as a drop-in for our big bad trucks and has the standard .21 engine-block mount, so conversion should be a snap. It also comes stock with a Roto-Start back plate instead of those funky old pull-starters. The Collari .32 has ABC sleeve construction and a nice fluted and tapered con-rod as stock issue. This beast is factory rated at 3.2 hp at 38,500 rpm and will make truckers everywhere punch-drunk with power. Unfortunately for the 2006 race year, and for most events this year, a .32 engine is not allowed for competition; a .28 engine is the largest they will let you go—something I wish they would increase. Regardless, this engine should be a great addition for the basher and will probably blow the doors off your buddies' trucks.

Hopefully, we'll get one for review in the near future, but, if you can't wait for the test and "just got to have one now," they should be in shops soon, or you can contact Werks Racing at:

**Werks Racing**, 2814 Aiello Drive Unit B, San Jose, CA 95111, (408) 365-1000, *www.werksracing.com*




## MORE RPM FOR YOUR REVO

By now, your Revo bumpers are probably getting a little ragged-looking. Fear not, my fashion-challenged brethren; RPM has come to the rescue with a new tubular bumper for your Revo that looks just like the real thing. These beauties are just the thing to spice up your ride and make it more durable, too. RPM's bumpers are guaranteed not to break and will bolt up to your Revo in seconds. I went with the chrome bumpers because I like shiny things, but they are available in black, blue, and gray if you want a choice in decking out your Revo. Another nice touch—RPM included a trailer hitch mount in the rear if you want to concourse your Revo with a trailer, and they even made room for stickers or a fake license plate in the bolt areas (see our cool *R/C Car* logo in the photo?). RPM is known for making excellent products that work and are durable, so no need to tell you all of that, but I should tell you that these bumpers are priced right at $8.95 for colors, and the chrome units are $10.95. They're currently available at a hobby shop near you, and you can check out RPM and all of their products at:

**RPM R/C Products,** 14978 Sierra Bonita Lane, Chino, CA 91710; (909) 393-0366, *www.rpmrcproducts.com*




## PIPE DREAMS!

Attention buggy and truggy fans; if you're running the new MSR truggy from Mugen, or anything else for that matter, you may want to check out Mugen's MSR .21 Polished Off-road Pipe/Manifold Combo. This is the pipe Chad Bradley has been using all year to swoop the competition in both classes, so I'm giving you a heads-up on how to give that guy a harder time at the races. For the rest of you who don't want to tackle the monumental job of acing out Chad at the finish line, this pipe is a good all-around pipe for your engine. This pipe is good for bottom to top-end power, and your engine will love you for it.

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# - BENCH RACING -

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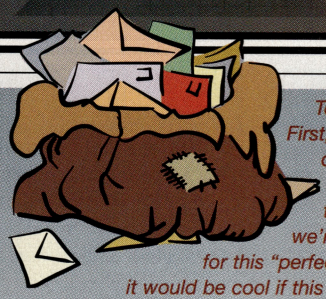
BY BRIAN SKINNER
email: brians@hi-torque.com

## SKINNY'S MAIL BAG



Hey, Frank. Hey, Skinny!

I had an idea the other day when I was watching Nascar Nation. My idea is as follows: I think that ROAR and other sanctioning bodies should have a thing where you can show up at a track on a certain day, and say; "I would like to run a (insert vehicle here) for (insert class event here). Are there any (insert type of vehicle here) available right now or in the next few minutes? Sort of like those hand-out spec motors, only it includes the rest of the vehicle, too. In other words, you show up, tell the guy what kind of vehicle you want to run, what power plant class you want (ie; Stock, Modified, Small Block, Unlimited, etc.), then the guy hands you the specific model that the track has decided to hand out, along with whatever you need to run the car, tires that are best for that specific track, some performance parts, and possibly an upgraded radio so that everyone is on equal terms, equipment-wise, so that the win all boils down to driving skill. A scenario of how you'd get the vehicle and such are as follows:

*Driver:* "Hi. I would like to run a Small Block Monster Truck; are there any available now?"

*Track Staff:* "Hello, sir. So, you want to run a Small Block Monster, huh? Well, let me see what we have . . . here you go! A Traxxas Revo with GTR shocks, a Hitec Aggressor SXR radio, RPM suspension arms, a Parma X-citer body, and Pro-line Bow-ties. Happy lapping!"

*Driver:* "Wow, thanks a lot!"

*Track Staff:* "Any time. Now, bring it back safe, you hear?"

So, what do you think, Frank and Skinny? Do you think it would work if it was tried? It would mean that an experienced basher might be on equal terms with Adam Drake.

It would also mean that "newbies" to the sport would have a chance to test out each class, so that they can make an educated decision on what car to buy, one that fits their style.

Thanks.

Tom

P.S. Great magazine ,guys, how do you like your Revos? I'm thinking of getting one, but I just want to know how it is right out of the box. Is the engine easy to break in? How does it handle going from driveway to grass and pine needles? Is there any noticeable glitching that might get annoying?

*Tom, you said a mouthful. First, off thank you for the compliment on our magazine; we all work hard to make it what it is, and we're glad you like it. Now for this "perfect world" idea of yours, it would be cool if this could happen. It would be nice if a new person could go to a facility and rent a R/C to get a feel for different cars before he bought one, and it would make racing easier for the first-time driver. Maybe they have such a thing in Heaven (I hope pulling trigger is on the agenda there), but, here on Earth, it would be really hard to do. You would need full factory support to cover the expenses of such a venture, plus a killer mechanic to keep the cars at their best; it would be a lot of work. I don't think we will ever see that happen—maybe in a perfect world. On the other hand, I could see individual manufacturers doing a track day with their products where people could come and try out their product on a given day, like Harley-Davidson does at Sturgis. I've seen this done elsewhere in the motorcycle and bicycle worlds before, and it has been very successful, but for now the closest things we R/C people have are tradeshows where they have closed areas to try different cars.*

*But alas, Tom, we can both dream!*

*—Skinny*

*P.S. Tom, you will love the Revo; both Frank and I use ours all the time, and it will do what you want—it's that good. You won't be disappointed.*

Dear Skinny,

I just wanted to let you know of some great new Revo front driveshafts. They're made by a company called Tornado Racing. These front drive shafts have a one-way in each shaft (similar to an RD Quick turn), but these driveshafts go in between the front diff and each front wheel. When using these, you should use an OFNA diff locker in the front to essentially create a spool. Now, when entering a corner, you have essentially "0K" in the front diff due to the X-wing driveshafts, which give maximum turn-in on the corners.

Exiting the corner on throttle, you essentially have a spool in the front end, which gives you maximum yank out of the corner. When used with an RD Quick Turn, the combination is awesome. I figured you may want to hear about these, being the MT gearhead you are.

Contact the owner of Tornado Racing, Tony Moffre, for info on them at *tony@precisionracingsystems.com* and tell him Casey sent you.

Take care.

Casey

*Casey, as a fellow technophile, this sounds intriguing to me; I sure wish you would've sent pictures. We're on it, though. I can see the benefit in this idea, but I wonder how it will work in all conditions? Better yet, we'll get some samples to test and tell our readers more about this system. For the rest of you out there, if you want this system for your Revo, you can use the contact info above to find out more about this—I sure will.*

*—Skinny*

Hey Skinny,

I recently went to my first R/C race and got hooked all over again. I've been out of the hobby for some time due to school. I also bought my first issue of *R/C Car* and must say it's very good. Your magazine actually has info on races, cars and all the other good stuff I like to read about. All the other magazines are just advertisements. About six years ago, I bought a 1/8-scale gas car and finished it to race the local outdoor season next year in Canby, Oregon. The reason I wrote you is I heard a rumor and was wondered if it was true.

I recently heard that Team Losi is possibly developing a 1/8-scale gas buggy; if true, this would be great. I will be at the second round of the R/C Pro Series in Canby, and I hope to see you and your ballistic monster truck there.

Thanks.

Randy Pennington

*Randy, I just got back from Round Two at Canby, and I had a great time. I think we met, there were so many new faces to see; I don't know who was who. You guys have it going on up in the Northwest, and I plan on doing a little story on the R/C scene up there (look for it next month). As far as Losi coming out with a 1/8-scale buggy in the near future, I have heard the same rumors, although Losi will not say—not even Adam Drake. Going by Losi's past history of denial on new product releases, I would say they just might be working on one (pure speculation, mind you). It would make sense to do one, as it's one of the hottest markets currently, and Adam does race a buggy, so why not, Losi? Like you, I'll have to wait to see if this rumor is true or not.*

*—Skinny*

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Off Road 1/8 Warm-Up

# - FEEDBACK -

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




## TOO MUCH TRAXXAS, PART 2

I'm writing a response to a letter you published by Rick Nokes. I wanted to tell him that there is at least one other person that feels like Traxxas gets all the glory and that the T-Maxx is nothing more than a truggy. My friend is a proud owner of a T-Maxx; however, not only can my Savage run circles around it, it's also way tougher. One day we were out driving them at my house and I had what I would consider a weak jump, made from a sheet of plywood, and when his T-Maxx tried to land after a small jump it bent his little shocks and broke an A-arm. One more thing: do you ever see a company that shares the same engine with seven of its other cars? What type of "monster truck" has the same engine as a on-road sedan?

Matt Dowless
via e-mail

*Matt, stop the hate. The top speeds of the Savage and the T-Maxx 2.5 are virtually identical, and in many conditions the smaller and lighter Maxx holds an advantage. As for toughness, we have to agree that the Savage is mondo-rugged; however, we also feel the same way about the Maxx—sometimes things break if you land the wrong way. We've seen Skinny drop a T-Maxx on its lid from 15 feet after an aborted back flip attempt—and drive away. As for the engine: no, we've never seen a company besides Traxxas use the same engine in seven vehicles. Then again, when your small-block has been described by several R/C publications as being among the most powerful, why wouldn't you make the most of it?*

## SAVE YOUR MONEY

I'm only about one month into this hobby and I've already bought two trucks and a whole bunch of hop-ups. I've been telling the owner of a nearby hobby store that I want my Savage to be the fastest thing out there. He's trying to sell me this engine that no one seems to have heard of. He says it's a Sirio .30 racing engine signed by some guy and that it's totally rebuilt to an eight port and that Novarossi builds only a couple of them. Does any of this make sense or do you think this guy is trying to rob me? He wants $450 for it.

Rob
Long Island, NY

*Rob, the engine to which your hobby shop guy is referring is the Sirio S30RS, which is a three-port (not eight) engine specifically designed for monster trucks such as the Savage. It'll bolt right into your truck, and it comes with a Roto Start backplate already installed. Our experience with modified engines is that, while they usually do boast some sort of performance advantage, they are usually more finicky and harder to tune (the "window" of proper tune is usually narrower). For a "fun" truck like the Savage, we recommend that you stay with an un-modified mill. Trinity is the U.S. distributor for Sirio, and they sell the S30RS for around $350—about a hundred smackers less than the mod motor.*

## DON'T FORGET US ELECTRIC TRUCKERS

I would just like to thank you for making such a good magazine. I refer back to my old magazines a lot and enjoy reading the new ones. I was wondering if you would include a little bit more of the E-Maxx in them. I recently bought one and think it would be cool to see an article about every mod and the different directions you can take the E-Maxx. Also it would be cool if you guys did a comparison on the different aftermarket motors and what ones work better. For example, using brushed motors comparing the Titans, Reedy, Trinity Mild, Wild, and Pro. Also, you could compare the brushless setups and tell us what is the most bang for the buck. Thank you for listening to my ideas.

Adam Coryat
via e-mail

*Those are excellent ideas, Adam, and be on the lookout for a project brushless race E-Maxx. The motor comparo sounds like a great story, especially the brushless shootout.*

## RUSTLE BUSTLE

I have a stock Traxxas Rustler and I need some help with gaining speed and acceleration. Could you give me some advice, like which parts I should buy or driving tips? I started about three years ago when my uncle bought a Kyosho Ultima ST. I then got a DuraTrax Nitro Quake. So I have some experience, but I've never modified anything.

Austin
via e-mail

*Assuming it's an electric Rustler, we recommend a budget-modified motor (check with your ESC's instructions to see the motor limit) and the best battery packs you can afford. You'd be surprised by how much punch and speed you'll get from having a better, higher voltage battery pack.*

## LORD OF THE RINGS

I race a Revo and it has a Picco .26 in it. I keep blowing front diff rings. I have the slipper set as loose as it can be were it can still move. Does anyone make an aftermarket ring and pinion for it?

Matt
via e-mail

*We've haven't heard of too many failures of the Revo's diff gears. What's even stranger is that you keep breaking the front ring gear. Usually, it's the rear diff that takes most of the punishment. We haven't been able to locate any aftermarket ring and pinion gears yet for the Revo, although it's likely that Maximizer Products or Robinson Racing Products will have them in the near future.*

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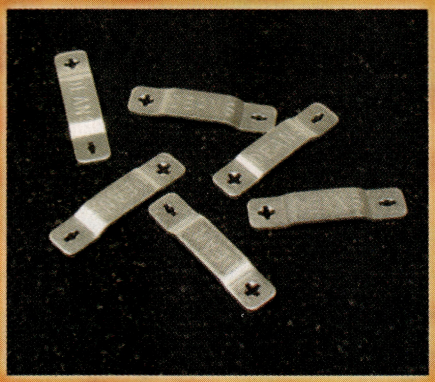

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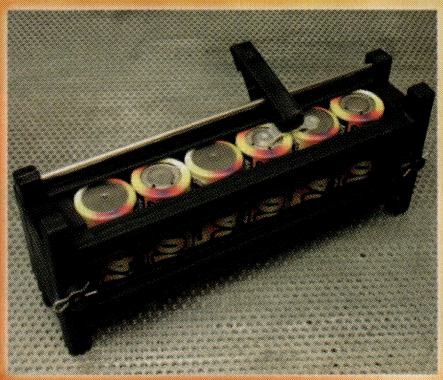

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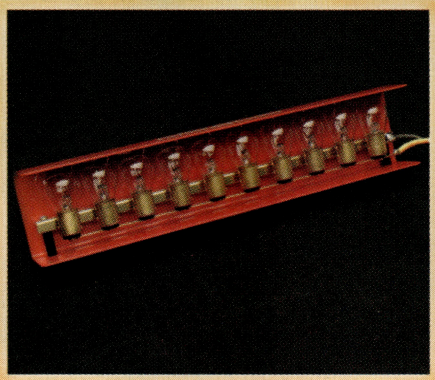

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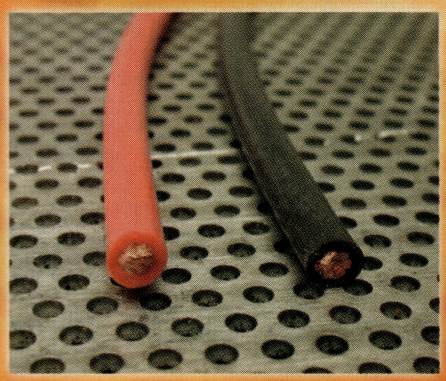

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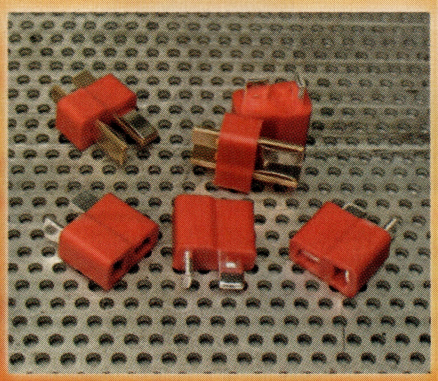

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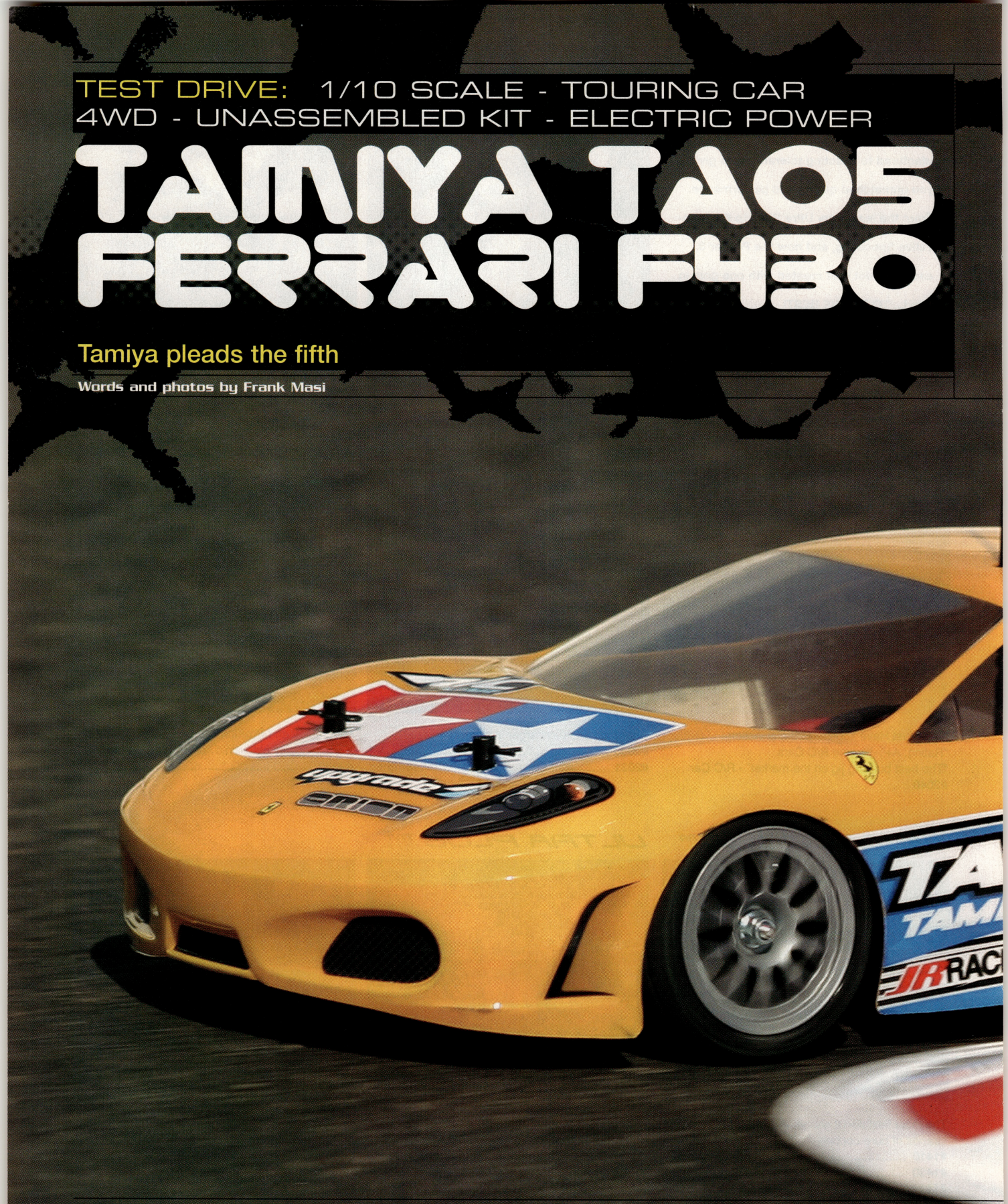
# TAMIYA TA05 FERRARI F430

## Tamiya pleads the fifth

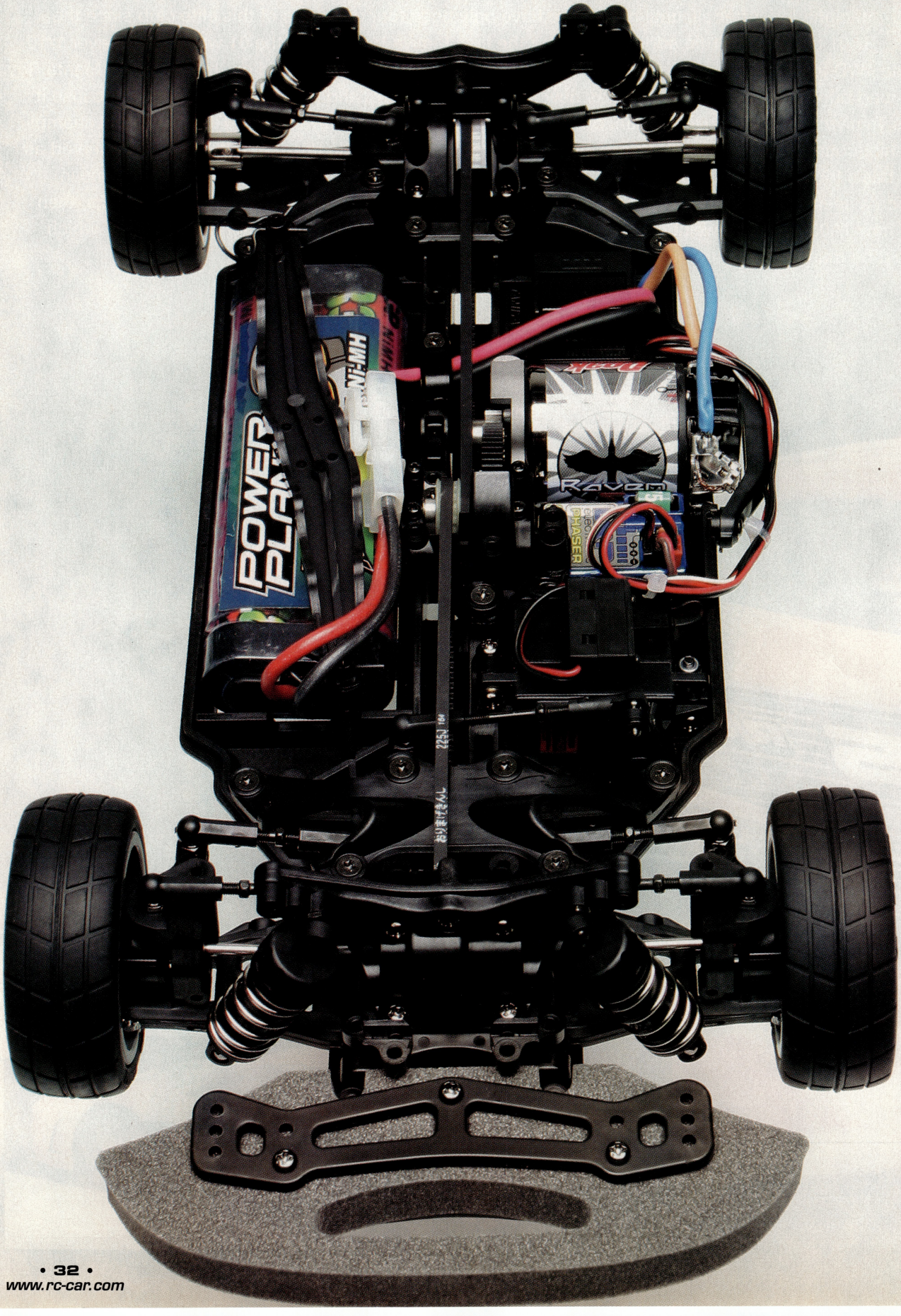
Words and photos by Frank Masi



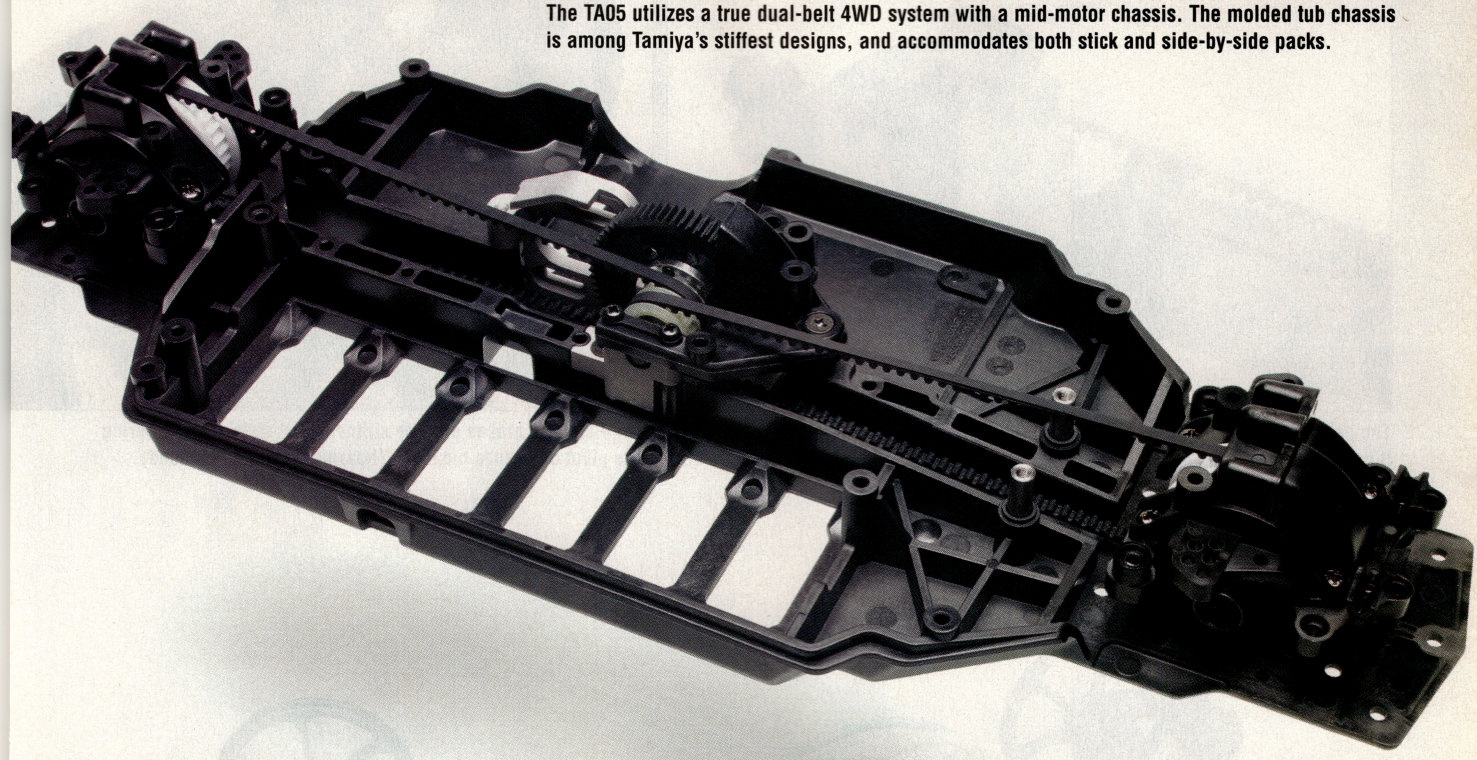
The introduction of a new entry into Tamiya's "TA" series is cause for celebration among touring car aficionados. After all, until now, there have only been four members of this elite club since the TA01 bowed in '91 (in addition to being the first Tamiya touring car, the 01 was the first-ever 1/10-scale 4WD touring car—period). The 01 and 02 were shaft-driven cars based on the venerable Manta Ray off-road buggy chassis, but the 03 was new from the ground up, and made history not only because it was Tamiya's first belt-driven sedan, but also because it won for Tamiya its first ROAR national championship (courtesy of Dave Jun). Things became more serious with the release of the 04, which served as the basis for the 414X and the World Champions 414M2 and 415MS. If the 04 began a trend, one in which a seemingly "sport" level chassis becomes the basis of Tamiya's future high-end offerings, then the new TA05 may very well be a rolling showcase of TRF (Tamiya Racing Factory) technology, which could be manifested in upcoming high-end kits.



# TAMIYA TA05 FERRARI



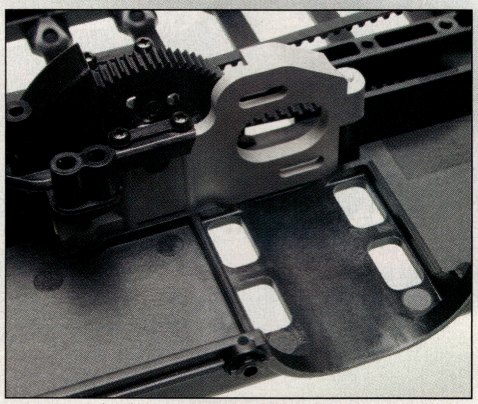
The TA05 utilizes a true dual-belt 4WD system with a mid-motor chassis. The molded tub chassis is among Tamiya's stiffest designs, and accommodates both stick and side-by-side packs.



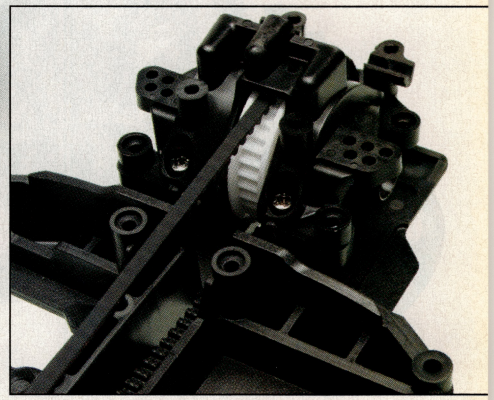
## CUTTING-EDGE DRIVETRAIN

One can easily see that the defining feature of the 05 is its unique twin-belt 4WD system. This is very clearly an evolution of the World Champion 415MS's drivetrain: The motor is installed to the left side of the chassis—as is the current trend in belt cars—and it's dumped unbelievably low, thanks to a "dugout" molded into the chassis. If this were a graphite chassis, there would need to be a machined relief beneath the motor to provide clearance. An adjustable aluminum motor mount comes standard. This allows for a wide variety of gear ratios, and helps draw heat from the motor. The motor mount also holds the center pulley shaft.

The 05 is truly a twin-belt car, with both the front and rear drive belts being identical. Tamiya claims greater efficiency at high speeds with this design, and we were impressed by how freely the 05 spun once assembled. The center shaft, drive belts and spur gear assembly have all been positioned for better chassis balance. The center shaft features 16-tooth drive pulleys, and can be replaced with an optional one-way unit if desired. Front and rear ball differentials are equipped with large, 36 tooth pulleys for greater efficiency (more belt wrap with less bending), and combine with the center pulleys to yield a drive ratio of 2.25. Tamiya also offers an optional front one-way to replace the diff. The Ferrari F430 kit includes a 70-tooth spur and 22-tooth pinion gear (04 module), and a full set of ball bearings for everything save the steering bellcranks.



A large one-piece aluminum motor mount keeps the motor cool and the center pulley shaft firmly held. Note the "relief" below the motor, which enables the motor to sit as low as possible.



The front and rear gearboxes are identical, and offer five positions for the vertical ball-stud camber links.

## FIFTH GENERATION CHASSIS

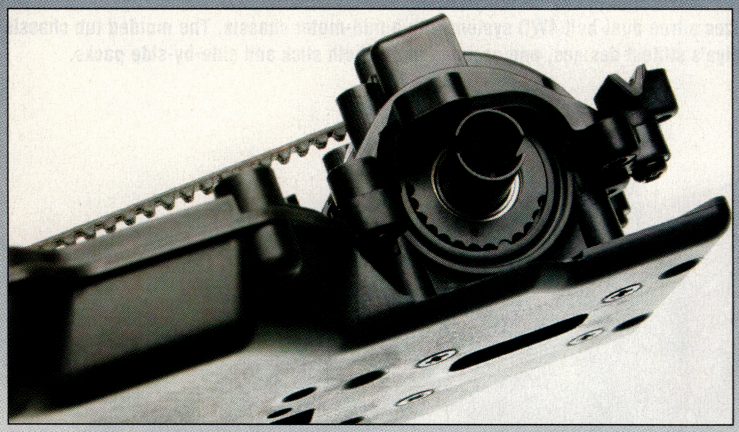
With the exception of the first 04, which had a double-deck FRP chassis, all TA series cars have arrived initially with molded tub-style chassis. The 05 is no exception, and it's molded chassis is artfully sculpted, intricate and cleverly braced for exceptional strength and rigidity. The battery compartment is molded to accommodate both stick and saddle style packs, and even fits the newer, larger GP cells. As it utilizes a single-deck theme, maintenance is a snap, as everything is easily accessible.

All-new gearboxes grace both ends of the chassis. Both 'boxes are identical, which keeps the parts' count low, and break apart so that the diffs can be lifted straight up and out—without the need to disconnect the optional stabilizer bars. Vertical bulkheads hold the diffs via adjustable-cam style bearing holders, providing wide array of tension adjustment for the drive belts.

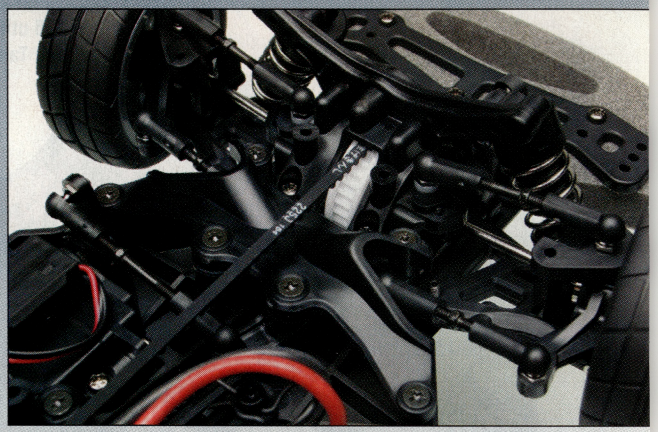
## TRIED-AND-TRUE SUSPENSION

The 05 utilizes the same suspension design first seen on the 04. This basic design has pulled duty on more Tamiya sedans that we can count on both hands,

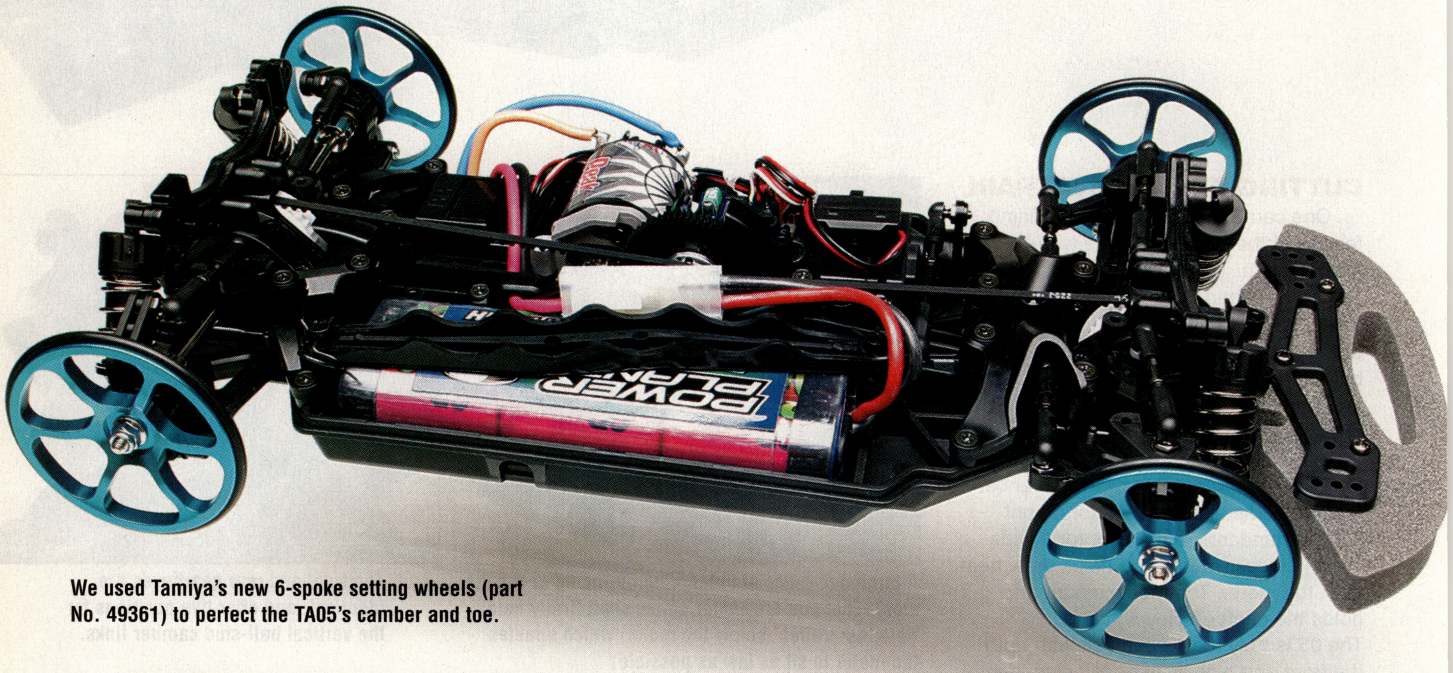
# TAMIYA TA05 FERRARI



The eccentric cam diff holders make it easy to set belt tension.



The molded chassis braces provide stiffness and style. Dual steering bellcranks pivot on bronze bushings (bearings can also be used).



We used Tamiya's new 6-spoke setting wheels (part No. 49361) to perfect the TA05's camber and toe.

including the World Champion 414M2. Of course, Tamiya has made subtle changes to the geometry of this proven suspension, most notably the addition of vertical inner camber-link ball-studs. The 05 has this setup, and it allows for a wider range of tuning adjustment (there are five inner locations) for this critical bit of geometry. Tamiya employs a unique molded standoff system to provide greater strength for higher camber-link locations. Steel turnbuckles are employed for each camber rod, and again for the steering tie-rods. Also of interest are the 05's molded CVA oil-filled shocks, down-travel adjustment screws on all four lower arms, and 2-degree rear hubs. The 05 can also be fitted with the Reversible Suspension Set first seen on the current World Champion 415MS.

## BUILDING THE KIT

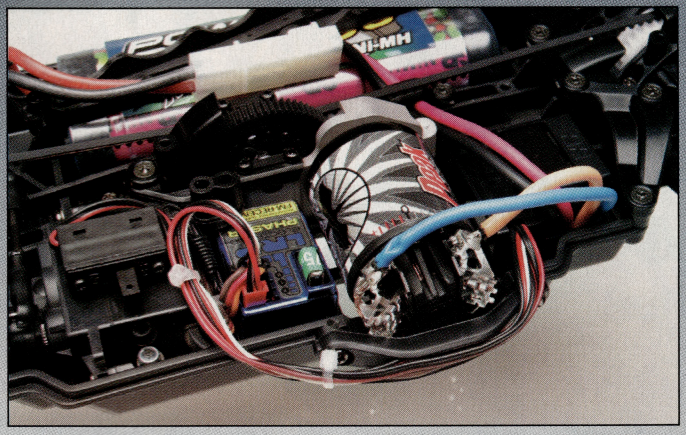
The 05 Ferrari F430 comes as an unassembled kit, one that we completed in just two evenings using basic hand tools (a Phillips screwdriver and needlenose pliers are all that's required; Tamiya supplies a metric box wrench to Allen keys. Metric Allen drivers in 1.5mm and 2.5mm sizes expedite assembly). The instruction booklet is a model of informative simplicity.

The Ferrari shell is, as expected of any Tamiya kit, a thing of beauty. The body arrives in clear polycarbonate, and must be painted. Tamiya includes a polycarbonate racing wing to give the car a bit more rear downforce.

You'll need to supply a two-channel radio system, steering servo, ESC, six-cell battery pack and charger. The kit includes a Mabuchi 540 motor, but unless you're planning on competing in Tamiya's GT-3 class at your local TCS (Tamiya Championship Series) event, you'll be a bit happier with a competition stock motor, and if you want to experience insane speed, the 05's drivetrain is more than capable of handling any modified motor, even those wild 7-turn monsters.



Twenty-spoke mesh wheels have 2mm offset. The stock treaded tires are good for parking lot running, but only adequate for groomed tracks.



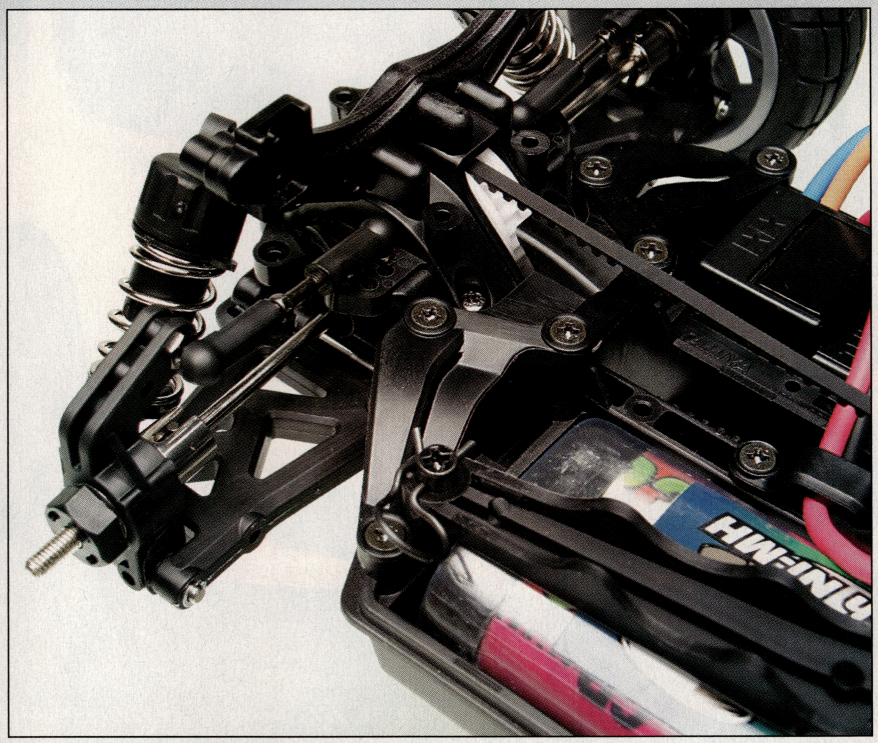
For our test we used a JR Racing Z8550Z digital servo, LRP Phaser receiver, Peak Raven 17x2 motor and Tamiya 101BK ESC.

## building tips

- The 2-degree rear hub carriers bind against the lower arms. We filed them down a bit at a time until the hubs pivoted freely once installed. Doing this will greatly improve the function of the rear suspension.

- The right-side steering bellcrank must be installed in a particular manner. Although it appears as if both ends of the bellcrank are of equal length, in fact they are not. The shorter of the two sides points forward. Failure to install the bellcrank correctly will cause a bind against the front gearbox.

- Small red foam buttons are inserted into the diff cups to prevent the dogbones from ejecting. This generally works, however we had to insert an extra rubber O-ring into the left-front cup to prevent the shaft from coming out when the wheels were steered.



Suspension is taken from the World Champion 414M2. Tamiya's oil-filled CVA dampers keep the tires in touch with the pavement.

## TRACK TESTING

We wrote earlier that it's very possible that the 05's basic chassis layout will find its way onto Tamiya's forthcoming high-end cars, and after testing the supposed "sport" level Ferrari F430 kit, we're adamant in our assertion.

The 05 has perfect balance. We can't remember driving a car that felt more neutral than Tamiya's latest. The stock tires aren't the greatest, but the lower grip manifested as neither over- nor understeer, but as a picture-perfect four-wheel drift. With its superb balance of front and rear grip, the 05 is very easy to drive, and you'd have to lean on it like crazy to get it to slide out.

Aside from utopian balance, the 05's drivetrain has other perks. It's very efficient and responsive. With the Peak Raven 17x2 machine-wound motor (geared with a 20-tooth 04 module pinion), the 05's acceleration was brisk and controllable. Top speed was a bit better than what you'd get with a 27-turn competition stocker, and run times were in excess of seven minutes.

We have to also praise the new Tamiya TEU-101BK speedo. Although the Ferrari kit didn't come with this ESC (we stole it from another Tamiya kit), it's well suited for use with mild modified motors. The 101BK provided very smooth throttle control, and it allows you to disable reverse for racing. Once we had programmed the ESC to our Airtronics M8 transmitter, we used the throttle EPA )end point adjustment) to dial-in just the right amount of brakes, and they worked perfectly. We had one issue with the 101BK; it shut down from heat while we were shooting photos. After being allowed to cool for a few minutes, the ESC began working again and finished out our test without a hitch.

We suspect that the new F430 body is going to be hot on the TCS scene. It has excellent steering for tight tracks, and with the optional racing wing (included in the kit), it's very good in the high-speed sweepers. It may replace the 360 Modena as one of the best aero packages in Tamiya's lineup. Oh, yes, and it looks amazing!

# TAMIYA TA05 FERRARI




## WHAT WE REALLY THINK

With back-to-back IFMAR World Championships under its belt, Tamiya has proven that it leads the world in touring car racing. One would be mistaken to view the new TA05 as a sport-level chassis, for it's much more than meets the eye.

Tamiya's TRF department has had its hand in this car's design, and the result is an evolution of the 415's belt-drive system and overall chassis layout. The kit itself is of the highest quality, with excellent molds and easy assembly (it took us little more than two evenings to complete the car).

The new F430 body is as beautiful as the real thing, and it works like a dream. Overall, the TA05 Ferrari F430 kit is an excellent starting point for your racing career, and it's a car that'll turn heads no matter where it's run.

## SPECS

| | | | |
|---|---|---|---|
| **Price:** | $165 (varies with dealer) | **Suspension:** | ind. lower H-arm, adj. upper link |
| **Length:** | 17.5in/445mm | **Damping:** | plastic CVA oil-filled shocks |
| **Width:** | 7.5in/190.5mm | **Drivetrain:** | dual belt 4WD |
| **Wheelbase:** | 10.2in/259mm | **Differentials:** | adj. ball diffs |
| **Track:** | 6.56in/167mm | **Bearings:** | full ball bearings |
| **Weight (RTR):** | 55.9oz/1,585g | **Tires:** | rubber tread |
| **Chassis:** | molded ABS tub | **Wheels:** | gray mesh (2mm offset) |

## SOURCES

- **Airtronics**, 1185 Stanford Ct., Anaheim, CA92805 • phone (949) 978-1895; fax (949) 978-1540
- **JR Racing**, distributed by Horizon Hobby Distributors, Inc., 4105 Fieldstone Rd., Champaign, IL 61821 • phone (217) 355-9511
- **Peak Performance**, 22601 La Palma Ave. #104, Yorba Linda, CA 92887 • phone (714) 692-8533; fax (714) 692-8534
- **Tamiya America**, Inc., 2 Orion, Aliso Viejo, CA 92656-4200 • phone (949) 362-2240; fax (949) 362-2250




2005 1st Place Finishes
- Team Losi Off Road Championship
- CRCRC Midwest Gas Champs
- Airtronics Off Road Championship

2004 1st Place Finishes
- Reedy Truck Race of Champions
- RC Pro Series National Championship
- U.S. Gas Championship
- Silver State Nitro Challenge

"Not only is the XXX-NT AD 2 unbelievably hooked up and easy to drive, it's stronger than any truck I've seen at the track."

*Adam Drake*

# XXX NT2 ADAM DRAKE



## 1/10 SCALE 2WD NITRO COMPETITION TRUCK

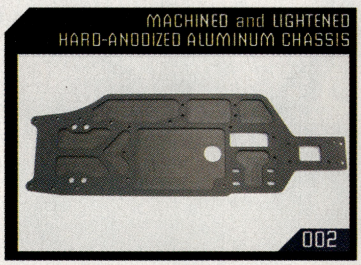
TEAM LOSI RACING

TEAM LOSI>subject: losa0846

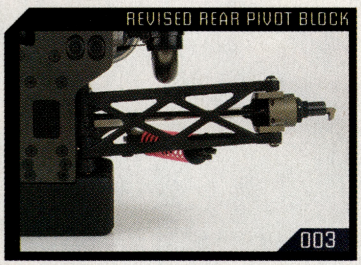
XXX-NT ADAM DRAKE 2




The multi-adjustable aluminum hubs house exclusive quick release rear axles in over sized bearings for outstanding durability and a great advantage on the track.



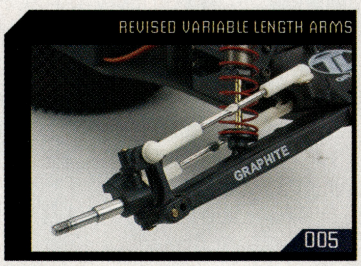

The extra-thick, aircraft-grade aluminum chassis is precision machined instead of stamped to prevent tweaks, lightened, and then hard anodized for added toughness.



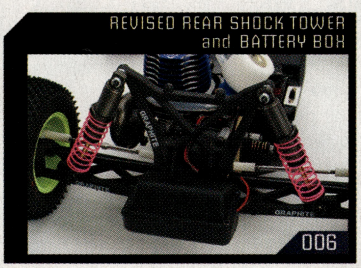

The revised rear pivot block is the strongest in its class with almost twice the support area to maintain proper geometry. Anti-squat shims make adjustments simple and quick.




The new wheels can be used on the front with a standard wheel nut as well as a quick change rear allowing for greater tire selection and extended wear.




The new extra beefy front and rear variable length arms allow an unmatched range of easily made tuning options with extraordinary durability and toughness.




Like the rest of the suspension components, the rear shock tower and battery box benefit from new materials and extra reinforcement for outstanding reliability.



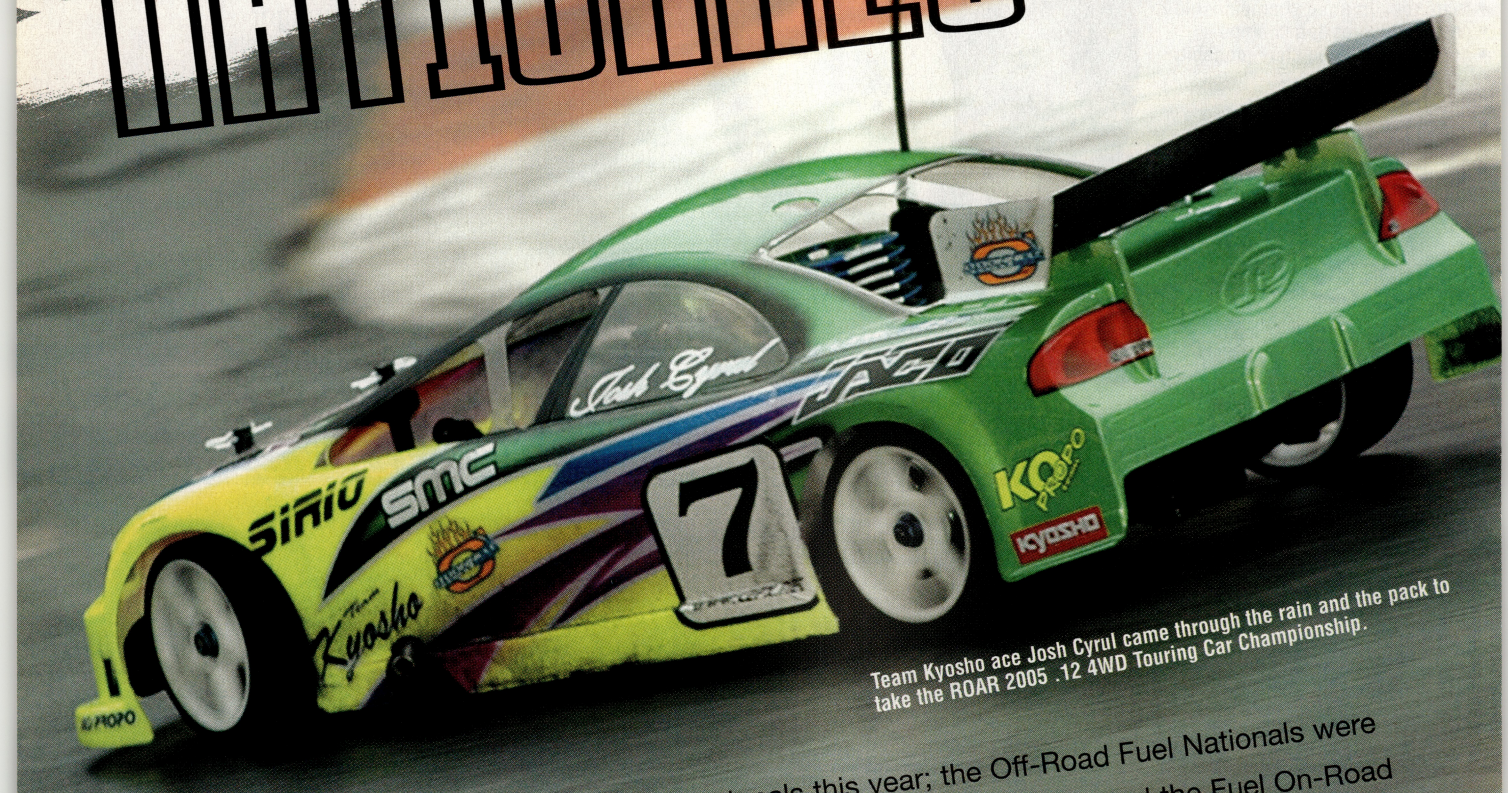

'890 ©2005 TEAM LOSI, A DIVISION OF HORIZON HOBBY, INC.

HORIZON HOBBY

# ROAR NITRO TOURING CAR NATIONALS

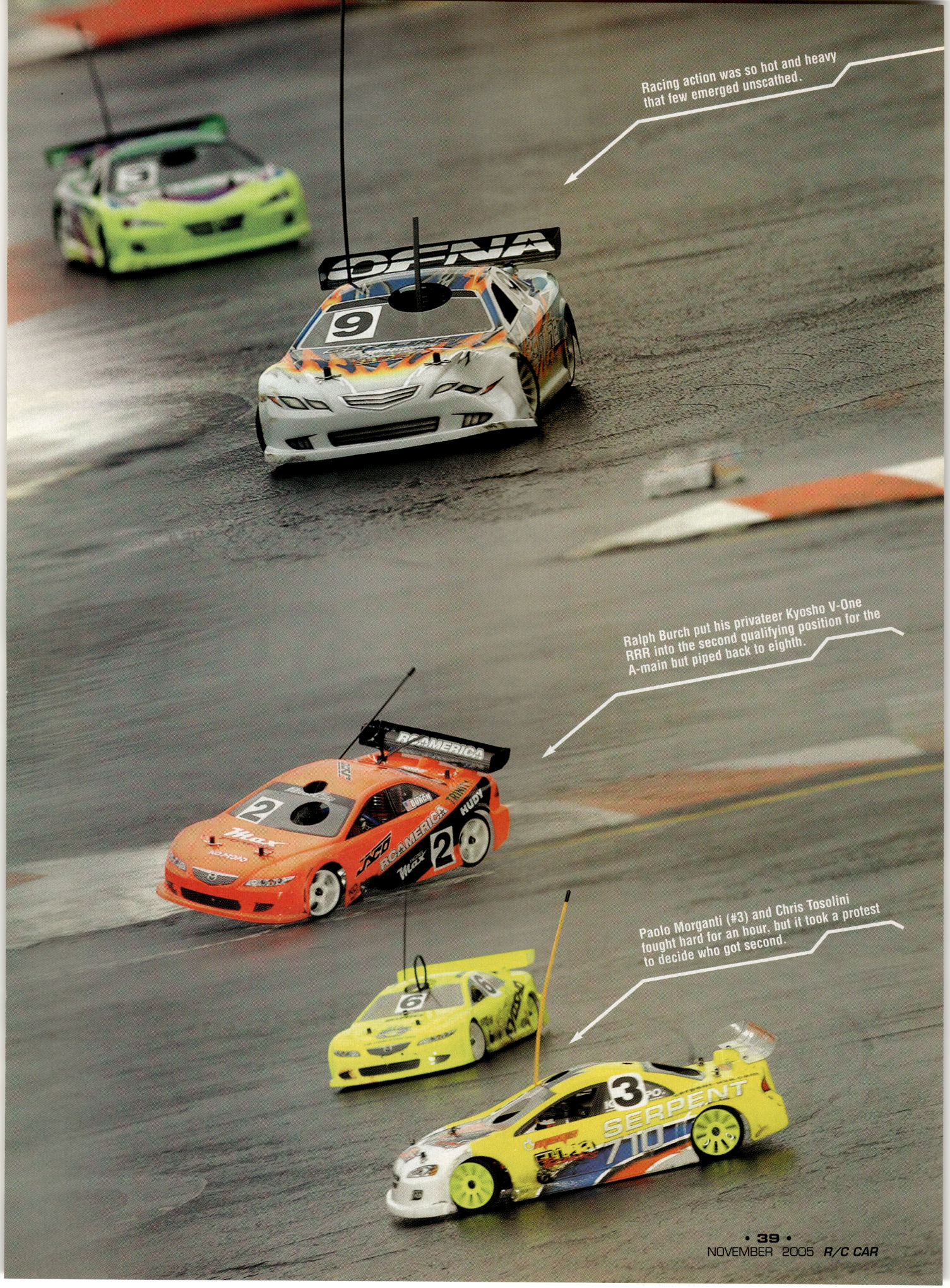
## Kyosho, Mugen and Serpent battle in the Lone Star State

**Words and photos by Lumpy**




Team Kyosho ace Josh Cyrul came through the rain and the pack to take the ROAR 2005 .12 4WD Touring Car Championship.

Texas was big enough for two ROAR Nationals this year; the Off-Road Fuel Nationals were held in Harlingen in April, and Burleson (just south of Fort Worth) hosted the Fuel On-Road Sedan Nats in July. Teams Mugen Seiki, Kyosho, Serpent and OFNA had a huge presence in the Lone Star State, but Team Associated chose to sit out the Nats after attending the Texas Biggie a few weeks before. The Radio Controlled Racing Club of North Texas (RCRCNT) hosted both the Texas Biggie and ROAR Fuel On-Road Nationals on a new permanent roadcourse and facility, and the Nats were sponsored by Futaba and O.S. Engines. Two National Championships would be awarded in 1/10-scale: the .12 4WD Touring Car (IFMAR 200mm) and .12 4WD TC Masters (40-years-plus, or "Jurassic Gas").


Racing action was so hot and heavy that few emerged unscathed.
Ralph Burch put his privateer Kyosho V-One RRR into the second qualifying position for the A-main but piped back to eighth.
Paolo Morganti (#3) and Chris Tosolini fought hard for an hour, but it took a protest to decide who got second.
9
2
6
3
SERPENT

While South Texas was all about ranching, oil exploration and agriculture, many of the farms and ranches in North Texas have been developed into suburbia and shopping malls, so it's great to see concerned clubs such as the RCRCNT buying up land for permanent R/C tracks. Not only does the RCRCNT have a road-course, there's a banked oval on-site for quarter-scale QSAC racing. More than 400 tons of asphalt went into the road course, and the 957-foot track has a 25-foot-wide back straight and is 20 feet wide everywhere else, so there's plenty of room for passing. The track has a nice balance of speed and technical sections, which include chicanes, increasing- and decreasing-radius turns and even off-cambers.

## SIX-GUN QUALIFYING

After a couple of days of open practice, the three-day Nationals began for two classes of 1/10-scale, 4WD, .12-powered, 200mm Sedans—Pro and Masters (40+). Three rounds of IFMAR five-minute qualifiers were run on Friday, and three more rounds went off on Saturday. Qualifier points from the best two rounds seeded drivers into the mains, and the lower mains were run Saturday afternoon, leaving the D through A-mains for Sunday. Only 14 road warriors signed up for the Masters class, so their heats determined starting order in the Geezer A-Main, and local Tim Copp TQ the class with some fine drives from Ray Juhl, Don Rice and Steve Cogdell.

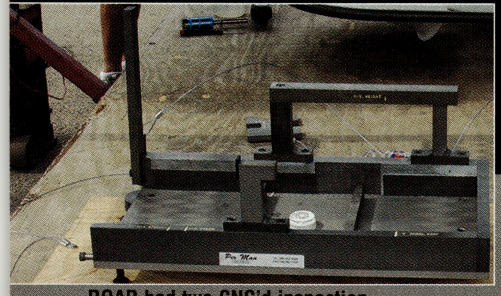
Locals were also dialed in Touring Car Pro, as Ralph Burch was laying down some fast laps and heats. The track had a lot of bite for steering, but several drivers had trouble with a lack of rear-wheel traction, which made for a lot of spin-outs. Everybody had the same track and the same conditions, though, and Mugen Seiki hotshoe Mike Swauger became the man to beat for TQ. Several drivers were in the 17-lap range by the fifth round of heats, and the pecking order was pretty much set. Swauger was TQ with a 17/5:05.08 and 16/5:05, ahead of Paolo Morganti, Burch, Scotty Gray and Chris Tosolini.

When the smoke settled from the sixth round of heats, Burch had bumped Morganti to third and Paul LeMieux had zapped Tosolini for fifth. The top two drivers from each main bumped up to the next one, with Kyosho pilots Ron Atomic

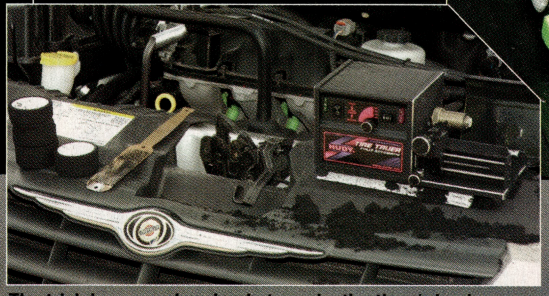
## ROAR/IFMAR 200mm Rules

Rules are pretty stringent in the 200mm 4WD Touring Car class, as body dimensions and trimming are closely watched, as are the engine, carb, pipe stinger, tire width and diameter and wing size and mounting. ROAR has a nice jig for making sure the sedans are legal and another located under the drivers' stand so the racers could check to make sure they'd pass inspection. To check track width, the car is placed in the box, which is then tilted 45 degrees; it must roll out of the box easily to pass. Here are the vital stats for ROAR/IFMAR 200mm 4WD Touring Cars.

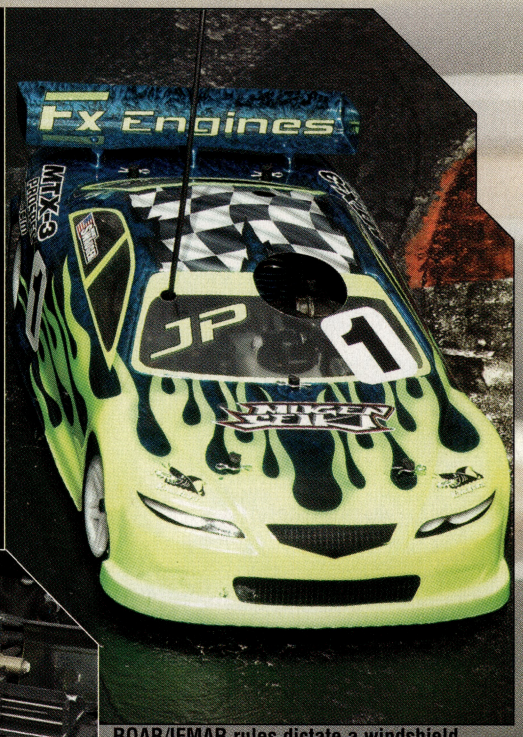
- Weight.....1725-1765 grams
- Fuel capacity (inc. lines).....75cc
- Engine displacement.....0.12ci
- Carb insert size.....5.55mm
- Pipe stinger (id).....5.05mm
- Tire width.....24-31mm
- Tire diameter.....55-67mm
- Wheelbase.....249-270mm
- Width.....200mm maximum
- Body width.....205mm max
- Maximum length.....460mm
- Maximum height.....125mm
- Max wing height.....125mm
- Wing width.....200mm max
- Wing side dam length.....50mm
- Wing side dam height.....35mm
- Windshield hole.....50mm
- Rear bumper height.....55mm max
- Wheelwell-tire distance.....10mm max



ROAR had two CNC'd inspection boxes to make sure the 4WD sedans adhered to IFMAR 200mm rules.



The trick in on-road racing is to make the tires/wheels as light as possible without violating the minimum-diameter rule at post-race inspection. Got calipers?




ROAR/IFMAR rules dictate a windshield cooling hole no larger than 50mm. The windshield holes must serve as both a means of cooling and for gaining access to the fuel tank during pit stops. Most racers have found that round holes preserve downforce better than similar sized square holes.



Participants at the ROAR Nats used all of the 20-foot-wide track...and more.

and Bobby Flack bumping from the B to the Big Show. Of the 12 seeds into the A-main, six represented Kyosho, three Serpent, two Mugen Seiki and one Team OFNA, but Mugen held the advantage with TQ in both A-Mains.

## A-MAIN MANIA

TQ Tim Copp railed his Mugen into the lead in the 45-minute A-Main and held it until the first pit, when Maxy Velazco took over briefly. As the pit stops cycled around, Copp was firmly in control for the first half of the race, while Velazco tried to keep Harry Hananouchi at bay. With less than ten minutes to go, Copp crashed and flamed out, dropping to third. While Hananouchi and Velazco battled, Copp laid down some fast laps and briefly retook the lead during pit cycles, but he flamed out again at the end and watched as Hananouchi won by 17 seconds. The top two turned 128 laps, and Velazco was third with 127.

TQ Mike Swauger holeshot the one-hour Touring Car A-main over Morganti, Burch and Tosolini, but Josh Cyrul was on a mission. Swauger dropped back in the first pit cycle, and he and Cyrul battled to the front by the 12-minute mark. Rain stopped the action at 16:30 (see sidebar) and the main had to be restarted after the track dried. Swauger, Cyrul and Morganti were first out of the pit on the restart, and Swauger left Cyrul to fight Morganti. Flame-outs shook up the standings with Paolo going a lap down with 20 minutes to go, then Swauger stalled leaving the pits soon after. He lost laps replacing his receiver batteries, and Cyrul took over the lead for good. Brandon McNally had worked his way to second at one point but also lost flame.

With 15 minutes to go, Cyrul was a full three laps ahead of his teammate Tosolini, and Swauger worked his way back into third with 3:30 to go. Cyrul was the clear winner at the buzzer, but the rest of the field was totally up in the air, like they'd been grabbed by a Texas tornado. Everyone milled about as the two parts of the main were added together. Minutes after the unofficial results were posted, they were protested by TQ Swauger, and the results wouldn't be official for several days. When things calmed down, Kyosho had a 1-2 with Josh Cyrul winning over Chris Tosolini, Paolo Morganti and Mike Swauger.






Creatures of the Black Lagoon: Before the rains came on Sunday, the track was already so smooth and slick that cars reflected as if on water.

## ROAR in another uproar

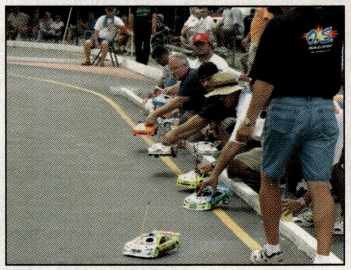
Mother Nature played a cruel trick on ROAR and the RCRCNT, as afternoon thundershowers interrupted the race schedule on Saturday and during Sunday's main event, the IFMAR 200mm Sedan A-main. You know how slick the road gets when it first starts raining? Water is heavier than oil, so the oil rises to the surface and makes pavement as slick as black ice is in the winter. The RCRCNT track was pretty "loose" to begin with, as the asphalt was sealed and very smooth. Even coatings of VHT and sugar water wouldn't create grip, and the rains washed them away. But the real controversy began just before the rainstorm on Sunday.

The timing loop was placed after the pit-lane exit, and Paolo Morganti flamed out a couple of times a quarter way into the one-hour A-main. Because of the placement of the timing loop and the 18 or so seconds it took to restart the car each time, the computer thought Paolo as scoring laps when he was actually losing laps to leaders Mike Swauger and Josh Cyrul. The rains came soon after, and the red flag came out, but some drivers didn't have the forethought to cross the finish line before coming into pit lane. Confusion and controversy took the reins as it rained. ROAR and RCRCNT officials held a pow-wow to determine the best course of action from there.

After the rainstorm and as workers dried the tarmac, ROAR decided to count the 16-odd minutes run so far, run a separate 44-minute main, then add the two "motos" together to determine the winner. The problem was that several drivers were already laps down to the leaders or several seconds behind, and the restart would be from pit lane with each car restarting a second apart. Aside from leader Swauger, everyone was the "lucky dog," especially Morganti and the two cars that had already broken. After the second portion of the A-Main was completed and the unofficial results were posted, the controversy boiled over in the muggy Texas heat. Cyrul was declared the winner, but Morganti was listed second ahead of Tosolini and Swauger. As the cars were going through the post-race inspection, Kyosho team manager Regan LeBlanc was filling out the protest sheet, but Swauger beat him to the punch.

This threw yet another wrench into the works, and most drivers left in disgust. Only Swauger stuck around for the results of the protest and inspection. His protest elevated Tosolini to second, but ROAR scored Morganti third ahead of Swauger, who was definitely not a happy man. There was no trophy presentation, as everyone except Swauger had already left for their hotel, favorite steak house or TexMex restaurant.





The IFMAR/ROAR 200mm sedans had two A-main starts—one on the back straight and, a couple of hours later, one from pit lane.

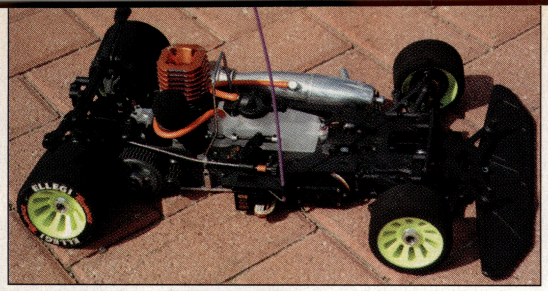


Rain delayed action on Saturday and Sunday; the track was dried with a blower and towels.

Front-wheel traction was way better than the bite in back; some went off-road looking for berms.

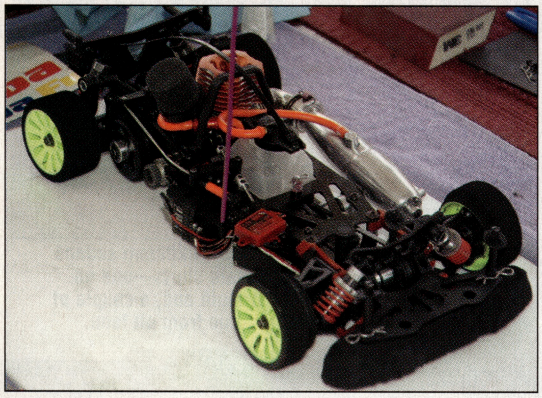
# ROAR NITRO TOURING CAR NATIONALS

# ROAR NITRO TOURING CAR NATIONALS



## seen in the pits

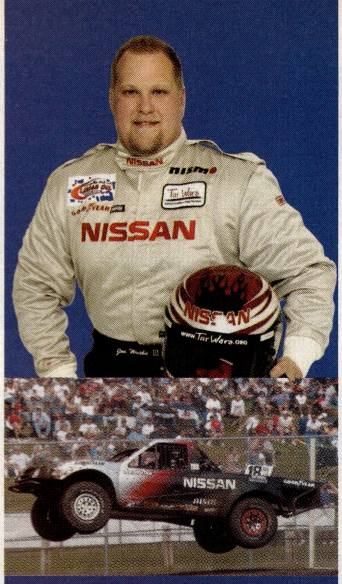
Serpent displayed its all-new 1/8-scale 4WD 960, minus the shocks. The 960 features a one-way bearing for the front diff, which has the ability to be locked by inserting two pins, and very sano hard-anodized-steel anti-roll bars.



Team Serpent was also testing a variety of prototype pieces for the 710 200mm Touring Car. Of the 25 cars in the two A-mains, Serpent, Kyosho and Mugen had seven each.

A flat-out back straight dumped competitors into a decreasing-radius first turn; it was the site of many slides and spin-outs.

The Radio Control Racing Club of North Texas hosted the 2005 ROAR Fuel On-Road Sedan Nationals at its brand-new facility.

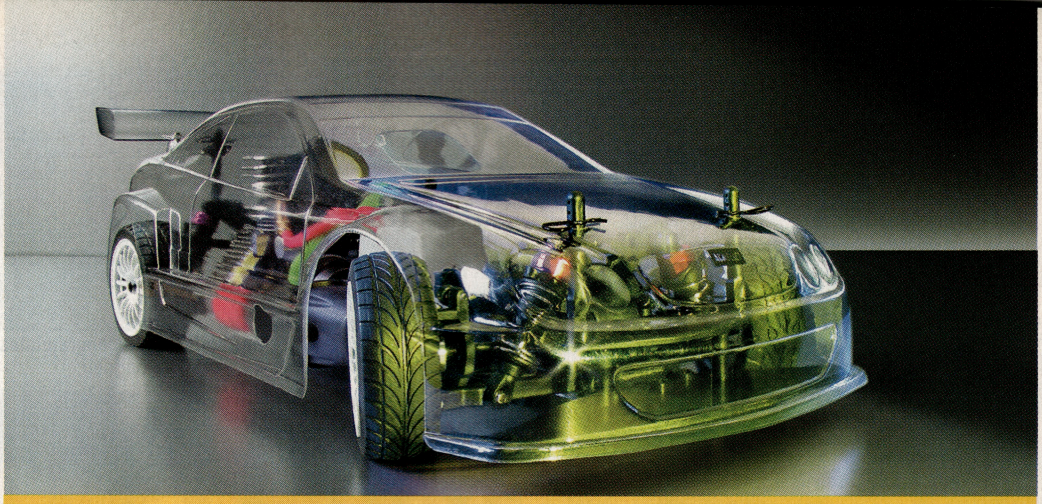



# PRO Speak

Joe Wutke III, former pro race driver for Nissan's factory team, helps design and drive MRC/ Academy's next generation 4x4s. Here are two of his latest intros.

For tips on setup techniques, and to take advantage of Joe's full- size racing experience, contact Joe at **732-225-2100** or **joew@modelrectifier.com**

**See the Pro's entire lineup of 1/10 4x4s at your local hobby dealer or visit us at www.modelrectifier.com**



## New VELOX XT

This nitro powered touring car sports a 3mm aluminum chassis, full ball bearings and is 90% assembled, Its shaft driven, 4-wheel drive engineering delivers road hugging traction and control. "You'll corner like a cat and hug the straightaways like rolling Velcro." Features clear body and decals. Install your own electronics and radio and you're virtually ready to go.

## New VELOX XB

***A light, powerful, 1/10 RTR, 4x4, nitro buggy loaded with high end features unheard of in this price range.***

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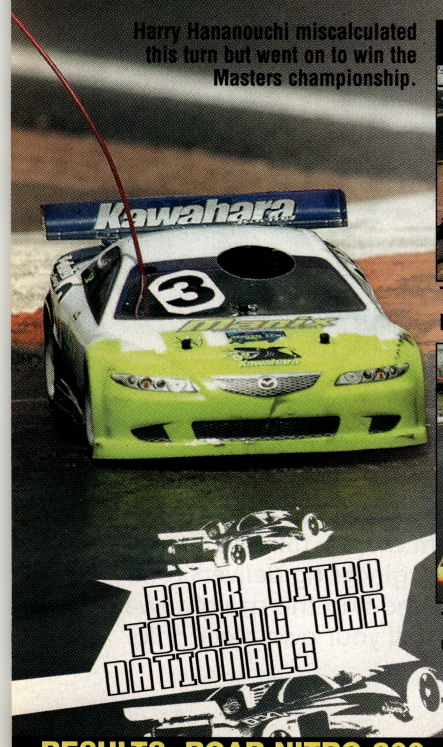


Harry Hananouchi miscalculated this turn but went on to win the Masters championship.



Team Serpent had the largest presence at the ROAR Nats.



Race Director Bob Ingersoll congratulates Concourse winner Steve Cogdell.



Thanks to Regan LeBlanc for the pic of .12TC winner Josh Cyrul.



Team Mugen Seiki found setups quickly and TQ'd both classes.



Masters TQ Tim Copp and Pro TQ Mike Swauger strut their stuff.



More than $4000 in sponsor swag was raffled off by the RCRCNT.

# ROAR NITRO TOURING CAR NATIONALS

## RESULTS: ROAR NITRO 200mm SEDAN NATIONALS

### 1/10-SCALE .12 4WD TC/IFMAR 200mm A-MAIN

| Fin | Qual | Driver | Hometown | Chassis | Engine | Fuel | Electrics | Tires | Body |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7 | Josh Cyrul | Monroe, MI | Kyosho V-1 RRR | Sirio Evo | O'Donnell | KO Propo | Jaco | Mazda 6 |
| 2 | 6 | Chris Tosolini | Huntington Bch, CA | Kyosho V-1 RRR | Sirio Evo2 | O'donnell 30% | AirtronicsM11/360 | Kyosho/GRP | Mazda 6 |
| 3 | 3 | Paolo Morganti | Miami, FL | Serpent 710 | Mega | White Lightning | KO Propo | Ellegi | ??? |
| 4 | 1 | Mike Swauger | Foothill Ranch, CA | Mugen MTX-3 | JP FX T-03 | Mugen | Airtronics | Kawahara | Protoform Mazda 6 |
| 5 | 8 | Darin Ishitani | Gardena, CA | Mugen MTX-3 | JP T-03 | Byron's | Airtronics | Kawahara | Mazda 6 |
| 6 | 9 | Brandon McNally | Austin, TX | Serpent | Mega ZX12 | White Lightning | JR Propo | Ellegi | ??? |
| 7 | 10 | Jeffrey Lin | Chino Hills, CA | OFNA GTX-4 | JP FX | Byron | Airtronics | Mono Tuning | Mazda 6 |
| 8 | 2 | Ralph Burch | Corinth, TX | Kyosho RRR | Max Power | Trinity | KO Propo | Jaco | Mazda 6 |
| 9 | 11 | Ron Atomic | Kyosho V-1 RRR | | OS 12T2 | Rocket Science | Futaba | Jaco | Parma |
| 10 | 12 | Bobby Flack | W. Bloomfield, MI | Kyosho V-1 RRR | Sirio | Trinity | KO Propo | Twister | Mazda 6 |
| 11 | 4 | Scotty Gray | Miami, FL | Serpent | Mega ZX12 | Maxy's Pro | Futaba | Ellegi | Mazda 6 |
| 12 | 5 | Paul LeMieux | Charlotte, NC | Kyosho | Sirio | O'Donnell | Futaba/Novak | Jaco | Pro-Line Mazda 6 |

### 1/10-SCALE .12 4WD TC MASTERS A-MAIN

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | Harry Hananouchi | San Mateo, CA | Mugen | JP | Mugen | Airtronics | Kawahara | Mazda 6 |
| 2 | 1 | Tim Copp | Bedford, TX | Mugen Seiki | NovaRossi | Rocket Science | KO Propo | Kawahara | Mazda 6 |
| 3 | 2 | Maxy Velazco | Miami, FL | Kyosho | OS Maxy's Mod | Maxy's 30% | Airtronics | Enneti/Ellegi | Mazda 6 |
| 4 | 5 | Jeff Brustad | New Brighton, MN | RD Logics Mongoose | OS 12T2 | Rocket Science | KO Propo | N/A | N/A |
| 5 | 6 | Ray Juhl | Clinton, MI | RD Logics Mongoose | Richey Mod | Byron Race | Airtronics | Jaco | ??? |
| 6 | 11 | Doug Darby | Longview, TX | Serpent 710 | Mega | Byron's | Futaba | N/A | Mazda 6 |
| 7 | 7 | Eduardo Romero | Katy, TX | Mugen | RB V12 Rody | Rocket Science | Airtronic/Spektrm | Fast/Kawahara | Mazda 6 |
| 8 | 8 | Richard Rivera | Austin, TX | Kyosho RRR | Palmaris/NovaRossi | Rocket Science | Airtronics | Twister | ??? |
| 9 | 10 | Hugh McGinnis | Borger, TX | Serpent | RB V12 | O'Donnell | Airtroincs | Twister | ??? |
| 10 | 9 | Donn Rice | Harvest, AL | Mugen | O.S. | O'Donnell | Futaba | Ellegi | Protofrom |
| 11 | 4 | Cliff McGee | Keller, TX | Mugen | O.S. | Rocket Science | JR | Kawahara | T-Bodz |
| 12 | 13 | Jack Holmes | Las Vagas, NV | Serpent 710 | Murnan Mod X12 | BK | Futaba | Ellegi | ??? |
| 13 | 12 | Steve Cogdell | Burleson, TX | Serpent 710 | NovaRossi | BK | KO Propo | Ellegi | ??? |



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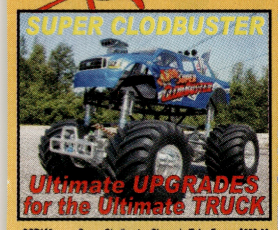





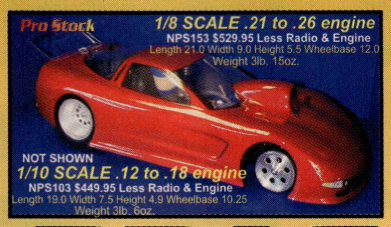





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| | | |
|---|---|---|
| MCT201 | Standard Wheelbase Kit | $69.95 |
| MCT202 | Long Wheelbase Kit (14in.) | $79.95 |
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| MCT204 | Front Steering Servo Adapter | $34.50 |
| MCT205 | Rear Steering Eliminator | $24.50 |
| MCT207 | Heavy Duty Steering Rods | $39.95 |
| MCT402 | Bearing Kit | $39.95 |
| MCT403 | Right Angle Body Mounts | $3.95 |
| MCT404 | Chrome Plated Stock Wheels | $19.95 |
| MCT421 | Cantilever Kit (4 Levers and Links) | $89.95 |

MONSTER GT

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| | | |
|---|---|---|
| AMG101L | Blue Tube Upper RACING Chassis. | $179.95 |
| AMG123MM | .21 to .27 Engine Mount | $34.50 |
| AMG123TT | Stock only Engine Mount | $34.50 |
| AMG320SD | Silver SUPER DUTY Front Skid Cover | $14.90 |
| AMG321SD | Silver SUPER DUTY Rear Skid Cover | $14.90 |
| AMG322X | Frt Alum Prot Sys: W/Brush Guard | $43.90 |
| AMG322Z | Front Alum. Protection Sys: Billet | $39.95 |
| AMG336SDF | Frt SUPER DUTY Alum Shock Tower | $38.00 |
| AMG336SDR | Rr SUPER DUTY Alum Shock Tower | $38.00 |
| AMG650 | Reservoir Piggybacks (8) | $79.90 |
| AMG910SD | LARGE Diameter Steel Tube Roll bar | $39.95 |

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|---|---|---|
| HSV101L | Steel Tube Upper Chassis 179.95 | $149.95 |
| HSV105SD | TVP 4.5mm Super Duty (set) | $44.50 |
| HSV105XL | TVP 3.2mm Extended 1 inch (set) | $59.50 |
| HSV210XLCR | Titanium Rear Extended Dog Bone | $24.50 |
| HSV211 | Titanium Outboard Dog Bone (pr) | $42.50 |
| HSV212 | Lower Chassis & Skid Support (pr) | $17.90 |
| HSV319SD | Super Duty Fr or Rr Body Mount | $24.50 |
| HSV320-21SD | Super Duty Fr or Rr Skid Cover 3.2mm | $19.50 |
| HSV332A | Adjustable Camber Upper Arms (pr) | $29.95 |
| HSV333SD | Super Duty Lower Arms (pr) | $39.50 |
| HSV334 | Super Duty Center Skid | $19.95 |
| HSV336SD | Super Duty Fr/Rr Shock Tower | $29.50 |
| HSV337 | Steer Knuckle Brace (4) | $19.95 |
| HSV339 | Aluminum Turnbuckles 5/16 Rod (4) | $24.95 |
| HSV340SD | Super Duty Bulkhead Brace Fr or Rr | $12.90 |
| HSV343 | Angled Wheelie Bar w/Rubber Tires | $29.95 |
| HSV344 | Fuel Tank and Linkage Guard | $22.50 |
| HSV403 | C Shaped Hubs Fr or Rr (pr) | $35.90 |
| HSV405 | Steering Knuckes Fr or Rr (pr) | $39.95 |
| HSV407 | Super Duty Springs (8) | $19.95 |




| | | |
|---|---|---|
| LST019 | 300+ Piece Stainless Steel Screw Kit | $24.00 |
| LST146 | .46 Engine Conversion Kit | $89.00 |
| LST320-21SD | SUPER DUTY Front or Rear Skid Cover | $19.50 |
| LST322 | Front Alum Protection Sys: Tube Style | $39.95 |
| LST322-23Z | Front or Rear Alum Prot Sys : Billet | $39.95 |
| LST322T | Frt Titanium Protection Sys : Tube Style | $49.95 |
| LST322X | Frt Alum Prot Sys : Billet w/Grill Guard | $43.90 |
| LST323 | Rear Alum Protection Sys: Tube Style | $39.95 |
| LST323T | Rr Titanium Protection Sys: Tube Style | $49.95 |
| LST332SD | Silver Upper Control Arms CNC | $34.90 |
| LST333SD | Silver Lower Control Arms CNC | $37.90 |
| LST334 | SUPER DUTY Silver Center Skid Plate | $19.90 |
| LST336SD | LST Front or Rear Shock Towers | $38.00 |
| LST342 | SD Silver Shock Tower Mount Plate | $9.90 |
| LST343 | Angled Wheelie Bar With Rubber Tires | $29.95 |
| LST407-5 | Heavy Duty Springs (5.0 lbs) pair (2) | $6.80 |
| LST407-55 | Heavy Duty Springs (5.0 lbs) pair (2) | $6.80 |
| LST450 | LST Wheel Drivers for Stock or T-Maxx | $34.90 |
| LST910MD | MD Steel Tube Roll Bar W/Brace | $49.95 |




| | | |
|---|---|---|
| AGT203 | Bi-Level Chassis | $79.50 |
| AGT206 | Bi-Level for .21 Engine | $124.50 |
| AGT101 | Rear Brace | $21.95 |
| AGT102 | Front Brace Tubes | $7.95 |
| AGT910 | 3 Point Roll Bar | $39.50 |
| AGT250 | 125cc Fuel Tank | $10.95 |
| AGT302 | High Volume Header | $24.95 |
| AGT333 | Frt Arms Aluminum | $34.50 |
| AGT334 | Rr Arms Aluminum | $34.50 |
| AGT430 | Frt Shock Tower Alum | $19.50 |
| AGT431 | Rr Shock Tower Alum | $19.50 |
| AGT345SD | Servo Receiver Guard | |
| | CNC Billet for RTR and TEAM | $16.95 |




| | | |
|---|---|---|
| KMF105SD | Extended Side Plates 6mm (set) | $59.50 |
| KMF209 | Suspension Support Rods | $28.50 |
| KMF210XL | Extended Titanium Dog Bone | $24.50 |
| KMF300V2 | Steering Servo up Front w/ Bumper | $68.95 |
| KMF301V2 | Front or Rear Bumper | $39.95 |
| KMF334 | Super Duty Center Skid | $19.95 |
| KMF343 | Wheelie Bars w/ Rubber Tires | $39.90 |
| KMF910SD | Super Duty 3 Point Roll Bar | $44.95 |



*Nitro Rustler and Stampede CNC Aluminum Upgrades*

| | | |
|---|---|---|
| TRS103 | 3.2mm Alum Chassis Plate (Rustler Only) | $39.95 |
| TRS330S | Silver Front Bulkhead | $37.50 |
| TRS331V2S | Rear SD Bulkhead - Silver | $25.90 |
| TRS332S | Frt Control Arms - Silver (pr) | $24.90 |
| TRS333S | Rear Control Arms - Silver | $24.90 |
| TRS402S | Rear Arm Mounts - Silver | $23.50 |
| TRS403S | SILVER Front C Shaped Hubs | $25.90 |
| TRS404 | Blue Alum Rear Hub - Blue | $25.90 |
| TRS430S | Front Shock Tower | $19.90 |
| TRS431S | Rear Shock Tower | $19.90 |
| TRX241 | Port Matched Header | $24.95 |

Many More REVO & T-MAXX Upgrades CALL

LOSI MINI-T & HPI Nitro Mt2 Upgrades CALL

## REVO Upgrades

| | | |
|---|---|---|
| REV012 | 270 Piece Stainless Steel Screw Kit | $22.00 |
| REV101L | Steel Tube Upper Chassis $179.95 | $149.95 |
| REV103 | Aluminum Cage System | $129.95 |
| REV110 | Revo .21/28 engine conversion | $89.00 |
| REV118P | Revo .21 engine conversion | $49.50 |
| REV118S | Revo conversion for Sirio .23 engine not included for REV110, REV118P, REV118S | $49.50 |
| REV124 | .15 to .18 One Piece Billet Eng Mount | $19.50 |
| REV320SD | SUPER DUTY Alum Front Skid Cover | $22.50 |
| REV320SDF | SD Flamed Alum Front Skid Cover | $24.50 |
| REV321SD | SUPER DUTY Alum Rear Skid covers | $22.50 |
| REV322 | Frt Alum Protection Sys: Tube Style | $39.50 |
| REV322-23Z | Frt or Rr Alum Prot Sys : Billet Style | $39.50 |
| REV322T | Front TI Protection System: Tube Style | $49.50 |
| REV322X | Front Alum Protection System : Billet w/Grill Guard | $43.90 |
| REV323 | Rear Alum Prot System: Tube Style | $24.95 |
| REV323T | Rear TI Protection System: Tube Style | $39.50 |
| REV332F | SUPER DUTY FRONT Upper Arms | $49.50 |
| REV332R | SUPER DUTY REAR Upper Arms | $36.50 |
| REV332R-S | Single Silver REAR Upper Arm | $36.50 |
| REV333F | SUPER DUTY FRONT Lower Arms | $18.50 |
| REV333R | SUPER DUTY REAR Lower Arms | $39.50 |
| REV334 | SUPER DUTY Silver Center Skid Plate | $39.50 |
| REV337 | Alum Susp Push Rod Set (4) | $29.50 |
| REV337XL | Alum Susp Long Push Rod Set (4) | $21.90 |
| REV339 | Heavy Duty Aluminum 8mm Toe Link | $22.90 |
| REV343WR | Angled Wheelie Bar w/Rubber Tires | $29.95 |
| REV344 | Silver aluminum fuel tank guard | $22.50 |
| REV345SD | Silver Steering Servo Skid Plates | $29.50 |
| REV406 | Titanium Stub Axles | $9.85 |
| REV407-15 | Chrome preload spring 22.6 LB pair (2) | $6.75 |
| REV407-17 | Purple preload spring 28.5 LB pair (2) | $6.75 |
| REV407-18 | Blue preload spring 30.4 LB pair (2) | $6.75 |
| REV407-19 | GunMetal preload spring 32.2 LB pair (2) | $6.75 |
| REV417 | Aluminum Rocker Arm Post Set | $9.70 |
| REV517 | 2 Pin Alum Flywheel: For 1/8 Clutch | $19.59 |
| REV519 | 3 Pin Alum Flywheel: For 1/8 Clutch | $19.50 |
| REV520 | 4 Pin Alum Flywheel: For 1/8 Clutch | $19.50 |
| REV875 | Billet Alum Shock Caps pair (2) | $11.50 |
| REV876 | Billet Alum Spring Adjusters pair (2) | $7.95 |
| REV877 | Billet Alum Spring Retainers pair (2) | $10.95 |
| REV878 | Billet Alum Shock Rod Ends Pair (2) | $12.50 |
| REV878-4 | Billet Alum Shock Rod Ends four (4) | $15.90 |
| REV879 | Billet Alum PUSH ROD Rod Ends (4) | $19.90 |
| REV910SD | Blue Super Duty Steel Tube Roll Bar | $36.95 |
| REV916SDS | Silver Super Duty Roll Bar | $36.95 |
| REV910X | Aluminum Brace for REV910SD/SDS | $19.90 |

## T-MAXX Upgrades

| | | |
|---|---|---|
| TRM101L | Tube Upper Chassis $179.95 | $149.95 |
| TRM103 | 4.7mm Main Chassis | $39.90 |
| TRM118SD | Super Duty 4.7mm .21 Conversion Kit | $129.50 |
| TRM128 | Super Duty Conical Engine Washers | $6.95 |
| TRM321XL | Extended Rear Skid Plate | $19.95 |
| TRM123S | Mount for Rear Exhaust .21 Engine | $35.00 |
| TRM215S | Power Slotted Carbon Fiber Brake Disk | $12.90 |
| T2591OSD | SUPER DUTY Steel Tube Roll Bar | $39.95 |
| TRM320XL | Front Skid Plate (3.2mm) w/Bumper Guard | $19.95 |
| TRM321SD | SUPER DUTY Rear Skid Plate (3.2mm) | $19.95 |
| TRM318P | Silver Front Body Mount Posts w/Plate & Collar | $22.50 |
| TRM319 | Silver Rear Body Mount Posts w/Plate & Collar | $22.50 |
| TRM322 | Front Bumper (2 Piece) | $18.95 |
| TRM323 | Rear Bumper (2 Piece) | $18.95 |
| TRM324 | Front Bumper Supports | $22.95 |
| TRM325 | Silver Rear Bumper Supports | $22.95 |
| TRM326R | Silver Lower Braces | $36.50 |
| TRM326SD | Revolutionary 4-Point Lower Braces | $48.95 |
| TRM330V3 | Silver Front Bulkheads | $49.50 |
| TRM331V3 | Silver Rear Bulkheads | $49.50 |
| T25332 | Upper Control Arms For 2.5 | $36.50 |
| T25333 | Lower Control Arms For 2.5 | $39.50 |
| T25336 | Frt or Rr Shock Tower 3 Position | $38.00 |
| T25339 | Aluminum Turnbuckles for TRX2.5 | $24.95 |
| TRM335SD | Center Skid Full Coverage | $19.95 |
| TRM340 | Front Bulkhead Brace | $10.95 |
| ACC600-T25 | 14-FIN ULTRA Heatsink Head | $39.90 |
| TRM343WR | Angled Wheelie Bar with Real Rubber Tire | $29.95 |
| TRM345SD | Silver Steering Servo Skid Plate | $15.90 |
| TRM405S | Chrome Air Filter | $5.95 |
| TRM407 | Silver Super Duty Springs Set of 8 | $9.95 |
| TRM452H | Center Line wheels Billet Alum | $149.95 |
| TRM452X | Super Star wheels Billet Alum | $149.95 |
| TRM452Z | Super Six Spoke Wheels (4) | $149.95 |
| TRM454Z | 40 Series Super Six Spoke Wheels (2) | $78.90 |
| TRM501D | Close Header for .21 to .28 Engines | $24.50 |
| TRM507 | Bellcrank & Linkage kit | $16.95 |
| TRM510 | Fuel Tank 125cc W/Stone Filter | $26.95 |

## E-MAXX Upgrades

| | | |
|---|---|---|
| TRE101L | Tube Upper Chassis RACING | $149.95 |
| TRE107 | 3.2mm Extended Main Chassis Alum. | $59.95 |
| TRE280V2 | AIRCOOL CNC Alum. Motor Mount | $19.95 |
| TRE281V2S | Silver CNC Alum. Battery Hold Down | $28.95 |
| TRE910SD | Blue SUPER DUTY Steel Roll Bar | $39.50 |





















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# X-FACTORY X-5 2+3

## Wheeling the new ROAR 4WD champ!

Words and photos by Frank Masi



Four-wheel-drive electric buggies may have been eclipsed by the popularity of their 2WD cousins and by the arrival of stadium trucks, but to a whole lot of racers, the only way to get around a track quickly is to have all four tires scrabbling for grip. Team Losi has achieved rock-star status with these 4WD loyalists, producing not one but two national and world champion buggies. The XX-4 debuted in '96 and with it Brian Kinwald promptly won the ROAR championship. Jukka Steenari went back-to-back in '99 and '01, capturing a pair of IFMAR World Championships. The XXX-4 bowed in '02 and proceeded to dominate the 4WD class around the world, a path that led to Ryan Cavalieri's IFMAR title in '03.

Suffice to say, Losi's 4WD buggies have quite a pedigree, and, like any car, both have strengths and weaknesses. The goal of bolstering strengths while minimizing weaknesses is the impetus for the X-Factory X-5—a hybrid of the XX-4 and XXX-4 that is the brainchild of the father and son team of Charles "Chazz" Sinclair and his son Paul. Does the experiment work? Team driver Greg Hodapp just won the ROAR Off-Road Nationals wheeling an X-5. How's that for a testimonial?



# X-FACTORY X-5

## WHY MAKE THE X-5?

Before answering this question, we must go through a bit of the history of Losi's 4WD buggies, which will help explain why the X-5 came to be.

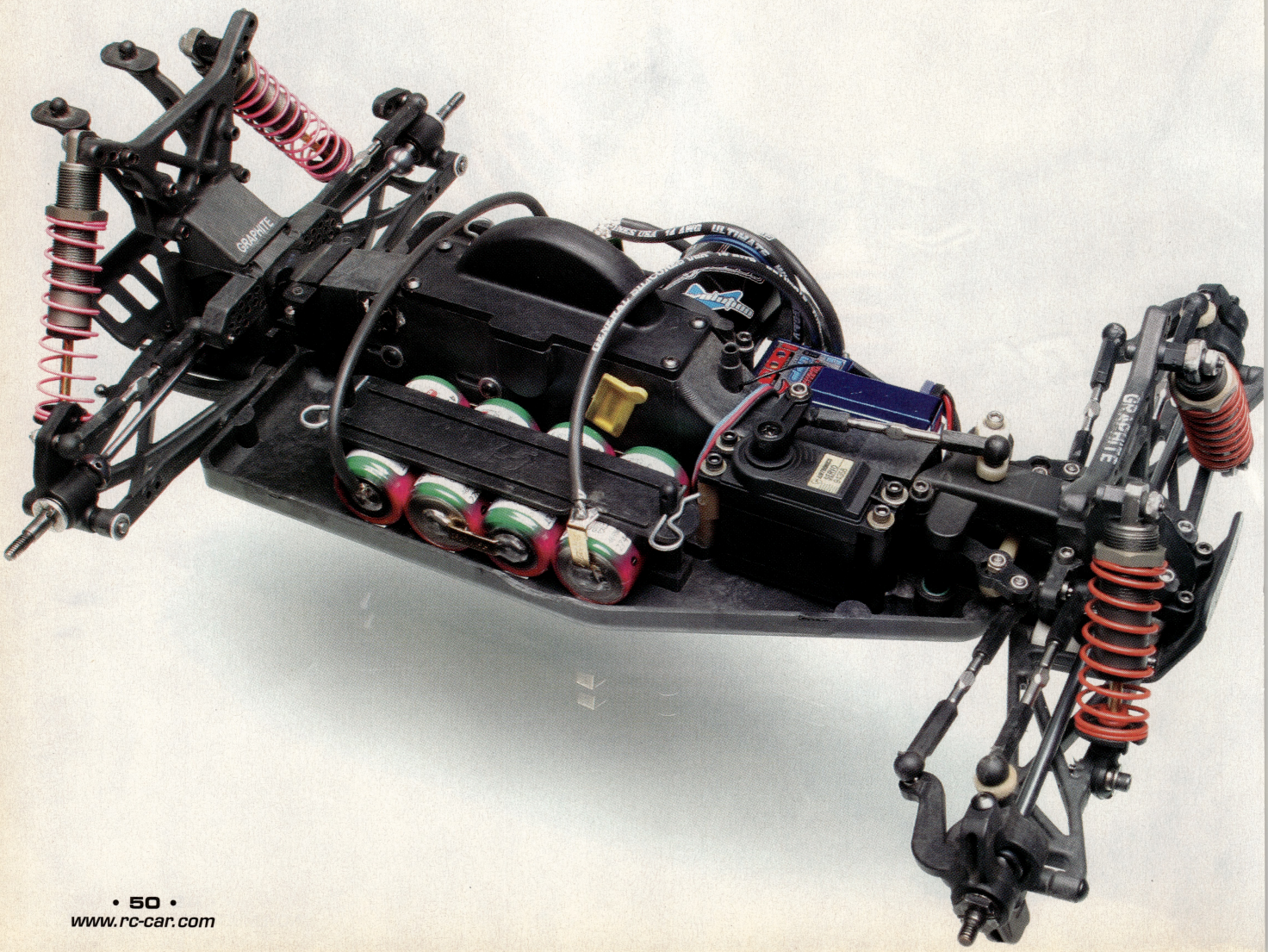
The XX-4 was designed from a blank sheet to be Losi's ultimate 4WD off-road car. Gil Losi Jr. and his staff incorporated several key innovations that centralized the car's mass, making it unbeatable through the bumps. To this end, the motor was mounted towards the front the car, while the battery was broken up into a saddle pack and placed close to the chassis' center, as was the steering servo. The chassis was an elaborate molding that fully encased the car's three-belt drivetrain, making it impervious to dirt infiltration. Among the XX-4's numerous innovations were an adjustable "clicker" device that allowed variable one-way action for the front diff, and a Double-X buggy style slipper clutch, easily adjustable from outside of the bodywork.

One year after its release, the XX-4 became the basis for Losi's first touring car, the Street Weapon. Sedans were becoming immensely popular during this period, and manufacturers scrambled to bring theirs to market to meet demand. The morphing of the off-road XX-4 into the Street Weapon was successful, and the car did quite well in all levels of competition. However, as is the case in all racing, competition became fiercer, and the Street Weapon's three-belt drivetrain became somewhat of a liability on certain tracks, where it would be outaccelerated by some of its two-belt competitors. Racers also complained that the XX-4's fully enclosed drivetrain made servicing the car too time consuming (although no one complained about the incredible durability of the system).

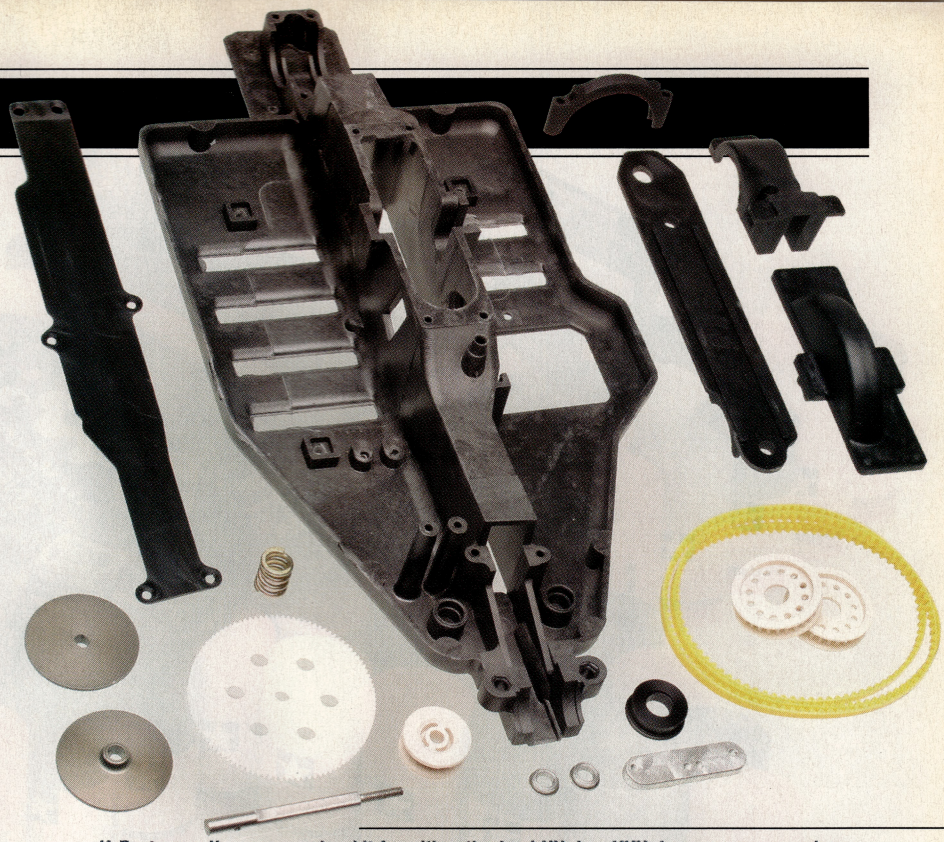
In answer to the newest crop of high performance touring cars, Losi followed the path that led it to success with the XX-4—it started with a blank sheet of paper (a blank computer monitor, to be exact) and came up with a completely new sedan, called the XXX-S. The XXX-S was optimized for on-road racing. It has what is, in our humble opinion, the cleverest drivetrain ever to grace an R/C model; a radical single-belt 4WD system that offered both unsurpassed efficiency as well as unmatched ease of maintenance. But four screws stood between you and either diff, while a clever top-loading spur gear assembly and lever-mounted pulley made simple work of changing spur gears and setting the belt tension.

It wasn't Losi's intention to turn the XXX-S into an off-road buggy, but customer demand often prevails, and it did so in this case. Losi fans, especially the ones who had spent hours working on the XX-4's sealed, but rather complex, drivetrain, were in love with the simplicity and efficiency of the XXX-S, and they wanted those traits in their next buggy. To meet that demand, Losi had to work backwards, tailoring the XXX-S's chassis, which, as stated previously, was designed for life as a touring car, into a buggy that could handle the rigors of off-road. That they succeeded so soundly is testimony to the capability of Losi's testing and engineering departments.

The Sinclairs' goal was to fuse the



superb weight centralization of the XX-4 with the improved acceleration and beautifully simplified maintenance of the XXX-4. The result was the X-5 from X-Factory. The X-5 is essentially a conversion kit for your Losi 4WD buggy. X-Factory sells two conversion kits—one for the XX-4 and one for the XXX-4—as well as a full version named the Entire Team Car, which includes everything needed to construct an X-5 from scratch save shock pistons, shock fluid, wheels and tires.



X-Factory sells a conversion kit for either the Losi XX-4 or XXX-4, or you can purchase an entire car kit. Shown here are the major contents of the conversion kit.

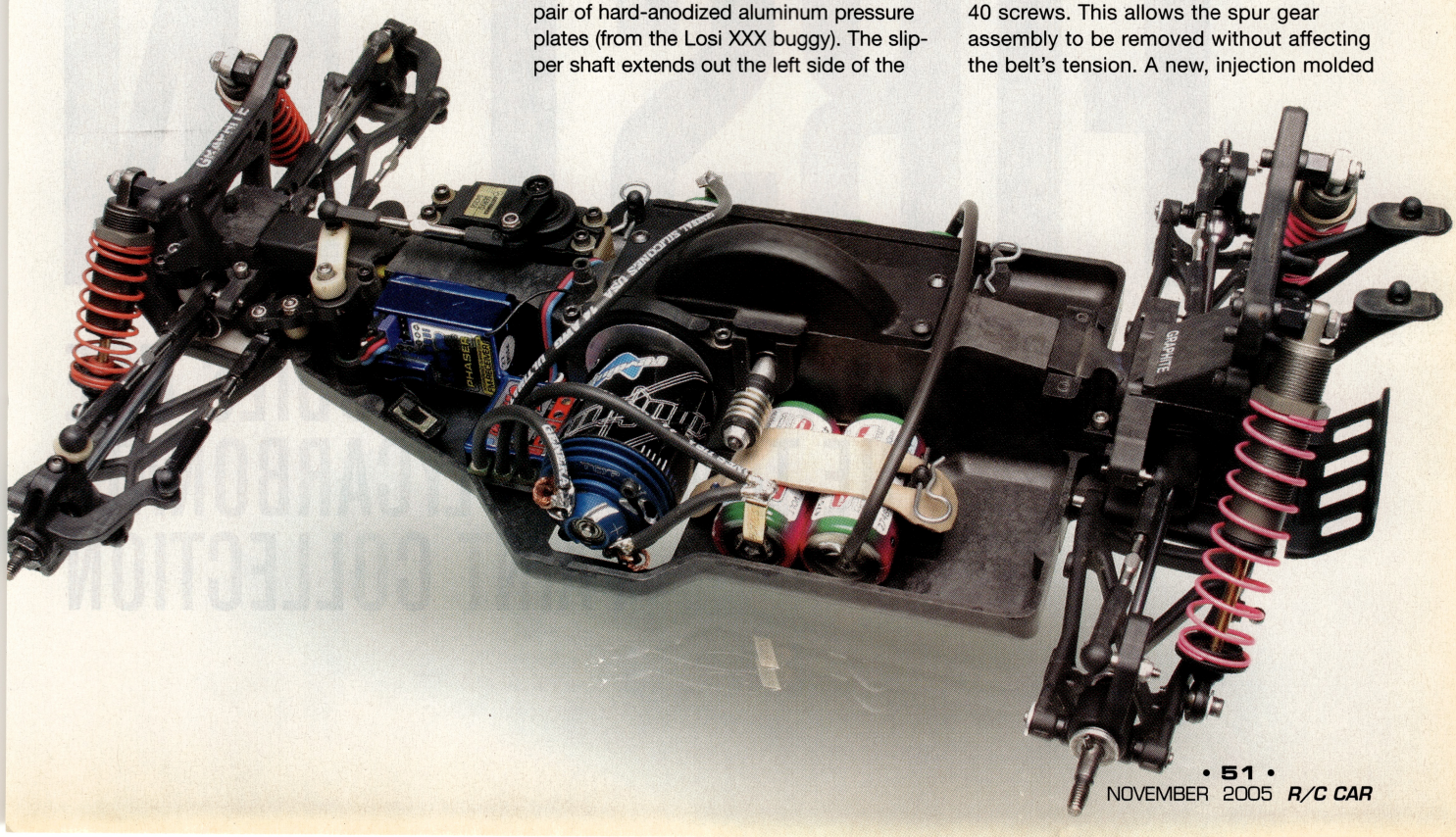
## WHAT COMES IN THE CONVERSION?

While there might be a bit of a "skunkworks" vibe to the X-5 kit, one thing's for sure: the chassis is super sano. X-Factory has created a molded chassis as intricate and as costly (to produce) as that of any mass-production kit. Sure, there are a few places that require de-burring, but we were mightily impressed. The chassis shuffles about all of the car's electrics. Compared with the chassis of the XXX-4, the X-5 moves the motor forward, takes two of the cells from the right side and tosses them to the left (behind the motor), moves the remaining four cells forward, and takes the steering servo from the left and transplants it to the right side, where it's stood up and tucked against the central drive tunnel.

The X-5 utilizes the theme of the XXX-4's single-belt drivetrain, but it merges this with the smaller diameter design of the XX-4's differentials. While the X-5 actually uses Losi differential parts—along with X-Factory's own 28-tooth diff pulleys—it uses the XX-4's front bulkhead, front belt cover, bumper, and rear bearing holders. Internal drive ratio goes from 2.3 (XX-4) to 1.75 for the X-5.

A huge 102-tooth 48-pitch spur gear, made by Precision Racing Systems, holds a set of six XXX-4 Teflon slipper pucks, which are in turn sandwiched between a pair of hard-anodized aluminum pressure plates (from the Losi XXX buggy). The slipper shaft extends out the left side of the drivetrain tunnel, where it's easily accessible for fast adjustment simply by lifting the body and turning the 4-40 locknut. The X-5 slipper uses the spring and retainer straight from the XXX buggy.

X-Factory subtly redesigned the XXX-4's belt-tension adjuster. Instead of having a pivoting lever, the X-5's belt-tensioning pulley slides back and forth and is affixed to the drivetrain tunnel via two 4-40 screws. This allows the spur gear assembly to be removed without affecting the belt's tension. A new, injection molded



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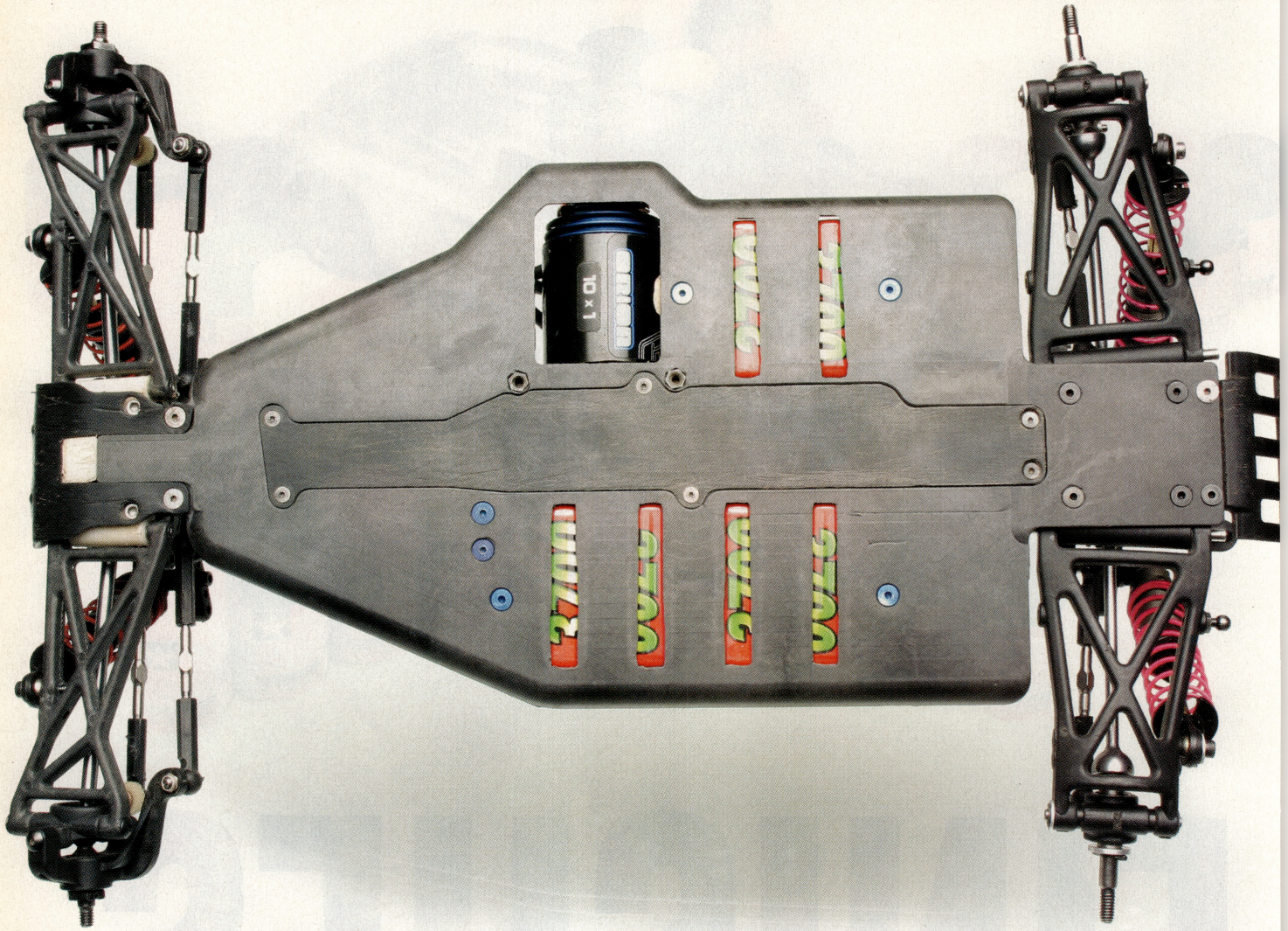
# X-FACTORY X-5



## the history of the x-5

When Paul Sinclair was 10, he and his Dad went to a hobby store to purchase a Pinewood Derby car, and Paul saw his first R/C cars. Dad bought an issue of an *R/C Car,* and Paul was hooked, soon subscribing to several magazines. The duo picked up a new Tamiya Thundershot buggy at a local R/C show, believing (erroneously, according to Chazz) the 4WD necessary for the dense woods that surrounded their home.

After a number of sessions between (and against) the trees, Paul wanted something more, and found T.A.R.C.A.R., a track operated by Losi factory driver Bill Bridges. Racing regularly there was Adam Drake along with several other Losi factory drivers. They were all extremely helpful—Paul wouldn't be racing today without them—and the Sinclairs realized quickly that a newer car was needed. Santa delivered one of the first Losi XX-4s in'97, and his racing career took off. Paul took sixth at the 2001 ROAR Stock Nationals with a XX-4, and third at the 2003 Nats with a XXX-4.




According to the Sinclairs, one of the little-known differences between the XX-4 and XXX-4 is that they feel the XX-4 is very easy to drive fast, allowing you to really race the other cars, while the XXX-4 requires a higher level of concentration.

At the 2003 Hot Rod Hobbies Off-Road Shootout, Paul ran his XXX-4 for two heats, and his XX-4 for the other two, using the same motor for both cars. The results were identical race times and lap times. Running the cars back-to-back like that substantiated Paul's theory that the XXX-4 was a rocket on the long straight, but the XX-4 made it all up on the rest of the track. "How could we combine the acceleration of the XXX-4 with the marvelous handling of the XX-4?" mused Chazz.

gear cover tops the drive tunnel and keeps dirt away from the spur gear assembly.

## THE DRIVING BALANCE

One of the keys to the XX-4's exceptional ability through bumps is its weight distribution. X-Factory took pains to replicate this balance in the X-5. To do this, they acquired a small, accurate scale and made three wooden pegs the same height as the scale. Paul's XX-4 Worlds Edition was fully dressed for racing and placed on the apparatus, with one wheel on the scale and the others supported by the pegs. This procedure, repeated for the other three corners of the car, created a baseline of the XX-4's weight distribution. The machined prototype of the X-5 was put through a similar procedure, and the Sinclairs moved the components about until the car's weight distribution was within fractions of an ounce of that of the XX-4. And if you're wondering why the X-5 has a unique four-plus-two battery configuration, the answer is that this was the only way to duplicate the XX-4's centralized mass.

## HOW THE DRIVETRAIN CAME ABOUT

In order to utilize the XXX-4's single-belt drivetrain, X-Factory had to overcome a rather large problem: The smaller XX-4 diff pulleys meant that the XXX-4 belt was too long. The solution presented itself during a father/son road trip, during which Paul shouted "I got it" and scribbled a design on a fast-food napkin.

The X-5 pulley system actually accomplishes two goals: First it solved the belt length problem. The idler pulley was moved from the spur gear assembly and affixed to the chassis, which took up the extra belt slack. Secondly, the X-5 tension pulley is independent of the spur gear and its main drive pulley, so when you need to make a gear change, the belt tension remains unaffected. Losi is at the forefront of belt technology, and this system allows the use of their low-drag XXX-S belts.

X-Factory also feels that it has improved upon the XXX-4's unique slipper clutch design. Although it uses the XXX-4's slipper gear and Teflon pucks, the X-5 uses Triple-X buggy slipper parts, which make it easy to set the slipper by simply using a 4-40 nut driver after lifting up the left side of the body. Slipper adjustments can be made much quicker with this system.

## HOW IT GOES TOGETHER

The X-5 instructions are very well done and are among the most comprehensive manuals you'll find from an aftermarket firm. The manual covers both the disassembly of the "donor" buggy as well as the buildup of the X-5, and includes a handy setup and tuning guide to help get the car dialed.

As is stated in the manual's opening pages, the X-5 conversion isn't for beginning builders, as it requires a certain level of know-how and a bit of precision Dremel work. The kit requires that you modify the XX-4's front belt cover by removing the rear portion using a cut-off wheel. You must also modify the rear diff's bearing blocks, the steering tunnel, and rear shock tower. Fortunately, none of the modifications require extensive work (the aforementioned cut-off wheel and a sanding drum are all that's required), and the manual provides plenty of clearly written text and photographs to guide you through these steps. It's also recommended that you have your XX-4 or XXX-4 instructions handy during assembly of the X-5.

Several X-5 drivers have installed the front one-way unit from the XXX-S into their buggies. This requires a slight modification to the XX-4 front bulkhead as well as to the one-way's outdrives, and both steps are outlined in great detail on X-Factory's Website (www.4wdrc.com). Our test car was fitted with the one-way modification.

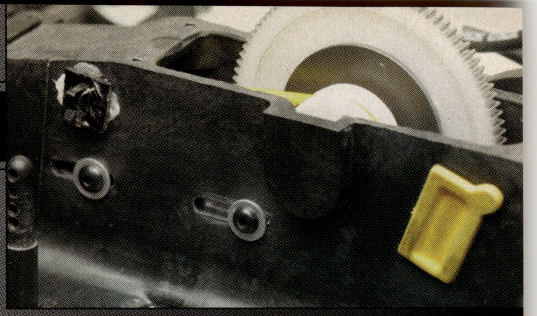
## TRACK TESTING

We packed up the X-5 and headed over to Hot Rod Hobbies Raceway in Saugus, California, to shoot some in-action pics, and then later put in some hot laps. Our photo car is actually X-Factory's backup ride, so we were pretty confident that it would have the hot setup and that it'd work like "buttah." We glued up some Losi Taper Pins (which were the favorite tire among the 4WD class at the recent Hot Rod Hobbies Shootout) and set the car on the track.

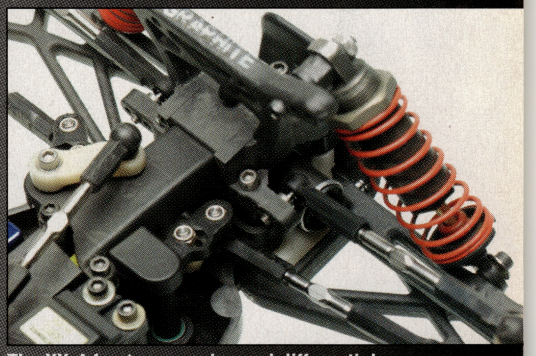
The Orion Revolution 10x1 we used for this test is tailor-made for high-grip 4WD racing, and it's well suited for the X-5. The car's drivetrain is amazingly free, yet soon inspired confidence in its ability to handle as much horsepower as we could throw at it. Punch the throttle during landings and feel free to mash the gas through bumps and ruts—the X-5 can handle the stress.

If X-Factory's goal was to merge the response of the XXX-4's drivetrain with the easy driving and superb balance of the XX-4, they've succeeded. The car feels like an extension of your trigger finger; there's no lag between your thoughts and the car's wheels. Acceleration is unreal; dramatic without terror. The car pulls through holes and over small bumps with nary a sideways buck.

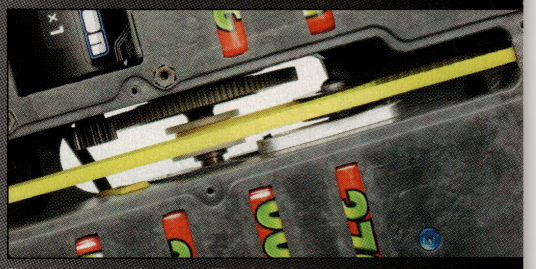
Jumping is also a strong suit of the X-5, as the car retains the centralized mass of



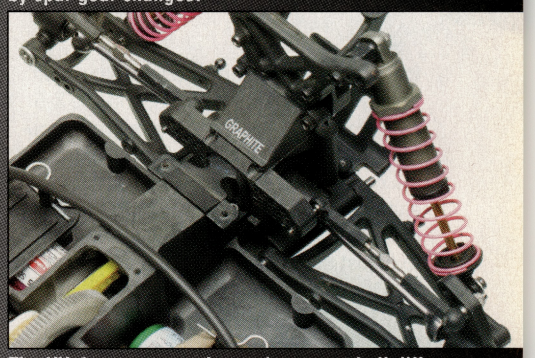
These two button-head screws are used to set the belt's tension. X-5 retains the XXX-4's clever gear-mesh inspection hole with rubber seal.



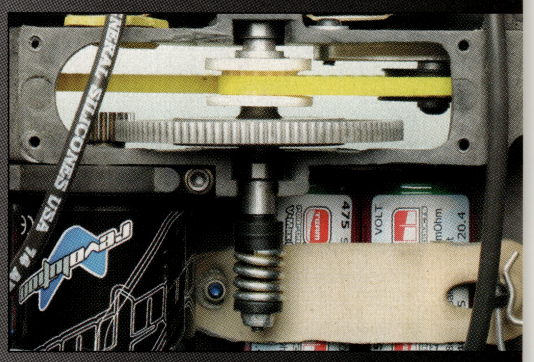
The XX-4 front suspension and differential grafted to the XXX-4's single-belt drive system.



The counter pulley is affixed to the chassis tunnel. Belt tension is unaffected by spur gear changes.



The XX-4 rear suspension and compact ball diff installed to the X-5 molded chassis.



The X-5 utilizes an easy-to-adjust slipper clutch design made with parts from the XXX 2WD buggy.

# X-FACTORY X-5




the original XX-4. Combine this feature with the drive of all-wheel traction, and the X-5 makes short work of even the trickiest double, triple and even quad jumps. Controlling the car mid-flight is a piece of cake, although we found it best to drop the car's nose right off the ramp, and use the throttle to adjust attitude to match the landing ramp.

Our car was equipped with a front one-way (described earlier in the text), which made it somewhat twitchy in the tight turns, but really responsive when on power. The car steers as well if not better than a rear-wheel-drive buggy, and catapults out of the turns with frightening velocity. Equipped with the latest GP3700 cells from Team Orion, our X-5 easily yielded run times in excess of six minutes—a testimony to the car's efficient drivetrain.

## WHAT WE REALLY THINK

X-Factory has proven itself a potent force in off-road racing. With the Sinclairs, Greg Hodapp and Takashi Sugimoto on board, the company has already built an impressive reputation with the X-5. And they're not done: Chazz informed us that they are developing a new one-way/differential system for the X-5, and they're continually experimenting with new aerodynamic concepts (the X-5's body and wing were designed by Josh Cyrul) and motor cooling systems. Chazz even hinted at the existence of new racecars—both 4WD and 2WD—in the pipeline.

## SPECS

| | | | |
|---|---|---|---|
| **Price:** | $229 (XX-4 conversion); $359 (XXX-4 conversion), $699 (Entire Car) | **Suspension:** | ind. lower H-arm, adj. upper link |
| **Length:** | 16.7in/424mm | **Damping:** | threaded aluminum oil-filled shocks |
| **Width:** | 9.8in/249mm | **Drivetrain:** | single belt 4WD |
| **Wheelbase:** | 10.63in/270mm | **Differentials:** | adj. rear ball diff, front one-way (opt.) |
| **Track (F;R):** | 8.4in/213.4mm; 8.1in/206mm | **Bearings:** | full ball bearings |
| **Weight (RTR):** | 57.7in/1,636g | **Tires:** | not included |
| **Chassis:** | molded composite backbone/tub | **Wheels:** | not included |

## SOURCES

- **Airtronics**, 1185 Stanford Ct., Anaheim, CA92805 • phone (949) 978-1895; fax (949) 978-1540
- **LRP**, distributed by Associated Electrics, Inc., 3585 Cadillac Ave., Costa Mesa, CA 92626 • phone (714) 850-9342; fax (714) 850-1744
- **Team Losi**, Inc., 4710 E. Guasti Rd., Ontario, CA • phone (909) 390-9595
- **Team Orion**, 22601 La Palma, Suite 103, Yorba Linda, CA 92887 • phone (714) 694-2812
- **X-Factory**, P.O. Box 2361, Whitehouse, OH 43571 • phone (419) 875-5455; Internet *www.4wdrc.com*; e-mail chazz@4wdrc.com

By: TEAM INTEGY

# iNDi 16X8v6 with built-in DynoV2

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We have taken racing electronics to a whole new level, the all new 16X8v6 high performance charger is capable of charging Li-Po, Ni-Cd & Ni-MH batteries at up to 8.0A, discharge 0.1 to 30.0A, break-in motor & test motor at up to 9.0V. The included thermo sensor is very accurate & responsive, user can specify cutoff temperature as well as cutoff deltaV from 0mV/cell and up, both temperature and voltage are continuously monitored. Your expensive racing batteries are now protected against overcharging-overheating. Our 3-phase charging will increase overall battery runtime & improve total battery lifespan due to reduced internal temperature & pressure. After 22 months of research & devolvement, we are proud to bring you the most versatile computerized charger available. The features are simply amazing and unmatched by competing products, at any price!

- 1-8 cell: Ni-Cd & Ni-MH
- 1-3 cell: Li-Polymer
- Linear Charge: 0.1 to 8.0A
- Discharge: 0.1 to 30.0A
- Motor-run: 1.0 to 9.0V
- Motor Dyno: Check rpm & condition
- Break-in: Adjust high & low voltage
- Timer: Cool delay & up to 99 cycles
- User can save & recall motor data
- F-1 SPEC 3-phase charge
- Adjustable "mAh" long logout
- Adjustable thermo cutoff
- Adjustable deltaV 0mV-120mV
- Auto discharge before charge
- Anti-false peak DSP software
- Adjustable cool-down timer
- Adjustable trickle rate & on/off
- Cycle battery up to 9 times
- AC/DC operation
- AC Input 110V-120V
- DC Input: 11V-16V
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- Built-in thermo sensor
- Reverse polarity protection
- Overload protection
- Overheat protection
- 1-year limited warranty

# Team Setup Station 2

## Ultra Precision Alignment Measuring Tool for 1/10 Touring Car

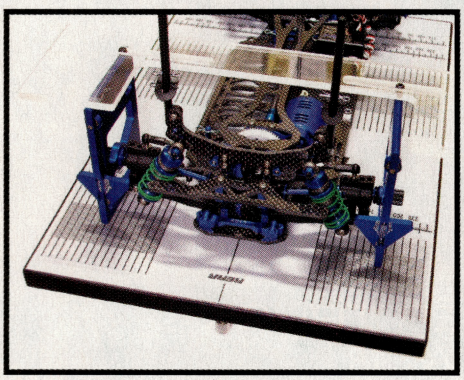
This is our new Setup Station for 1/10 touring car. The system works on both electric 190mm and nitro 200mm platforms. This new system uses ball bearing supports while moving parts are minimized. There is no wobble between machined parts and extremely accurate readings are now possible. This system is very easy to use, you can measure front camber, rear camber, front toe, rear toe, castor, steering angle, steering symmetry & camber changes. Medium size 3-point setup board and a limited edition professional carrying case are included.

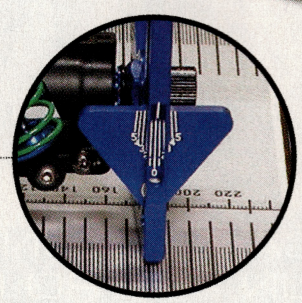
Model#INT C22350PRO, $129.99
available in blue, purple, red & gun metal color
* include standard size wheel nut (4), medium setup board, setup wheels and a limited edition professional carrying case

optional metric size wheel nut #INT C22305M, $9.95
optional large setup board #INT C22348, $49.99
optional setup wheel (4) #TOP T7012, $27.99




Patent Pending





This next generation setup station provides incredible camber adjustment accuracy. A less than 0.25 degree sensitivity is visible while you are adjusting the camber linkage. This breakthrough is made possible using our exclusive design and a very special production process. All the reading marks are CNC machined with pinpoint precision.

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Model#INT C22337, $59.99



Tough bumpers and A-arms are just part of the story; the 46LE has oversized outdrives and all-metal diffs.

TEST DRIVE: 1/8 SCALE - MONSTER TRUCK - 4WD - READY TO RUN - NITRO POWER

# CEN GENESIS 46 LIMITED EDITION

Upgrading the five-horse monster for more speed!?!

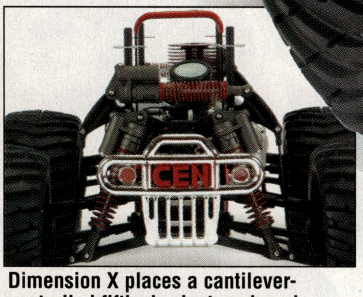


The CEN Genesis 46 Limited Edition wheelies up steep hills like they aren't even there.

One of the coolest parts of the monster truck revolution (which was started by the Traxxas T-Maxx) is the horsepower wars; you have to generate monster power to turn those monster tires and wheels, and CEN is the hands-down leader in the horsepower (and tire) wars with its Genesis 46. The .46ci is powered by a CEN NX76 engine with true ABC (aluminum piston, brass sleeve with chrome lining) construction and a power output of an insane five hosepower at 23,000 rpm. It's mated to a three-speed transmission (forward or backward) to create the perfect gear ratio for any situation, and the Genesis has a ten-shock suspension system to put the power to the ground.

Well, CEN has gone to the next level and created the Genesis 46 Limited Edition, which has new features developed in monster truck racing with Andy Smolnik. All are designed for more speed, control and durability, so let's look under the hottest hood in monster trucking.

The aluminum tuned pipe isn't going anywhere, as it's secured by a double-mount set-screw system with a third crossbar for safety.



Dimension X places a cantilever-controlled fifth shock at each end; it stiffens the ride but limits travel.



An Airtronics MX-3 FM radio tops the list of Genesis 46LE highlights; the kit even comes with a center-diff locking device for extreme 4WD R/C-ing.

## WHAT'S NEW IN LE BOX?

First and most importantly, the RTR Genesis 46LE has a bonafide Airtronics MX-3 three-channel FM radio and 92836 receiver, which is one of the better radios we've seen on an RTR. It also come with three 144 oz./in. CEN servos—one for steering, one for the throttle and dual (fore/aft) brakes, and one for switching the three-speed transmission from forward to reverse and back. The 46LE also has all of the latest hop-up options from CEN's racing program, like diff-tuned front and rear four-gear differentials, a center-diff locking device, a built-in fail-safe and a new transmission brace. To top off the Limited Edition, CEN includes a nice-looking silver-painted body with flames and special graphics. This is in addition to the basic Genesis' ten shocks with working reservior, NX76 engine, four-disc brakes, three-speed tranny, four-shoe vented clutch and heavy-duty spindles, castor blocks, A-arms and hardened 8mm CVSs.

## HOW FAST IS THE 46LE?

We took the CEN up to 7000 feet elevation and tested it in the Sequoia National Forest; after five tanks of bench-idle break-in (the recommended is seven) and two low-load, tuning tanks, we let 'er rip. The 46LE is scary-fast! It'll climb hills like a sand rail and rip around Jeep trails like a rally car with Travis Pastrana at the wheel. The three-speed transmission puts it in the right gear all of the time, so it'll rock-climb with a granny-puller first then grow the tires like a top-fuel dragster burnout in third. The CEN NX76 engine can't be stopped; it'll flip over backwards or dig a hole, but the engine keeps singing.

## HOW DOES THE GENESIS HANDLE?

For a 17-pound bullet, the Genesis 46LE handles its weight pretty well. It bashes with the best of them and climbs surprisingly well. We did some rock climbing in Sequoia National Forest, and the 46LE is very sure-footed. It drifts easily on dirt roads and jumps off of rocks like a California cougar, and the 4WD pulls it out of endoes on mis-stimed leaps. When we got the beast into something too tight or tough, reverse got it out of trouble every time. On pavement, the weight and top-heaviness make the Genesis three-wheel around corners (on throttle or off). We removed the fifth shock, front and rear, and slammed the body to lower the CG. Removing the shock gives almost a half-inch more travel but softens the overall ride and increases weight transfer in corners and when braking or accelerating. Still, the 46LE is fun to drive, whether you're bashing or in a dash-for-cash.

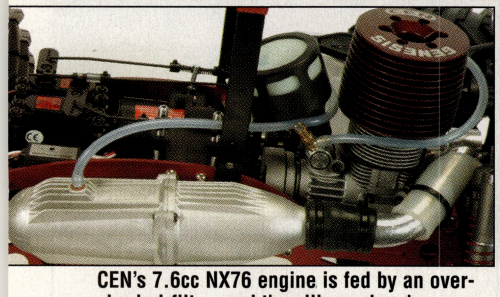
## DOES IT HOLD UP TO ABUSE?

We slammed the Genesis 46LE into bolders, stumps, fallen logs and curb-like faces, we jumped logs, monoliths and berms, and we climbed insanely steep and loose hills, and the beast never broke stride, much less parts. It either moved the immovable object or bounced

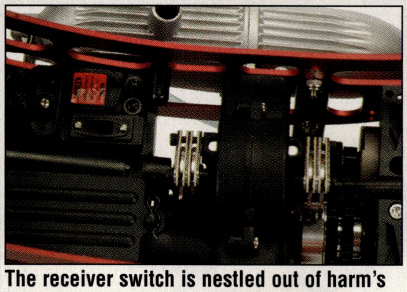
# CEN GENESIS 46 LE TEST DRIVE



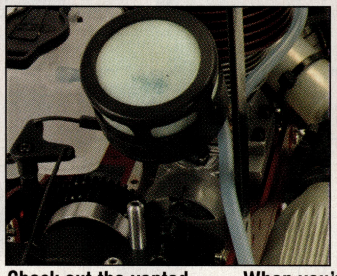
Rock crawling and stump jumping are big fun, and the MT is as tough as a tank.



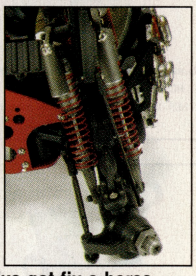
CEN's 7.6cc NX76 engine is fed by an oversized airfilter, and the silicone header-cover keeps heat away from the shocks.



The receiver switch is nestled out of harm's way under the chassis, and the four-disc brakes are strong and adjustable (fore/aft).



Check out the vented, four-shoe clutch; gearing is 17/43 and 21/39.



When you've got fiv e horsepower on tap, the drivetrain and suspension have to be burly.

off, but it never broke. Even burying it in its own roost didn't faze the CEN; as long as you keep the air filter clean, the beast is built to last and go fast.

## WHAT WOULD WE CHANGE?

Like we said earlier, we removed the fifth, cantilevered shock at each end and slammed the body for better handling and less weight. Next, we'd replace the stock, four-AA battery box with a high-output NiMH pack for stronger steering. We'd like to convert the pull-start engine to roto-start, but it always lit up easily during testing. We'd like to see anti-sway bars as an option, too, to fight body-roll and weight transfer in corners. Other than that, the Genesis 46LE is a complete package and one monster of a monster truck, thanks to the 7.6cc engine and upgrades.

## WHAT WE REALLY THINK

CEN did its homework with the Genesis 46LE. It's an agile rock crawler, a duner, and a racing monster truck. Its engine is fitted with an oversized air-cleaner and well-tuned pipe, and the suspension and drivetrain are top-of-the-line. Durability and performance are excellent, and the LE doesn't need a lot of hop-ups like other RTRs. It comes stock with metal shocks with working reserviors, a four-shoe clutch and awesome Airtronics MX-3 radio; just add batteries and fuel, and you're set to jet.

## SPECS

| | | | |
|---|---|---|---|
| **Price** | $749 (varies with dealer) | **Bearings/bushings** | Full ball bearings |
| **Length** | 23.1 in./587mm | **Shocks** | 10 aluminum coil-over shocks |
| **Width** | 18.4 in./467mm | **Suspension** | Individual A-arms with adj. upper links |
| **Wheelbase** | 15.6 in./397mm | **Tires** | 7.5 in/190mm |
| **Front/Rear Track** | 18.4 in./467mm | **Wheels** | 5.2 in./132mm |
| **Weight** | 17 lb/7.7 Kg | | |
| **Chassis** | Dual vertical plate | | |

## SOURCES

- **CEN Racing/GTC**, 1800 E. Miraloma Ave., Suite F, Placentia, CA 92870; (714)792-1923, Fax (714)792-1968; *cenracing.com*
- **Sidewinder/Morgan Fuels**, P.O. Box 311201, Enterprise, AL 36331; (334)347-3525; *morganfuel.com*

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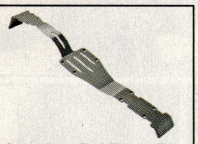


**Undercarriage Skid Plate - Titan.**
HCR-05021 (blue) • HCR-05022 (green)
HCR-05023 (purple) • HCR-05024 (silver)



**Roll Bar/Handle - Alum. & Titan.**
HCR-05031 (blue) • HCR-05032 (green)
HCR-05033 (purple) • HCR-05034 (silver)

**REVO CANTILEVER APPLICATION GUIDE:**

**Front Cantilevers - Titan.**

POSITION 1:
HCR-05071 (blue) • HCR-05072 (green)
HCR-05073 (purple) • HCR-05074 (silver)

POSITION 2:
HCR-05081 (blue) • HCR-05082 (green)
HCR-05083 (purple) • HCR-05084 (silver)

POSITION 3:
HCR-05091 (blue) • HCR-05092 (green)
HCR-05093 (purple) • HCR-05094 (silver)

LONG TRAVEL:
HCR-05091 (blue) • HCR-05092 (green)
HCR-05093 (purple) • HCR-05094 (silver)

**Rear Cantilevers - Titan.**

POSITION 1:
HCR-05111 (blue) • HCR-05112 (green)
HCR-05113 (purple) • HCR-05114 (silver)

POSITION 2:
HCR-05121 (blue) • HCR-05122 (green)
HCR-05123 (purple) • HCR-05124 (silver)

POSITION 3:
HCR-05131 (blue) • HCR-05132 (green)
HCR-05133 (purple) • HCR-05134 (silver)

LONG TRAVEL:
HCR-05141 (blue) • HCR-05142 (green)
HCR-05143 (purple) • HCR-05144 (silver



**Trans Servo Skid - Titan.**
HCR-05041 (blue) • HCR-05042 (green)
HCR-05043 (purple) • HCR-05044 (silver)



**Battery Cover - Titan.**
HCR-05051 (blue) • HCR-05052 (green)
HCR-05053 (purple) • HCR-05054 (silver)



**Gas Tank Skid - Titan.**
HCR-05061 (blue) • HCR-05062 (green)
HCR-05063 (purple) • HCR-05064 (silver)



**Front & Rear Cantilevers - Titan.**
Multiple part numbers available. See chart for specific part number application.



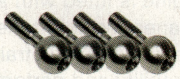
**Front Bumper - Titan.**
HCR-05151 (blue) • HCR-05152 (green)
HCR-05153 (purple) • HCR-05154 (silver)



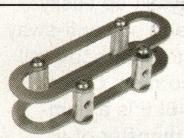
**Rear Bumper - Titan.**
HCR-05161 (blue) • HCR-05162 (green)
HCR-05163 (purple) • HCR-05164 (silver)



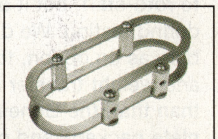
**Revo Mutant Head - Alum.**
HCR-05171 (blue) • HCR-05172 (green)
HCR-05173 (purple) • HCR-05174 (silver)



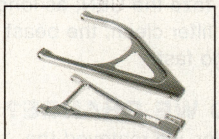
**Pillow Balls (4 pc.) - Titan.**
HCR-05181 (blue) • HCR-05182 (green)
HCR-05183 (purple) • HCR-05184 (silver)



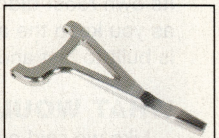
**Front Bumper Bracket - Titan.**
HCR-05261 (blue) • HCR-05262 (green)
HCR-05263 (purple) • HCR-05264 (silver)



**Rear Bumper Bracket - Titan.**
HCR-05271 (blue) • HCR-05272 (green)
HCR-05273 (purple) • HCR-05274 (silver)



**8 Piece Arm Set - Alum.**
HCR-05201 (blue) • HCR-05202 (green)
HCR-05203 (purple) • HCR-05204 (silver)



**Front Upper L&R Arm - Alum.**
HCR-05211 (blue) • HCR-05212 (green)
HCR-05213 (purple) • HCR-05214 (silver)



**Front Lower L&R Arm - Alum.**
HCR-05221 (blue) • HCR-05222 (green)
HCR-05223 (purple) • HCR-05224 (silver)



**Rear Upper Arm L&R - Alum.**
HCR-05231 (blue) • HCR-05232 (green)
HCR-05233 (purple) • HCR-05234 (silver)



**Rear Lower Arm L&R - Alum.**
HCR-05241 (blue) • HCR-05242 (green)
HCR-05243 (purple) • HCR-05244 (silver)



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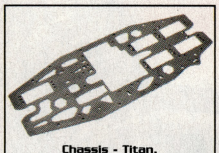
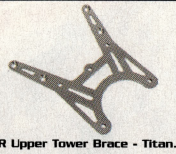


**Chassis - Titan.**
HCR-15001 (blue) • HCR-15002 (green)
HCR-15003 (purple) • HCR-15004 (silver)



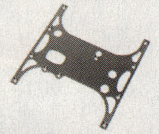
**F/R Upper Tower Brace - Titan.**
HCR-15021 (blue) • HCR-15022 (green)
HCR-15023 (purple) • HCR-15024 (silver)



**Front Skid Plate - Titan.**
HCR-15031 (blue) • HCR-15032 (green)
HCR-15033 (purple) • HCR-15034 (silver)



**Rear Skid Plate - Titan.**
HCR-15041 (blue) • HCR-15042 (green)
HCR-15043 (purple) • HCR-15044 (silver)



**Center Skid Plate - Titan.**
HCR-15051 (blue) • HCR-15052 (green)
HCR-15053 (purple) • HCR-15054 (silver)



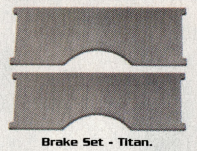
**F/R Bulkhead Brace - Titan.**
HCR-15061 (blue) • HCR-15062 (green)
HCR-15063 (purple) • HCR-15064 (silver)



**Upper Hingepin brace - Titan.**
HCR-15071 (blue) • HCR-15072 (green)
HCR-15073 (purple) • HCR-15074 (silver)



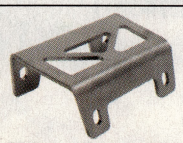
**Lower Hingepin brace - Titan.**
HCR-15081 (blue) • HCR-15082 (green)
HCR-15083 (purple) • HCR-15084 (silver)



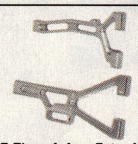
**Brake Set - Titan.**
HCR-15091 (blue) • HCR-15092 (green)
HCR-15093 (purple) • HCR-15094 (silver)



**Battery Skid Plate - Titan.**
HCR-15101 (blue) • HCR-15102 (green)
HCR-15103 (purple) • HCR-15104 (silver)



**F/R Bumper Bracket - Titan.**
HCR-15111 (blue) • HCR-15112 (green)
HCR-15113 (purple) • HCR-15114 (silver)



**8 Piece A-Arm Set - Alum.**
HCR-15121 (blue) • HCR-15122 (green)
HCR-15123 (purple) • HCR-15124 (silver)

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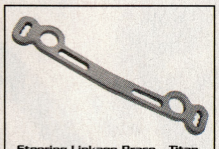
**Chassis - Titan.**
HCR-04501 (blue) • HCR-04502 (green)
HCR-04503 (purple) • HCR-04504 (silver)



**Front Shock Tower - Titan.**
HCR-04511 (blue) • HCR-04512 (green)
HCR-04513 (purple) • HCR-04514 (silver)



**Rear Shock Tower - Titan.**
HCR-04521 (blue) • HCR-04522 (green)
HCR-04523 (purple) • HCR-04524 (silver)



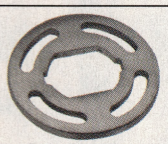
**Steering Linkage Brace - Titan.**
HCR-04531 (blue) • HCR-04532 (green)
HCR-04533 (purple) • HCR-04534 (silver)



**Center Diff Brace - Titan.**
HCR-04541 (blue) • HCR-04542 (green)
HCR-04543 (purple) • HCR-04544 (silver)



**Front Bulkhead Brace - Titan.**
HCR-04551 (blue) • HCR-04552 (green)
HCR-04553 (purple) • HCR-04554 (silver)



**Brake Disc - Titan.**
HCR-04591 (blue) • HCR-04592 (green)
HCR-04593 (purple) • HCR-04594 (silver)



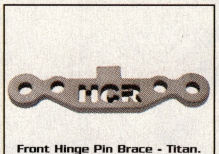
**Brake Caliper Set** (4 pads) **- Titan.**
HCR-04601 (blue) • HCR-04602 (green)
HCR-04603 (purple) • HCR-04604 (silver)



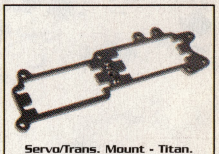
**Front Brace - Alum.**
HCR-04611 (blue) • HCR-04612 (green)
HCR-04613 (purple) • HCR-04614 (silver)



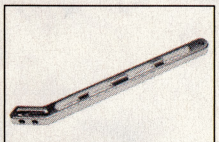
**Rear Hinge Pin Brace - Titan.**
HCR-04561 (blue) • HCR-04562 (green)
HCR-04563 (purple) • HCR-04564 (silver)



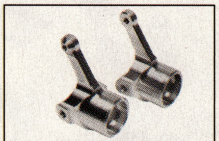
**Front Hinge Pin Brace - Titan.**
HCR-04571 (blue) • HCR-04572 (green)
HCR-04573 (purple) • HCR-04574 (silver)



**Servo/Trans. Mount - Titan.**
HCR-04581 (blue) • HCR-04582 (green)
HCR-04583 (purple) • HCR-04584 (silver)



**Rear Brace - Alum.**
HCR-04621 (blue) • HCR-04622 (green)
HCR-04623 (purple) • HCR-04624 (silver)



**Knuckles - Alum.**
HCR-04631 (blue) • HCR-04632 (green)
HCR-04633 (purple) • HCR-04634 (silver)



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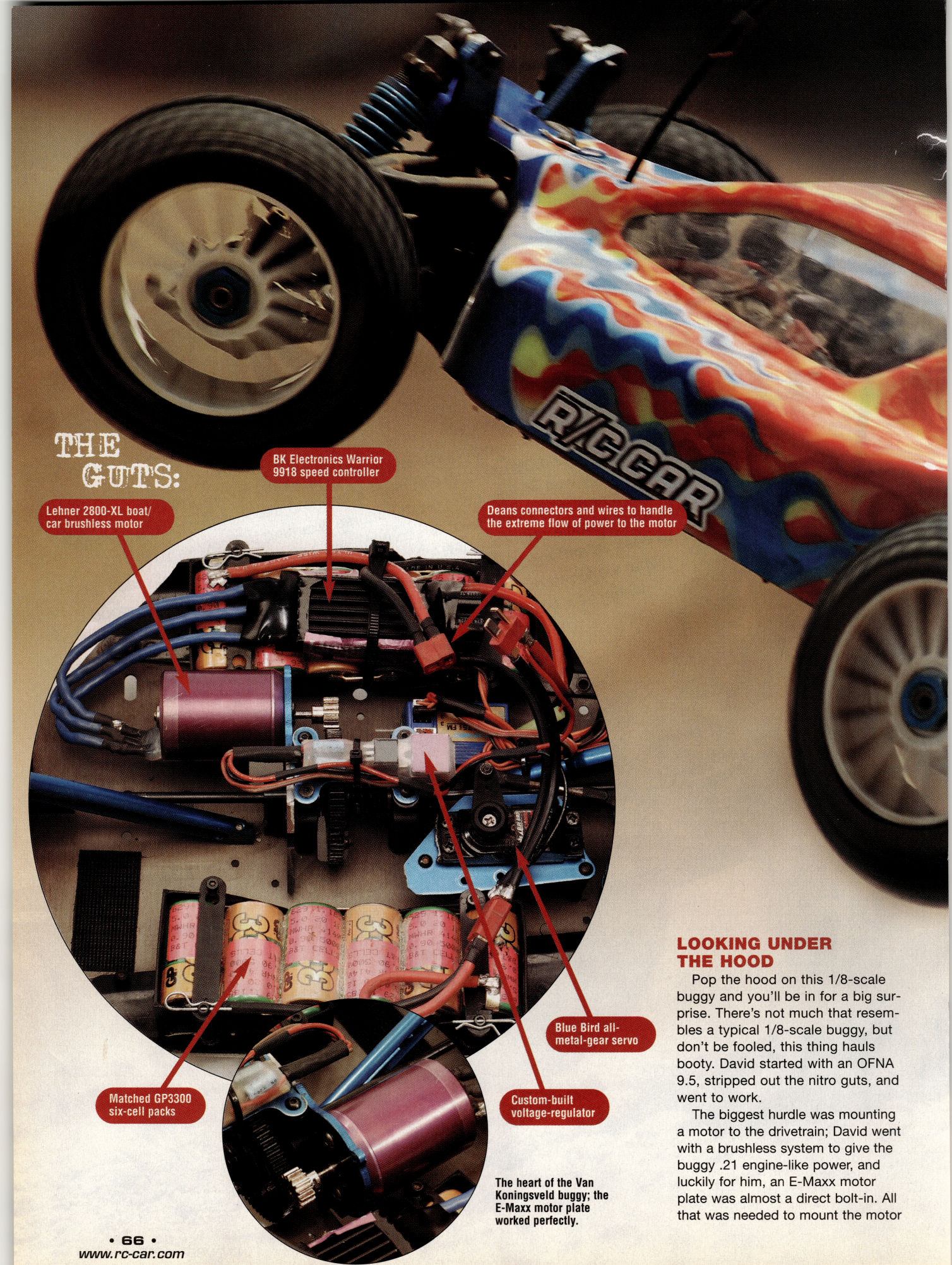
# HOME-BREW HIGH VOLTAGE BUGGY

## Nikola Tesla would be proud!

Words by Brian Skinner
Snaps by Mike "Happy Hands Club" Basher

Do you want a 1/8-scale buggy that has insane bottom-end, can pull wheelies from a dead stop, and is so quiet your neighbors would never know you were causing havoc in the neighborhood? If so, then take a look at David Van Koningsveld's home-brewed electric 1/8-scale buggy. We met David and his creation one night at a photo shoot at our local track and noticed his buggy was awfully quiet on the course. Wanting to know why his 1/8-scale was so quiet, we went over to see why, and it turns out David had made an electric 1/8-scale out of an OFNA 9.5 Nitro buggy. We knew this was too good to pass up and made arrangements to check out David's creation. Here's what we found out about this innovative 1/8-scale buggy; could this be a whole new fad or the next RTR for the masses? Let's take a look.




The heart of the Van Koningsveld buggy; the E-Maxx motor plate worked perfectly.

## LOOKING UNDER THE HOOD

Pop the hood on this 1/8-scale buggy and you'll be in for a big surprise. There's not much that resembles a typical 1/8-scale buggy, but don't be fooled, this thing hauls booty. David started with an OFNA 9.5, stripped out the nitro guts, and went to work.

The biggest hurdle was mounting a motor to the drivetrain; David went with a brushless system to give the buggy .21 engine-like power, and luckily for him, an E-Maxx motor plate was almost a direct bolt-in. All that was needed to mount the motor

# HOME BREW HIGH VOLTAGE BUGGY

plate to the chassis was to do some trimming for fit and drilling holes in the plate to match the bolt holes for the brake-caliper mounts on the diff tower. This worked out great because with the electric motor, you don't need disc brakes; the motor magnets do the deed.

To get power to the wheels, David used a Savage spur gear and an OFNA Dominator slipper clutch. Since this review, however, David has gone back to a traditional center diff but increased the spur gear to a 52-tooth coupled to a 12-tooth pinion. This made the buggy react much more predictably and more like a 1/8 scale as far as power. One last problem to be solved was powering the receiver and steering servo. He could've added a battery pack to power them, but instead made a custom voltage regulator to run off the six-cell packs that power the motor. The voltage regulator steps the power down from the packs to 6-volt power, so the steering servo can work and not get smoked by all the extra juice. After these hurdles were conquered, the rest was easy. Other than these changes the rest of the buggy is typical 1/8 scale stuff.



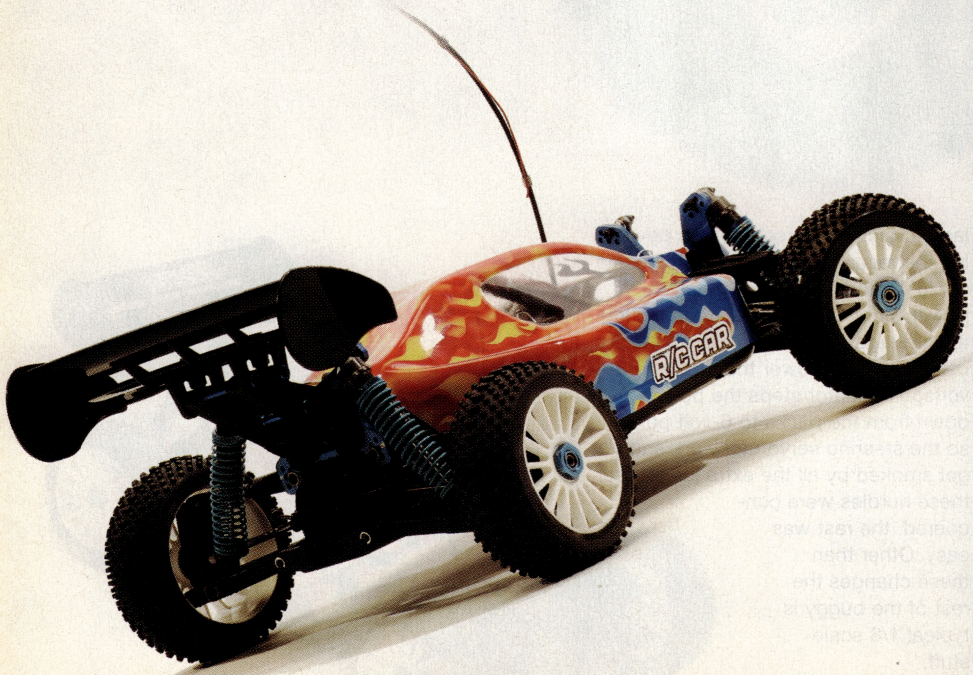
# HOME-BREW HIGH VOLTAGE BUGGY

## head-to-head with a nitro

After trying David's creation in our parking lot and seeing how quick this electrifying buggy was (insane wheelies), we knew we had to pit it against a nitro buggy to see how it stacked up. Under the guise of some action shots, off we went to Sun Valley Speedway to pit it against a nitro buggy—with poor David none the wiser. At the track, we got some action shots and sneaked onto the course with the other nitro buggies that were there. Before David knew it, we were dicing with the nitros and hanging tough. You'd be surprised, but the brushless buggy was easily keeping pace with its nitro cousins, and the only place it was a little slower was on the long 200-foot straight. There, the nitro buggies put a nice gap on it. We also found that David's creation ran longer than the nitro buggies on the track; we actually got about 10 minutes of continuous run time, while the guys we were dicing with had to come in for fuel after 7 minutes.

The only thing was, once the battery dumped, we had to come in and change batteries and let it cool down some; did you know that a brushless motor can reach 150 degrees at race pace? Neither did we! Our conclusion is that David's buggy is really cool, and he did a great job of making an electric 1/8-scale buggy. We also pondered the possibility of seeing some company releasing an RTR electric buggy to the masses. This would be an excellent avenue for a new person to get involved with 1/8-scale buggies, and we could see a new class on the horizon. We think our photo guy Basher said it best: "Man, I would buy one of these things in a second; I could bring this to a supercross, and not get hassled playing with it."

Basher, you got a point there. Is anybody listening?






**DAVID VAN KONINGSVELD'S SPECS:**

**Name:** David Van Koningsveld
**Age:** 21
**Resides:** Santa Clarita, California
**Years in the hobby:** Four years and not stopping
**Favorite things to do:** Build things differently
**Current occupation:** Mad R/C scientist
**Free plugs:** David wants you all to check out these two Websites (they are help-and info-R/C hobby sites): *www.ultimaterc.com* and *http://www.lsarc.com*

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## NEW 1/8 Buggy TIRES



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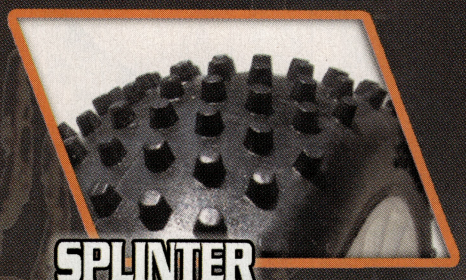

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*-G-Force sidewalls are currently employed by the Blockpass tread only.

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# TOOLS FOR

## Made in the shade

As hard as it is for me to admit, Skinny actually wrote something that made me think. Skinny reviewed some of our MaxSpeed Designs products in the July '05 issue, and wrote that even decals can be used as tools. If this was true, then there must be other products out there that could be also considered "tools." I knew of some right off the bat—sunglasses and goggles, i.e., eye protection.

Granted, when you electric guys go inside and play on the rug, it doesn't matter, but to those of us who race outside, glare from the sun, dust, nitro fumes and wind can wreak havoc with our peepers, and cause poor driving performance.




### NOT JUST FOR SUNNY DAYS

Besides picture perfect sunny California, the rest of us actually have clouds in the sky and this can change your view of the track throughout the day. Also, at some bigger races, you may start out with a sunny day and end up running your mains under the lights. While all these changes are taking place, your main goal is to keep stuff from getting in your eyes and ruining your perfect run. But how do you do that with all these changing light conditions?

Several companies offer an array of lens types, but for this article I'll be focusing (is that a pun?) on Oakley's line. Oakley offers hundreds of different models, styles and colors, but I'm only with two styles of sunglasses—the M Frame and the Half Jackets. Both models offer interchangeable lenses and over 40 hues that have been "formulated to precisely balance transmission, absorption and reflection of light, depending on the targeted environment for usage." In layman's terms, you can change lenses for every type of light condition possible.

You can change out your lenses in a matter of seconds. Your competitors will be struggling to see in low light conditions or opt to go "naked," while your eyes will be well adjusted with a lens that actually helps you see better.

For all the off road guys out there, Oakley's goggles are some of the best on the planet. They even have lenses specifically designed to enhance your view of the dirt. Featured here is the brand new Crowbar goggle. If they work for Ricky Carmichael, they should work for you!

This is where the interchangeable lenses helped me out. I use a clear lens nine times out of ten. I've never really liked a very dark lens, but I was looking for something in-between for really sunny days. My friend Eric at Oakley recommended a few lenses to try in my Half Jackets. As I said before, with over 40 choices, you're bound to find something ideal for each situation. Besides the obvious ones, Eric sent me a totally trick set of lenses for running at night or in very low light conditions. I don't even know how to describe them. The insides are yellow; the outside is like a blue or purple tint. The neat thing is that when you put them on, they don't brighten everything significantly. Eric gave me a lengthy scientific explanation on how they work but, whatever; they just work—I don't care how.

# YOUR EYES



## WHAT TO LOOK FOR IN A LENS

There are several key features that help determine the right lens for a particular application. The following descriptions are from Oakley's tech department.

• **Polarization**—Light waves "roll" at every angle. Imagine a curl traveling down a bullwhip. If the whip moves from side to side, the curl is parallel to the ground. If the whip moves up and down, the curl is perpendicular to the ground. Waves can roll down the whip at any angle. That's how light waves travel, except when they reflect off flat surfaces. This causes them to align so they all roll in the side-to-side direction. The result is blinding glare. A polarizer is a filter that blocks certain angles of wave roll. Imagine the bullwhip is fed between the slats of a fence. Only the up-and-down waves can make it between the slats. A polarizer does the same thing with light waves, eliminating glare by blocking the side-to-side waves that blind you.

• **UV Protection**—You can be blinded by what you can't see. An invisible form of radiation, UV rays pelt your retinas at 186,000 miles per second. Eye damage linked to UV includes cataracts, a condition where the eye lens becomes opaque so light can't get through. UV is also linked to photokeratitis (sunburn of the cornea), pterygium (tissue growth that can block vision), and macular degeneration (damage to the part of the inner eye that receives light patterns and transmits them to the brain).

The biggest misconception regarding sunglasses is that they're all basically the same, and that you're simply paying for the brand name with more expensive models. This is not the case: cheap sunglasses may look just like some of the brand-name models such as Oakleys, but in fact they offer little to no protection against damaging UVA, UVB, UVC and harmful blue light. So while your five dollar shades might make you look cool, they aren't actually filtering out the harmful rays that can not only cause poor vision and clarity, but also cause lasting damage to your vision. In other words, you can "cheap out" with jeans, shoes and jewelry, but when you buy cheap sunglasses (with apologies to ZZ-Top), you could be paying a hefty price down the road. Always check the lens specs and buy based on the protection they offer. Incidentally, Oakley's Plutonite lenses block 100 percent of the above mentioned rays.

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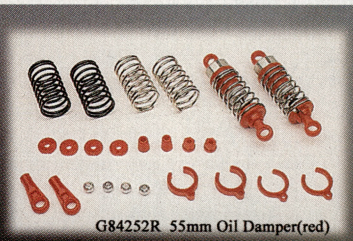
## Upgrade



G84250 Colorful Spring Set 30mm



G84252R 55mm Oil Damper(red)



FF014 GD
2.2 in. Off Road wheel (Gold)



G73901 Bearing 5x8x2.5

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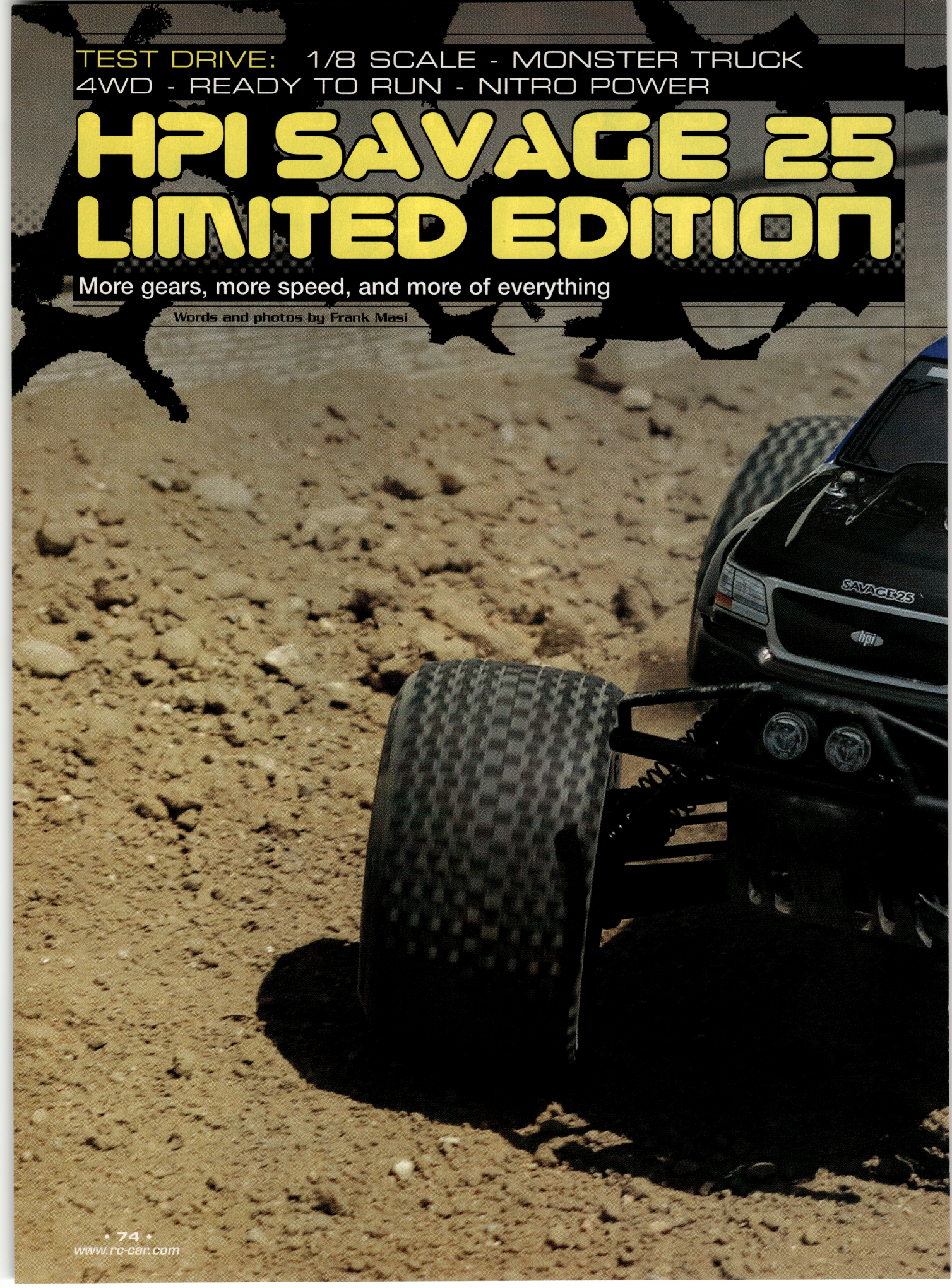
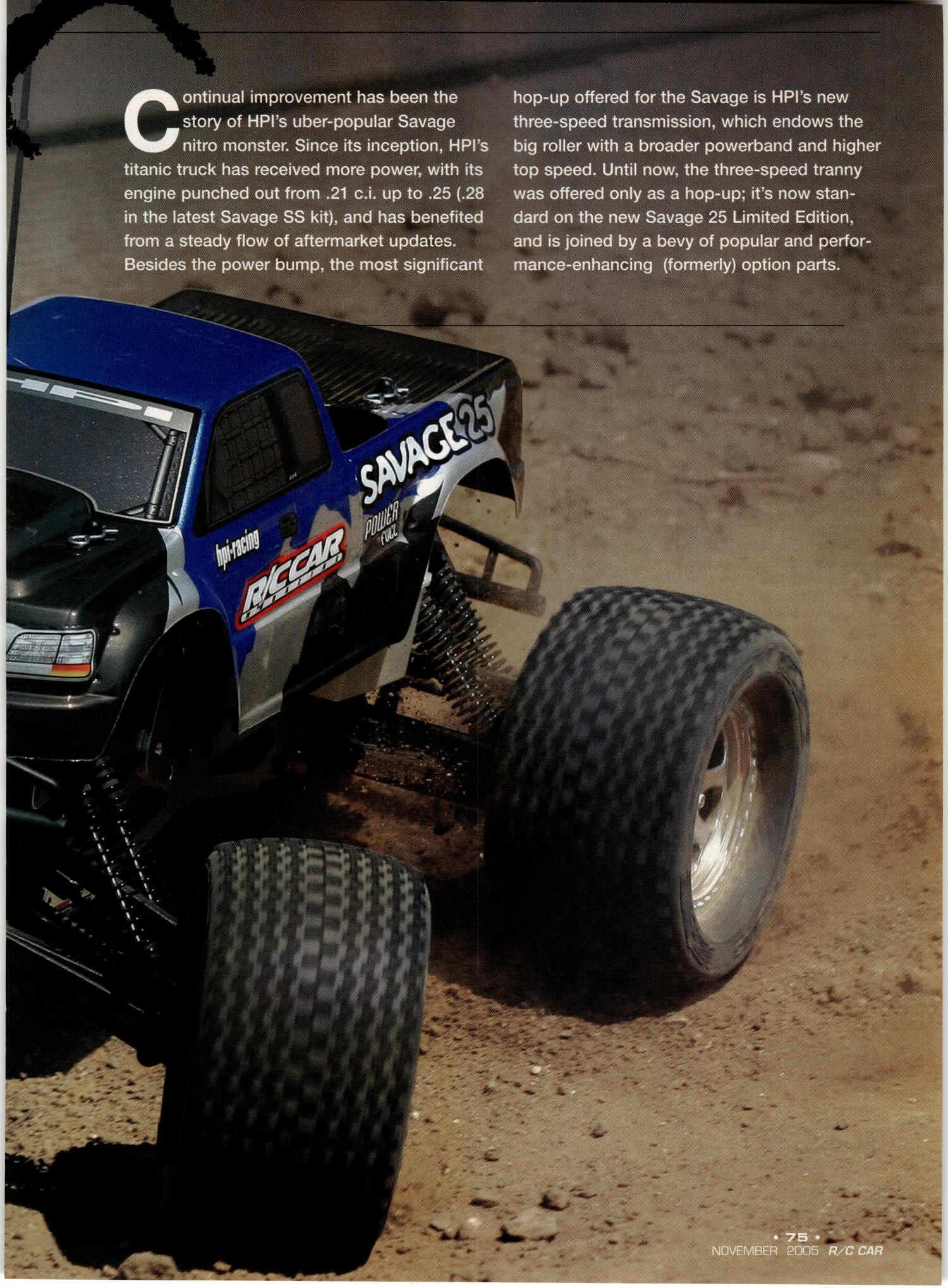
# HPI SAVAGE 25 LIMITED EDITION

More gears, more speed, and more of everything

Words and photos by Frank Masi



Continual improvement has been the story of HPI's uber-popular Savage nitro monster. Since its inception, HPI's titanic truck has received more power, with its engine punched out from .21 c.i. up to .25 (.28 in the latest Savage SS kit), and has benefited from a steady flow of aftermarket updates. Besides the power bump, the most significant hop-up offered for the Savage is HPI's new three-speed transmission, which endows the big roller with a broader powerband and higher top speed. Until now, the three-speed tranny was offered only as a hop-up; it's now standard on the new Savage 25 Limited Edition, and is joined by a bevy of popular and performance-enhancing (formerly) option parts.



# HPI SAVAGE LE





## venomous voltage

Most RTRs come with a battery holder for four AA cells. People usually fill the holder with alkaline cells, but these can become expensive over the long haul. One option is to use rechargeable NiMH AA cells, which can be used over-and-over (and have greater voltage than alkalines). Venom Racing sells a set of four 2400mAh NiMH AA cells for just $10. Another option is to use a five-cell, 6-volt NiMH pack made from 2/3A cells. These packs provide both improved voltage as well as run time. Venom Racing also offers a bulk pack of single 2/3A cells for just $60 for 24 cells. We built a five-cell pack (shown at left) for just $12.50, and the pack's voltage is off the charts (which means faster servo response). You can go in with your friends on the bulk cells, and they can also be used to build packs for your micro R/C vehicles.

## LIMITED EDITION UPGRADES

The big news is the LE's three-speed transmission, which provides a wider power band in which the Nitro Star S-25 engine can strut its stuff. HPI didn't merely tack on a taller third gear to its existing tranny; the three-speed's gear ratios are spread perfectly, providing a first gear that has 10 percent greater torque and a top ratio that has 10 percent higher speed. Second and third gears have been beefed up, and are made from hardened steel. HPI has even bolstered the shifting clutch mechanisms, forming them from steel rather than aluminum for greater durability. Rotating mass has been reduced thanks to lightened gears and shift hubs, giving the LE acceleration that's even brisker.

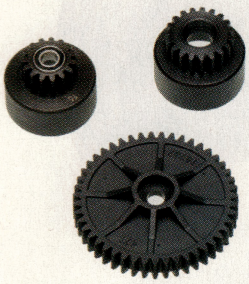
Other drivetrain changes include beefier four-gear differentials (one of the most popular Savage upgrades) that can handle much greater loads than those in previous Savage models, optional gear ratios (HPI includes an extra 19-tooth clutch bell and 47-tooth spur gear for a total of four possible primary drive ratios), and a racing-style three-shoe clutch for faster acceleration and less drivetrain loss.

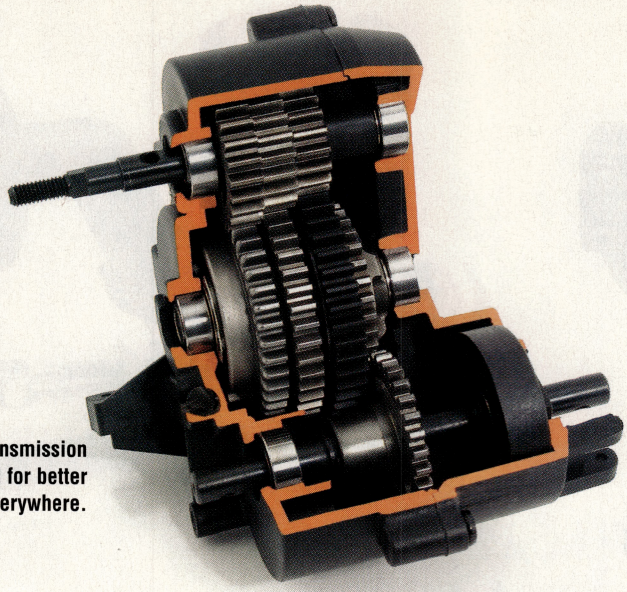
The Nitro Star S-25 engine is a substantial improvement over the original Savage's .21 mill, and it's a welcome part of the LE package. HPI further boosts the engine's performance by including a beautiful dual-chamber polished-aluminum tuned exhaust system. This pipe gives the S-25 a smoother and wider power band, and it dissipates heat better than the plastic pipe found on previous Savages. Also included is a new high-performance air cleaner. An oiled inner foam-element traps tiny particles, while a coarser outer foam element keeps larger particles from inhibiting airflow. HPI even includes extra elements so you won't have to interrupt the fun to clean the filter. A redesigned throttle/brake linkage assures crisper engine response.

With a better-breathing S-25 engine and three gears on tap, the Savage LE is definitely a faster machine, so greater stopping power is mandatory. This duty falls to a pair of drilled stainless-steel brake discs, which provide twice the surface area of the discs found in previous Savages. The new brake system is also more effective in adverse conditions such as mud, sand and moisture.



Additional gearing allows for a total of four possible primary drive ratios.





A standard three-speed transmission provides a wider power band for better performance everywhere.



A three-shoe racing clutch provides faster, more positive engagement. The result is quicker acceleration.

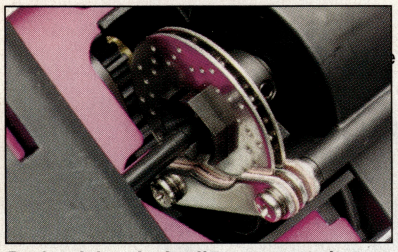


# HPI SAVAGE LE




**The RTR LE includes a great HPI TF-4 pistol-grip transmitter and handheld Roto Start on-board engine starter.**

**The powerful Nitro Star S-25 engine gets a breathing boost in the form of a dual-chamber polished tuned pipe and high-flow foam air cleaner.**



**Dual stainless brake discs are vented for improved cooling and longer-lasting stopping power.**

Savage's steering bellcranks to improve response. The original design utilized a pair of solid bellcranks, while a servo-saver steering horn absorbed shock. The problem was that the large monster-truck tires often overpowered the servo-saver and caused a lack of precision in the truck's steering. The new design is similar to that found on 1/8-scale nitro buggies. The servo-saver mechanism has been moved to the bellcrank, and it's much tighter than the old setup.

Another very useful—although virtually invisible—change is the addition of small washers to the rear toe links' ball-links. These little gems help prevent the outer ball-ends from popping off if the truck lands awkwardly from a jump or cartwheels crazily during a bad crash.

The LE comes with HPI's new Dirt Bonz tires, which are 40-percent lighter than the tires found on previous Savage models. This substantial weight savings not only gives the truck quicker acceleration, but also reduces unsprung weight from the suspension, making the LE more effective over rough terrain. The Dirt Bonz also hook up exceptionally well on hard-packed dirt, and come pre-glued to hot-looking six-spoke chrome wheels.

Also of note is a special metallic blue, silver and graphite paint job on the LE's GT-1 pickup shell. The body comes pre-trimmed, and with stickers already applied; you need do nothing save attach the body to the chassis and avoid rolling over and scratching it.

## TRACK TESTING

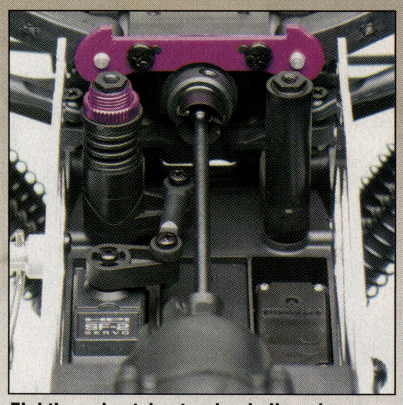
We tested the Savage LE at Hot Rod Hobbies raceway in Saugus, and at the wide-open SV Speedway track in Sun Valley (both circuits are located in Southern California). We opted to install a five-cell NiMH battery pack made from Venom Racing's single 2/3A cells, as this would supply the servos with higher voltage (better speed and torque) than had we used the stock four AA battery holder. We filled the truck's huge 160cc flip-top tank with Byron's Race fuel (30-percent Pro Driver blend).

The S-25 fired very easily, however we had to bump-up the idle a bit (by turning the idle screw clockwise about a quarter turn) to keep the engine running. The factory settings are extremely rich, even for break-in, so we leaned the high-speed needle by about a half-turn to allow the truck to be driven slowly for the successive break-in tanks. After four tanks, we leaned the engine further until it began to pull harder on top. By the sixth tank of fuel, we had leaned the engine to its final tune, and we were impressed by its power and acceleration. The wider power band afforded by the three-speed reduces strain on the engine, and reduces its operating temperature. Our S-25 never exceeded 210 degrees during testing.

The three-speed is a much larger advantage than we'd originally surmised; first gear is lower and gives the Savage a lot more punch out of the turns, while second gear is perfect for small to medium sized tracks. The LE is much better through the tighter sections, and can clear big jumps with ease thanks to its improved acceleration. Second gear engages sooner with this tranny, and the truck pulls all the way down the straight, rather than experiencing an abrupt shift into second, as was the case with the two-speed Savage. On larger tracks and in open spaces, third gear enables the Savage to devour real estate with ease. With the LE's three-speed there is no longer a need for a gearing compromise.

The LE's overall performance and handling is the best of any Savage we've tested. The firm black springs keep the chassis flat during cornering and extremely responsive to throttle and braking inputs. The Dirt Bonz tires are excellent on a variety of surfaces, although

their specialty is hard-packed dirt. The stock high-torque steering servo, when combined with a 6-volt NiMH pack, is very impressive, with very fast transit time and good torque. You won't feel the need to upgrade this truck's electronics.



**Eighth-scale style steering bellcranks have a stronger servo-saver for more responsive steering.**

## WHAT WE REALLY THINK

In the realm of RTR monster trucks, the Savage has always been a favorite. And among its competition, the Savage has always been among the most durable. With the LE version, the Savage is now a contender for the performance and handling title. The refinements to the power package and the addition of the three-speed breathe new life into the venerable Savage platform, while the subtle suspension tuning and lightweight, high-grip tires quicken the pace substantially. The LE takes an already popular monster and makes it a star.

## SPECS

| | | | |
|---|---|---|---|
| **Price:** | $520 (varies with dealer) | **Damping:** | eight oil-filled shocks |
| **Length:** | 21in/533mm | **Drivetrain:** | full-time 4WD, three-speed |
| **Width:** | 16.8in/427mm | **Differential:** | four-gear bevel (f/r) |
| **Wheelbase:** | 13.25in/337mm | **Bearings:** | full ball-bearings |
| **Weight:** | 10.3lb/4672g | **Tires:** | HPI Dirt Bonz |
| **Chassis:** | Twin Vertical Plate (alum.) | **Wheels:** | six-spoke chrome plastic |
| **Suspension:** | ind. double wishbone | | |

## SOURCES

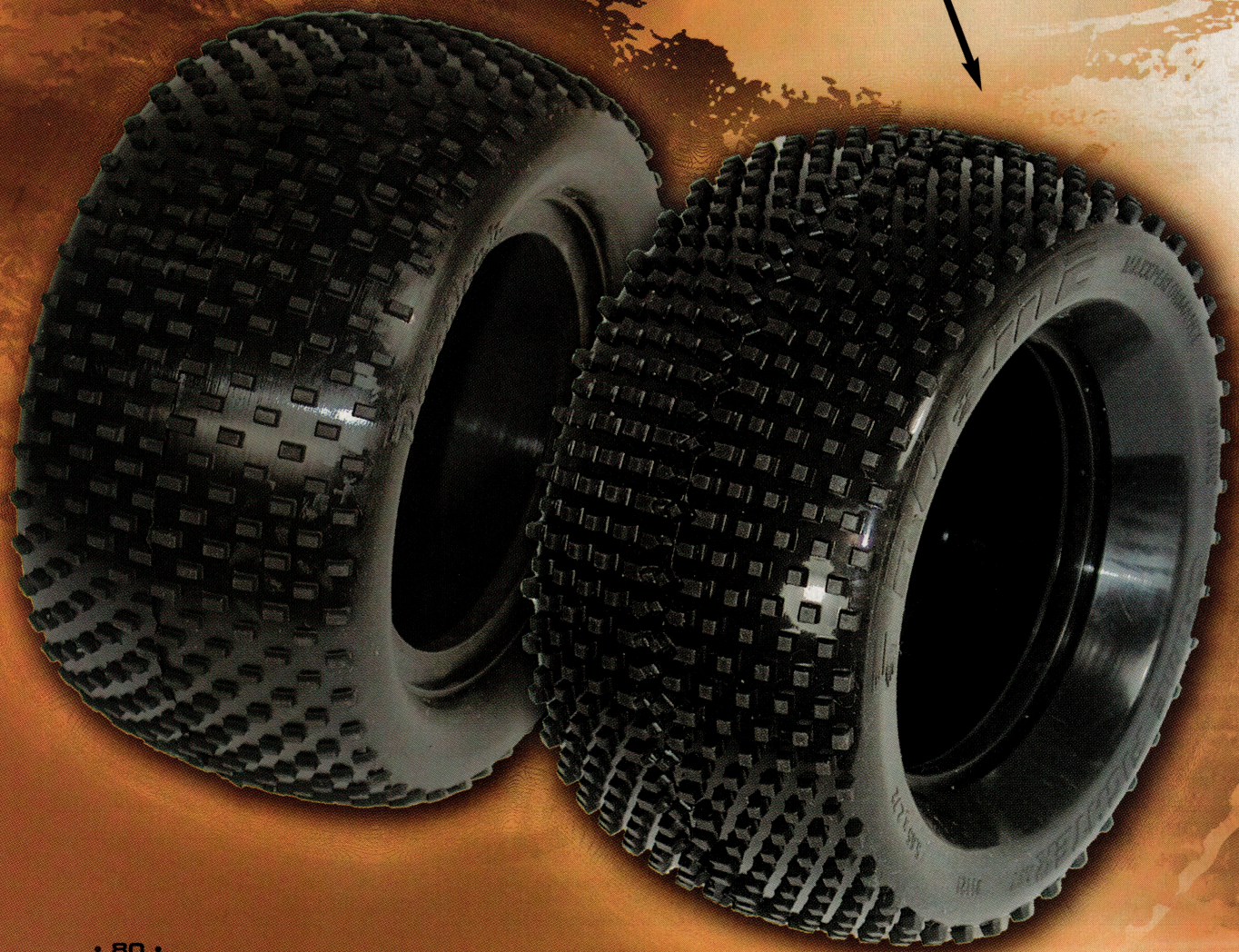
- **Byron Fuel**, P.O. Box 279, Ida Grove, IA 51445 • phone (712) 364-3165
- **HPI Racing**, 70 Icon Street, Foothill Ranch, CA 92610 • phone (949) 753-1099; fax (949) 753-1098
- **Venom Racing**, 600 W. Buckles Rd., Hayden, ID 83835 • phone (800) 705-0620; fax (208) 762-2520

# Big Treads Battle!

## Panther Boa vs. Pro-Line Crime Fighter MT

### Which new MT tire rules?

By Brian Skinner



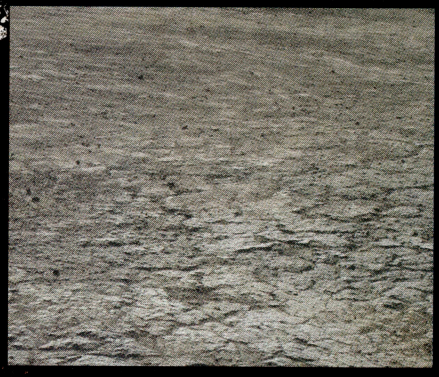


Our test truggy shod with Panther Boa tires.

## THE CONDITIONS FOR THE TEST

This is what the conditions were and how we compared the new tires. This was just one test session on a particular type of dirt, so results will vary from track to track and dirt to dirt, but we got some side-by-side testing. We also got a general idea of how this new size of tire will work on big trucks.

There were four rounds of five-minute qualifiers, and we opted to test each set of tires alternately for each round; this way we'd get back-to-back sessions with each tire and in theory would get to see a difference, if any, between each round. We used a Hot Bodies/Pro Hobby Lightning project truck—on which we have significant track time—as these tires were designed for truggies.



Here's a photo of the dirt and race-testing conditions. Hopefully you can put our performance summaries and this photo together and come to your own conclusion.

The MT (monster truck) tire war rages on. First it was Pro-Line, then it was Panther, then Pro-Line, then Panther. One company's tire went too big, the other went too small. At this point, the R/C community jumped in and rallied for something else. The factory pros, as it turned out, had the right idea all along. They were cutting their own tires and making something in-between the existing tire sizes. We all wanted these tires, and Panther and Pro-line listened, and with the blessing of the sanctioning bodies, created two sleek, agile and wicked tires for use on both truggies and traditional monster trucks. We got our hands on early samples of Panther's new Boa and Pro-Line's new Crime Fighter MT, and decided to perform a head-to-head comparo.

Round two of the RC Pro Series was within our testing window, and "new release" tires were just deemed legal for use. Off we went to pull trigger in Oregon, where the soil is rich and often slick.

# BIG TREAD BATTLE!



The track was in good shape during the first two qualifiers; it was almost blue groove with a little broken soil on top. There was loose dirt outside of the main line, and if you got into that, you were in trouble. No tire would grip there.

## ROUND ONE: THE FIRST TWO HEATS

• **Panther Boa**—In hard-packed conditions, the Boa worked well; it seemed to have good corner speed, and forward bite was excellent. The truggy felt planted and smooth. The track was still smooth, and it was hard to tell if the Boas were absorbing the bumps well or not. After the five-minute qualifier, it was apparent that this new tire felt smoother and quicker than Panther's Komodo LP. This was mainly due to the Boa's taller sidewalls, and this new design was a step above what is currently available.

• **Pro-Line Crime Fighter MT**—The Crime Fighter MT worked well in the second five-minute heat. The tires seemed to have great forward bite, but the corner speed seemed a little flat. The front tires really dug in and turned well, but weren't as snappy as we'd have liked. We also noted that there was no tendency to push in the hard corners. The truck felt planted and had a smooth feel to it. At this point, the track was still smooth, but you could feel that the tires were contouring the ground well. The Crime Fighter MT did feel much different than its uncle, the Bow-Tie; the new tires don't have the sidewall flex of the Bow-Tie.



Heats three and four saw a huge difference in track conditions; the track surface was now blown out and very choppy. There was a lot of loose dirt everywhere, including the blue groove.

## ROUND TWO: THE PLOT THICKENS

• **Panther Boa**—Overall performance was still good, considering how bad the track felt. Corner speed was still good, and no pushing was detected. There was less forward bite than in the first round, and the truck felt like it was skating in areas. The Boas felt a little more skittish in the choppy stuff, and they didn't want to hug the ground as they did during the smoother first round. Feelings aside, the truggy was extremely fast, and we got the best finish of the day with a third.

We should note here that Panther didn't have their foam inserts ready at the time of this test, so we used Trinity two-stage foams. These are very good and are widely accepted by the racing community. This could be a reason that the tires felt a little jumpy and skated on the rough track; the Panther foams we normally use deaden the sharp impacts on rough tracks, so keep this in mind.

• **Pro-Line Crime Fighter MT**—These tires seemed to be at home in the horrid conditions of the fourth round. Corner speed still felt flat, but they were tracking well with no sign of pushing. Forward bite was excellent, and the tires felt planted. In the chop, the Pro-Lines reacted well and weren't fazed too much by sharp edges. Pro-Line did provide foams that were meant for the Crime Fighter MT, and this probably helped the tire feel so good in the rough stuff.

The track was really blown out by the fourth round, and both Pro-Line and Panther drivers who were using the new tires were speculating that larger MT tires may have been better in these conditions. This goes to show you that, even though these new tires may be super-hot in some conditions, the originals will still be needed in some circumstances.

## AND THE WINNER IS...

When the roost settled, there was no clear winner; both tires worked well, and both tires will shine in different conditions. The Boa and the Crime Fighter MT are better for racing than what's currently available. They're both smaller and lighter than the last generation, but the Boa is the lightest and smallest of the two, and these new style tires are going to help your big truck's overall handling by taking a huge workload from the clutch and drivetrain. Both tires will improve acceleration and braking. Both the Boa and the Crime Fighter MT are the next-level racing tires for the truggy class; we would speculate that these new style tires will be the tires of choice once they hit the market. As for our choice for the A-Main in Oregon, we went with the Crime Fighter MT to deal with the rough track, as it has a little more sidewall to absorb the holes, curbs and bumps. Remember how Chad Bradley added two rows of knobs to his tires for the U.S. Gas Champs? That fact stuck in our head as we prepped for the A. Again, softer inserts may have helped the Boas better cope with the choppier surface.



## A-Main Action

There were team drivers from both companies competing in the A-main, so it was a good chance to see how the tires stacked up in the heat of a 30-minute battle. Both tires led in the main, so we know they're both capable of leading the pack. Using the Crime Fighter MT, Chad Bradley of the Pro-Line camp won by one lap over Mikey Sharwin, who was using standard-sized MT tires. Mike Dana from Panther got third using the new Boas, so it's still a tight game in the tire wars. We also examined all tires after the A-main and found that, after the 30-minute battle, the Boa tire had significant wear to it, meaning that it's probably a soft compound.

The Crime Fighter MT tires showed little wear and looked like they could have another 30 minutes in them, so Pro-Line is using a harder compound. We assume both companies will offer different compounds to consumers, so don't go judging just yet. All drivers who ran these new-style tires definitely thought they are the next step for truggies and plan on using them again.

## testing on the revo

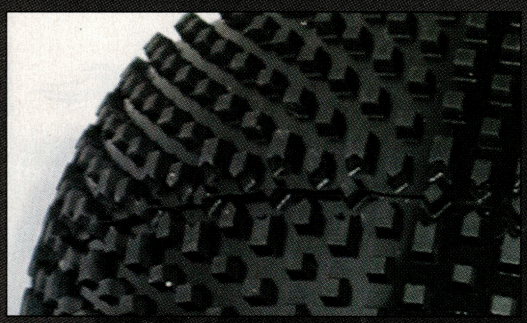
We got the chance to mount up an extra set of Crime Fighter MTs on a Traxxas Revo. Much to our surprise, these smaller, thinner, and lighter tires worked great on the smaller and lighter Revo. Acceleration was better, and the smaller 2.5 engine loved not having to work as hard. Engine temp was down five degrees over normal. Cornering, traction, and jumping were all better with the new tires, so, whether you run Panther or Pro-Line, your traditional-style monster truck is going to love you for it.




## technical mumbo-jumbo

In creating their newest MT tires, both Panther and Pro-Line used existing, extremely popular tread patterns, and both companies went in different directions. Let's take a closer look.

• **Pro-Line Crime Fighter MT**—The Crime Fighter MT is basically a hybrid Bow-Tie. Pro-Line kept the same basic design of the Bow-Tie, but replaced the tread with its hugely popular Crime Fighter pattern. Next, they narrowed it down a quarter of an inch, and the ribbed sections of the sidewalls were eliminated to save weight. The side walls still bulge out from the rim, and the height is about the same as the Bow-Tie.

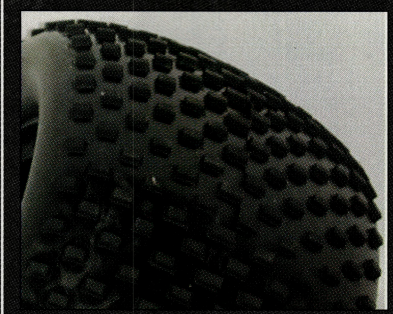


The ever-popular Crime Fighter tread pattern is now available for your big truck. It's exactly the same as its 1/8-scale cousin.

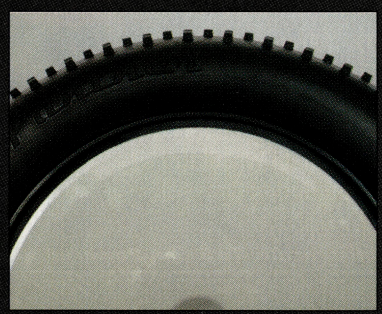


The only difference between the Crime Fighter MT sidewall and the Bow-Tie is the lack of ribs. We would've liked to have seen a shrinking in this area, but there may be a reason it was carried over to the new tire.

• **Panther Boa**—After studying all of Panther's tires, we've come to the conclusion that Panther used its widely popular Python tread and then doubled the sidewall height of the Komodo LP. This resulted in a tire that's lightweight and is exactly between Panther's two existing MT tires. We like the fact that the sidewall is flush with the wheel. Panther opted not to include inner ribs on this tire as they do with most of their tires, and this helps make the Boa the lightweight of the test. These tires will surely help in acceleration and reduce wear and tear on your clutch and drivetrain.



Panther borrowed its popular Python tread for the Boa, and this tread patter has proved itself more than a few times on the track, as it's the current RC Pro Series national champion.



This is called a "glue channel"; it's the little gap you see between the wheel and where the sidewall starts. All you do is puddle up an area of the channel with CA and then just roll it around the bead. We recommend using a thin CA so you will get good penetration under the bead.



Here are both tires side-by-side: the Boa is on the left. The Boa is smaller, and the sidewall is much closer to the wheel. The outside diameter of the Boa is about an eighth of an inch less than the Crime Fighter MT. Both tires are legal for racing.

### SOURCES

- **Panther Products, Inc.**, 1100 Marlborough Ave., Riverside, CA 92507 • (951) 682-2861; fax (951) 682-7870
- **Pro-Line Racing**, P.O. Box 456, Beaumont, CA 92223 • (909) 849-9781

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1/10 SCALE GAS POWERED 4WD TOURING CAR

# MTX-3 PROSPEC



**MTX-3 Prospec - T0040:**
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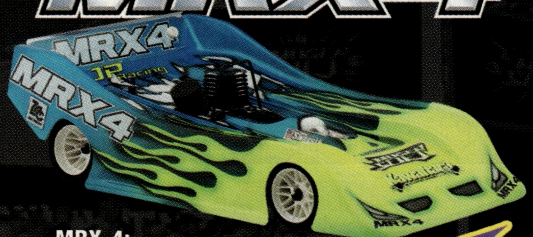
# MRX4



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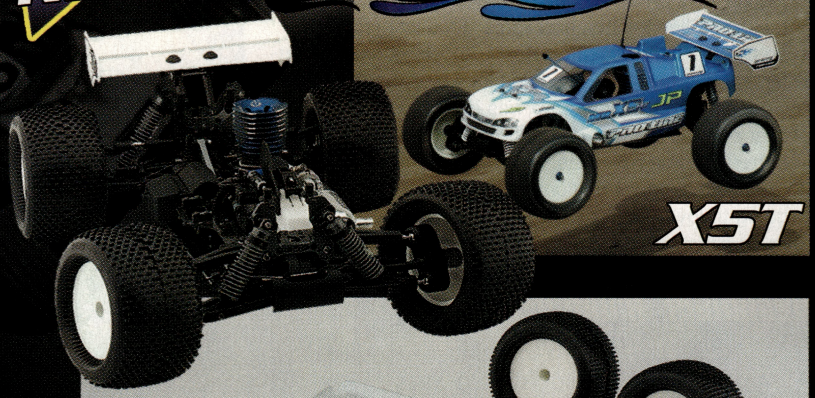
NEW

NEW

# MSR



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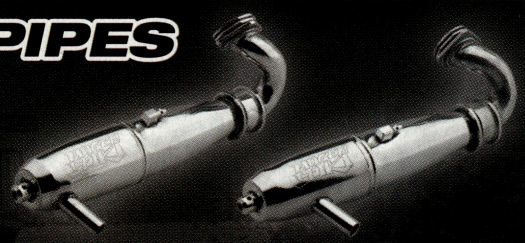
Available in 20%, 30%, 40%



*Competition .21 Pipe*
P01004 • 1pc • top end power

*Competition .21 Pipe*
P01003 • 1 pc • bottom end power



*Comp .12 Pipe*
P01002 • EFRA-26090 • On-Road • 1 pc

*Comp .12 Pipe*
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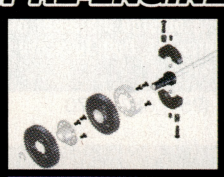

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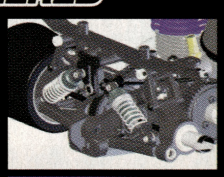
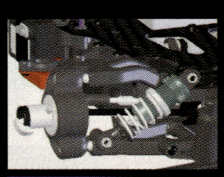


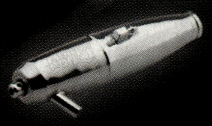
LONGER SUSPENSION



NEW SUSPENSION GEOMETRY



*Comp .12 Pipe*
Outlaw • S01002



*Comp .12 Pipe*
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# TAMIYA GRASSHOPPER

## Tamiya re-releases everyone's first R/C car

Words and photos by Frank Masi



On May 14th of 1984, Tamiya released what is arguably the most significant R/C kit in the hobby's history—the Grasshopper. The Grasshopper arrived at a time when R/C was poised to move from an obscure pastime into America's limelight, and it was an instant hit, offering easy assembly, a low parts count, and unmatched durability. Tamiya sold hundreds of thousands of Grasshopper kits (and an equal number of the 'Hopper's progeny, the Hornet), and these early off-roaders became the cornerstone of the R/C explosion of the '80s. Tamiya is on a retro kick as of late, and it's begun re-releasing a slew of its historical all-stars, and for those of us who discovered R/C during the '80s, the Grasshopper re-release is like digging up a time capsule of happy memories.



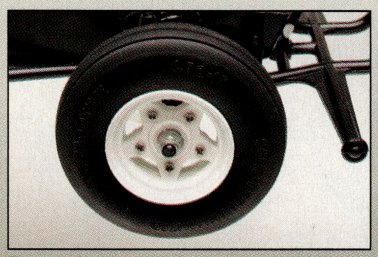
# TAMIYA GRASSHOPPER

## OF BATHTUBS AND BUMPERS

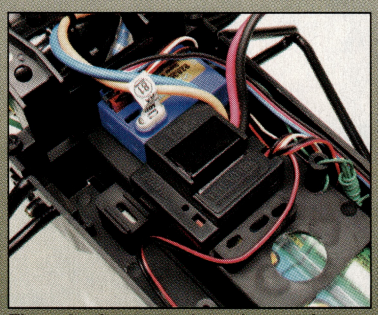
Tamiya's early off-roaders were based largely on single-seat desert buggies, and the Grasshopper carried the tradition with its rigid rear axle and independent front suspension with tall coil-over shocks. The heart of the Grasshopper is its molded ABS "bathtub" chassis, which had ample room for the comparatively bulky radio equipment of the period. Simplicity is the name of the game, and the 'Hopper's chassis is one large piece of ABS—no sub-assemblies or bolt-on stiffeners to impede fast assembly.

The entire rear portion of the car consists of a sealed transmission/solid axle assembly. Inside the shiny black 'box is an ultra-rugged two-gear transmission composed of a lower gear diff and a molded cluster gear. The differential uses a quartet of plastic bevel gears, and is connected to the wheels via a pair of stout half-shafts, just like the live axle rear ends of many full-sized autos. The 'Hopper comes with a relatively tame Mabuchi RS380 motor, which helps to make the car easy to drive for beginners. More power can easily be had by installing a larger 540 motor, which the transmission readily accepts. Cost-saving plastic bushings abound, but those in it for the long haul can fit the transmission and wheels with smoother, more efficient ball bearings.

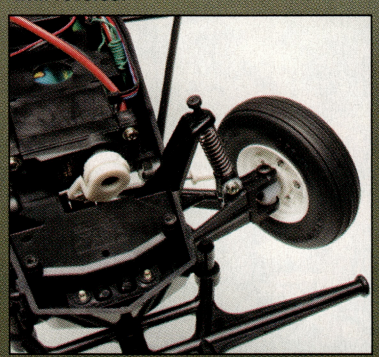
As for suspension, the 'Hopper utilizes a pair of long, front lower A-arms with integrated uprights, which form an "L." Like some of Tamiya's earlier buggies—and like many of those old single-seat desert buggies—wheel camber varies wildly throughout suspension travel. Spring-loaded shocks don't provide much suspension control, but they sure do look cool. The live rear axle pivots vertically only; there is no



**Three-piece molded wheels affix the tires without requiring cement. The grooved front tires are ultra-long lasting, even when the car is run continuously on pavement.**



**The only change made to the re-release kit is the inclusion of Tamiya's excellent TEU-101BK electronic speed control with reverse.**



**Beefy lower A-arms with integrated steering uprights are also controlled by coil-spring shocks. Camber may vary greatly, and the shocks allow for quite a bit of bouncing, but this setup is fun and effective, and incredibly rugged. Note also the front bumper, which extends to protect the front suspension from damage.**



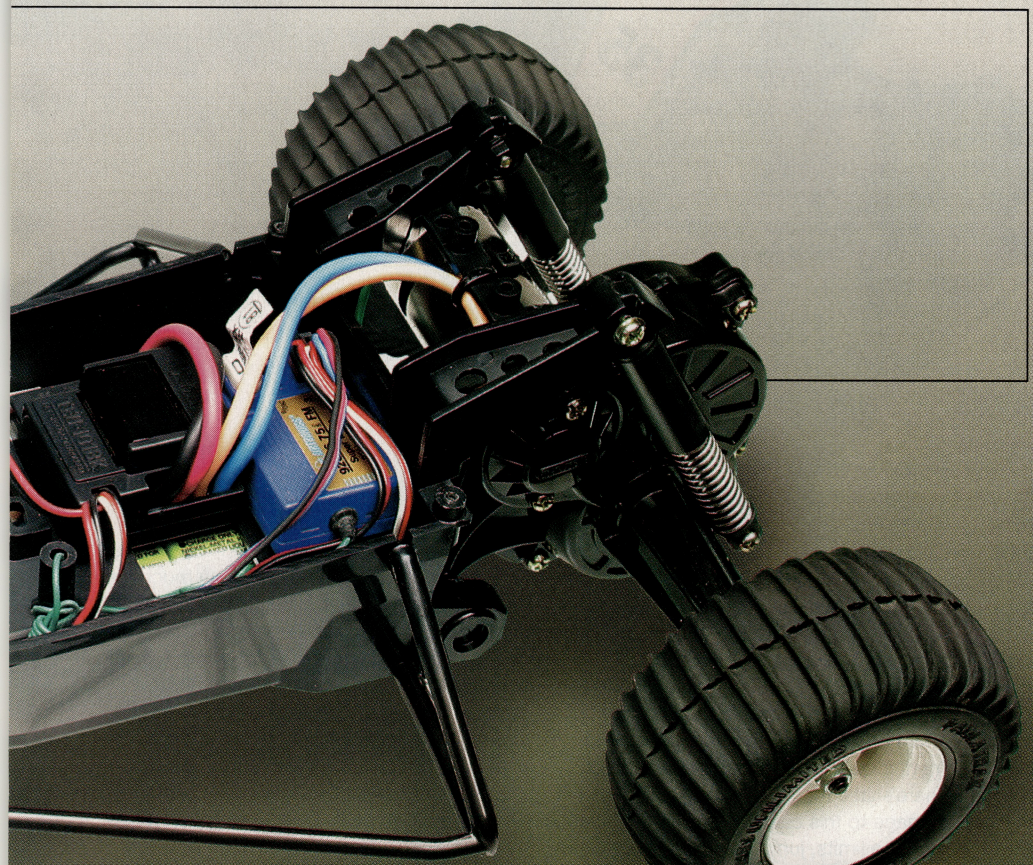
side-to-side motion at all. Again, spring-loaded shocks push the wheels back down to earth when the tires encounter bumps.

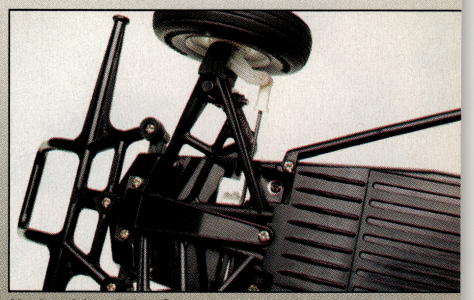
The only difference between the original 1984 kit and this re-release is the specification of the standard speed control. Whereas the original kit relied upon a three-step forward and reversing mechanical speed control, the re-release includes Tamiya's new TEU-101BK ESC (electronic speed control) with reverse. This is a major improvement over the old three-stepper, and provides smoother, more efficient throttle control with a substantial weight savings.

The 'Hopper's trademark ribbed front tires and rear paddles recall the early days, when tires were based on full-sized designs. No "fuzzy" tread or super-sticky rubber compounds here; these tires are made to roost sand and grip pavement. The original three-piece plastic wheels make it easy to install and remove the tires without having to mess with super glue. Sure they're heavier, but boy, they sure look great. The 'Hopper was the last Tamiya off-road buggy to have a hard-plastic body (subsequent buggies arrived with lighter polycarbonate shells), and the white plastic still looks fantastic. A few decals are all it takes to make your kit look just like the box's illustration. Four self-tapping screws secure the shell to the ABS chassis—no quick body changes here.

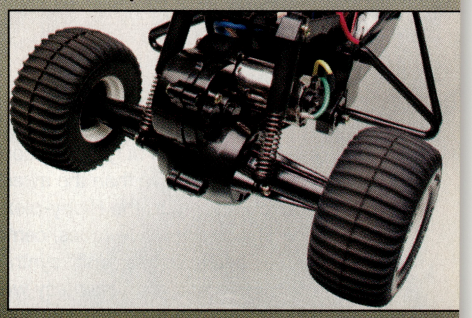
## A WALK IN THE PARK

In this day and age of groomed tracks, insane supercross-style jumps, scientifically developed tire compounds and suspension that would make a SCORE desert truck green, has the Grasshopper been thoroughly outdated? Not on your life. We pondered the perfect testing grounds for





Underside of the Grasshopper's front end reveals the long-travel lower wishbones and front skidplates.



The heart of the Grasshopper - and its sibling, the Hornet - is this combination sealed gearbox and solid rear-axle suspension. A pair of coil-spring shocks provides damping, while rubber paddle tires replicate those found on full-sized single-seater buggies.



Five-year-old Haley Charron and her prized Grasshopper. Haley sat on the slide for 10 minutes posing for photos, never once complaining that the darned thing had been baking in the sun all day and was over 150 degrees! That's dedication to your craft.



The Grasshopper is back and ready to introduce a whole new generation to the joy of R/C. Youngsters can drive the 'Hopper without fear of breaking. Curbs and trees offer little resistance.

# TAMIYA GRASSHOPPER




the re-released Tamiya buggy, and could think of no better venue than the awesome playground adjacent to the Hippy-plex. With a choice of four surfaces—grass, cement, wood chips and a unique "soft" synthetic play matting—and a child's fantasy world of slides and ladders, this playground was made for the 'Hopper.

As expected, the 'Hopper wasn't all that fast, its suspension didn't seem all that supple nor its tires that surefooted, but none of these supposed shortcomings dampened our fun. The 'Hopper was in its element, and it was more than capable of throwing roost from the sandbox and spitting the wood chips over its hard-plastic shell. The paddle tires hopped and scrabbled for purchase on the softer surfaces, but hooked up like high-wear Bridgestones on the harder ground. The new speed control is a welcome upgrade, and makes the 'Hopper even easier to drive. With a Peak 3000mAh sport pack on board, the fun can last as long as 20 minutes.

The durability of the 'Hopper's design is every bit as formidable as I remembered; That huge front bumper and those side "nerf" bars ward off virtually all comers. There's little that one could do to cause damage to this car, and we tested this theory to the limits, jumping the 'Hopper down the park's slides, often catching an immovable object on the way down.

## WHAT WE REALLY THINK

The Grasshopper re-release is a welcome blast from the past. In this day of ever-increasing speed and handling, the beloved 'Hopper reminded us of just how much fun we used to have back in the early days of the hobby, when even launching off a curb could produce shouts of glee. And despite its age, the 'Hopper is still more durable than nearly every modern vehicle—it's the only car in recent memory that could ward of head-on collisions with curbs, lamp posts, and unyielding trash cans without so much as a scratch. Of course some of this invincibility is related to the mild power of the 380 motor, but credit must also go to Tamiya's designers, who created a car that looked great, handled well and used a mixture of materials proven to stand the test of time and of irresponsible drivers.

## SPECS

| | | | |
|---|---|---|---|
| **Price** | $85 (varies with dealer) | **Damping** | Coil spring shocks |
| **Length** | 15.3in/389mm | **Drivetrain** | Sealed gearbox RWD |
| **Width** | 8.77in/223mm | **Differential** | Bevel gear |
| **Wheelbase** | 10.1in/257mm | **Bearings** | Plastic bushings |
| **Weight** | 29.2oz/830g | **Tires** | Front ribs, rear paddle tread |
| **Chassis** | ABS bathtub | **Wheels** | Three piece white plastic |
| **Suspension** | Front A-arm, rear trailing axle | | |

## SOURCES

- **Airtronics,** 1185 Stanford Ct., Anaheim, CA92805 • (949) 978-1895; fax (949) 978-1540
- **Peak Performance,** 22601 La Palma Ave. #104, Yorba Linda, CA 92887 • (714) 692-8533; fax (714) 692-8534
- **Tamiya America, Inc.,** 2 Orion, Aliso Viejo, CA 92656-4200 • (949) 362-2240; fax (949) 362-2250

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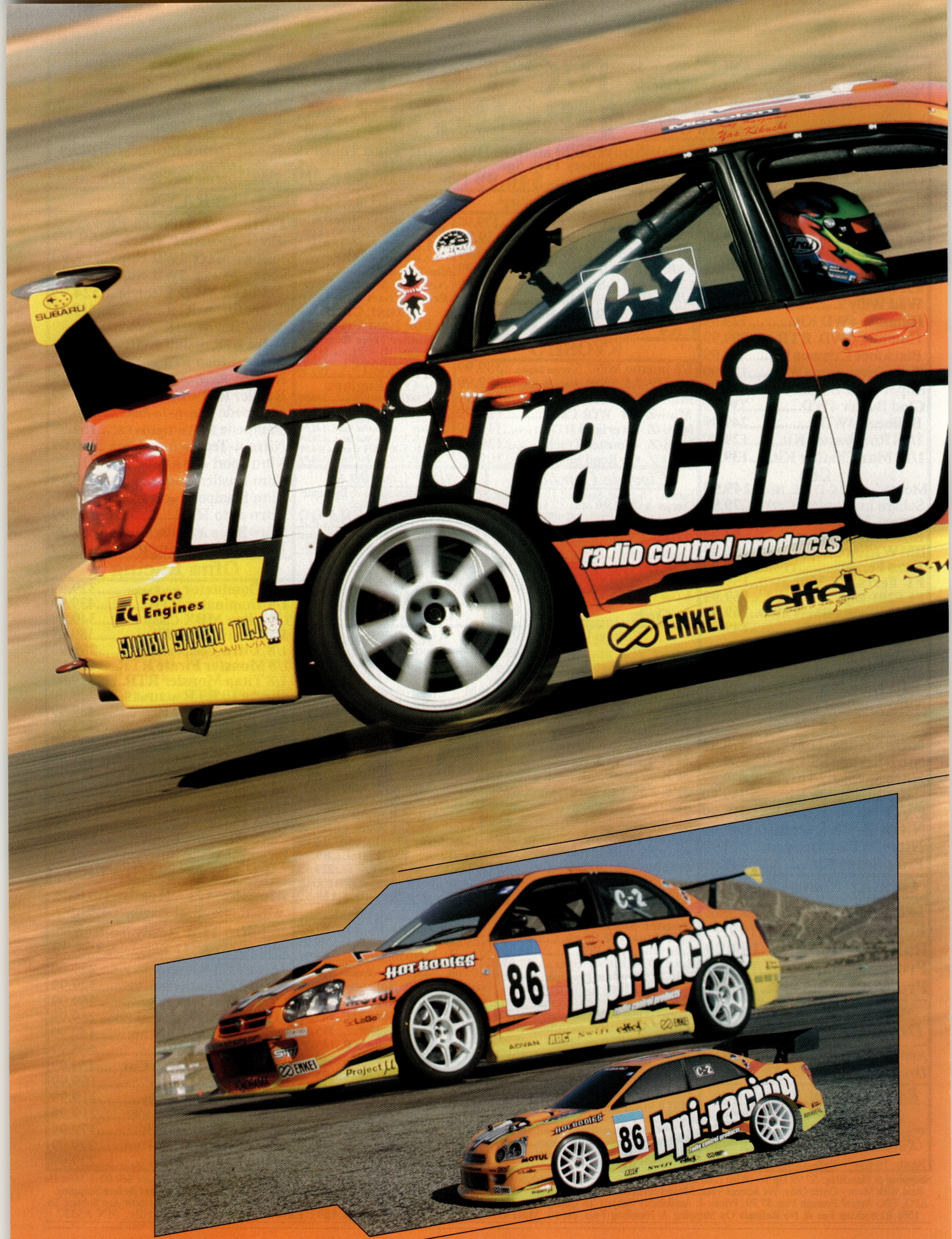
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# HPI takes Willow Springs

## The Super Taikyu Series comes to California!

**Words and photos by Frank Masi**

Journalists from leading R/C magazines were invited on July 22 to join HPI and the staff of Fast Lane Driving School at California's legendary Streets of Willow Raceway in Rosamond, to check out the HPI/Hot Bodies-sponsored 2004 Super Taikyu (endurance) Series No. 86 Prova Racing Subaru Impreza STi. The car, which placed fourth overall in Class 2 of the grueling eight-race series, was shipped from Japan to be displayed in HPI's Foothill Ranch, California headquarters. Along with the Impreza, HPI had also "imported" driver Kazuhiro "Kaz" Koizumi, one-half of the successful driving team (the other driver being Yasushi Kikuchi) for some hot laps around the Streets of Willow circuit. As HPI had rented the facility for four hours, they opened the track for anyone who wished to test their driving skills (as long as they donned the requisite Snell SA95 helmet and took some acquaintance laps with a Fast Lane instructor).

## 2004 Results for No. 86 HPI/Hot Bodies Impreza

| Rnd | Date | Event | Circuit | Results |
|---|---|---|---|---|
| 1 | 03.20-21 | Motegi Super Endurance 500 | Twinring Motegi | 5th |
| 2 | 04.24-25 | Highland Super Endurance Race | The Sendai Highland | 3rd |
| 3 | 05.15-16 | Suzuka Super Endurance 300 mile | Suzuka Circuit | 2nd |
| 4 | 06.26-27 | CP-MINE 500km race | CP-MINE Circuit | 4th |
| 5 | 08.06-07 | 11th Tokachi 24 hour races | The Tokachi Speedway | 2nd |
| 6 | 09.11-12 | TI Super Endurance Race | TI Circuit Aida | 4th |
| 7 | 10.02-03 | SUGO Super Endurance Race | Sportland Sugo | 4th |
| 8 | 11.13-14 | Motegi Super Endurance | Twinring Motegi | 2nd |

Final Result in Class 2 Series - 4th

## hpi takes wilnow springs




HPI's 1/10-scale Nitro 3 D-Spec topped with the pre-finished Super Taikyu Impreza shell.




HPI offers three sizes of its Super Taikyu Impreza line: The 1/10-scale Nitro RTR 3 Evo, the 1/18-scale Micro RS4, and, in Japan, the tiny XMODS versions (HPI distributes XMODS in Japan).

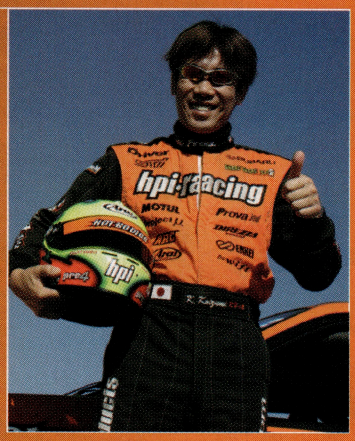
## THE SUPER TAIKYU ENDURANCE SERIES

The Super Taikyu Series consists of eight endurance races that take place throughout Japan's most illustrious circuits, such as Suzuka and Twin Ring Motegi. Each of the races is about three hours long, and each team consists of two drivers, who divide the driving time equally. The HPI/Hot Bodies Impreza STi competes in Class 2, against other Imprezas and Mitsubishi Evo VIIIs. Class 2 cars are all-wheel-drive and must have an engine displacement of between 2001 to 3500cc.



The HPI team poses in front of Kaz's ride.

## HIGH ENDURANCE MAN




Co-driver Kazuhiro "Kaz" Koizumi should be an inspiration to anyone looking to move from model racing to full-sized cars; Kaz was a successful R/C racer in Japan before becoming a popular full-scale driver. Kaz began his racing career in '91 behind the wheel of a Toyota KP61, and won fourth overall in the series in '92. He also participated in 26 FJ1600 events throughout Japan, then moved to the F3 Series in '93. After taking some time away from racing in '96, Kaz returned to the cockpit in '02 and became a driver for the HPI Racing Impreza in the Super Taikyu Series.

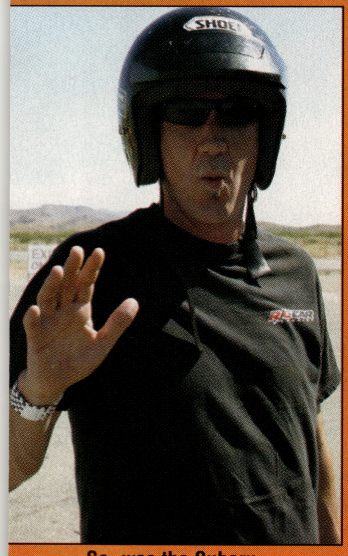


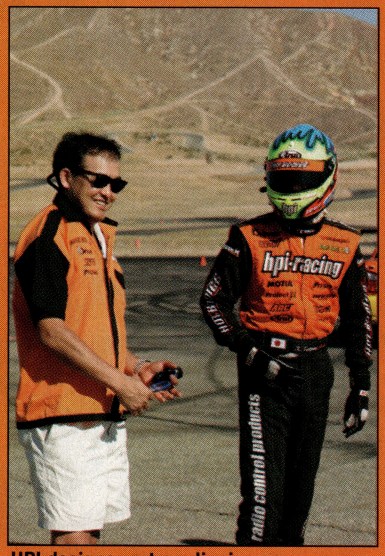
Kent Clausen looks on as Kaz takes some hot laps with the R/C version of his racer. Kaz is a former R/C racer, and is no slouch behind the wheel of any sized vehicle.

## INSIDE THE NO. 86 IMPREZA

The HPI/Hot Bodies Prova Racing Subaru Impreza STi features a Subaru/STi EJ207 1,994cc engine fitted with an IHI twin-stroke turbocharger. Engine output is a healthy 340-plus horsepower with a maximum of 47kg of torque. After a ride around the Streets of Willow, we can only surmise that Subaru is being coy about the engine's output, as it felt more like 400 ponies to our backsides. As the car tips the scales at a svelte 1,280kg, the power-to-weight ratio and all-wheel-drive grip kept us pinned in the form-fitting racing seat while accelerating, and the Dunlop Direzza racing tires and stiff suspension gave us stiff necks while cornering.





So, was the Subaru fast, Hippy?



HPI designer extraordinaire Akira Kogawa chats with Koizumi-san.


Frank's new ride. Not.


HPI rented the Streets of Willow, and after the Impreza demo, anyone who wanted could take to the circuit. HPI's Shawn Ireland puts his trick M3 through its paces.

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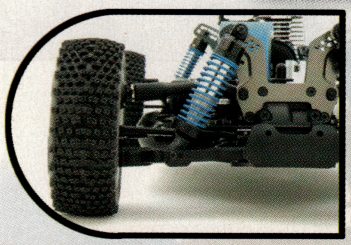
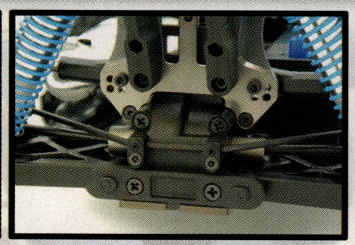
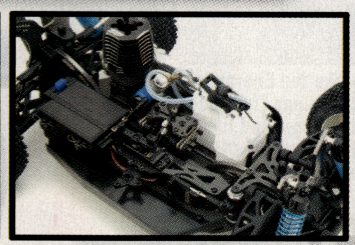
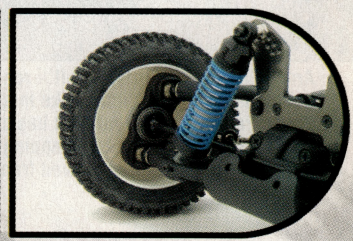
# STORM CL-1

Claude Lachat

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**To learn more about the CL-1, visit**

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GS® Racing

# DIAL A READY-TO-RUN

## Sure it's pre-built, but is it built for speed?

RTR is all the rage, as it brings neophytes who might be intimidated by building an electric or nitro R/C into the hobby/sport, but who knows when the car or truck was built? Without a "Born-On Date," who knows if the RTR was assembled on Monday or Friday (when employee morale may be low)? Even if an assembler is eager during the whole work week, the Ready-To-Run R/C was built by a stranger for a stranger, not by Jared Tebo or Mark Pavidis for the A-main. Even if came off of the assembly line perfect, the RTR may not have threadlock on the fasteners or quite enough grease in the diff(s). Here's how to go over your RTR with a fine-toothed comb to make it be all it can be.




**Arm your RTR properly, and it'll run like the Energizer Bunny in severe conditons, like this Thunder Tiger does on Pike's Peak snow. If your RTR has chevron-tread tires, you can gain more traction by swapping them so the "V" points to the back when viewed from above.**

### STEP 1)

Check and re-torque all of the fasteners, and it's always a good idea to apply threadlock to all metal-to-metal nuts and bolts, especially on nitro RTRs. Pay close attention to set screws and collars on throttle/brake linkages, outdrives and pinions. If you do this one screw at a time, it won't require total disassembly, but you'll want to partially disassemble the RTR to perform other steps, so this should be the first and last step.



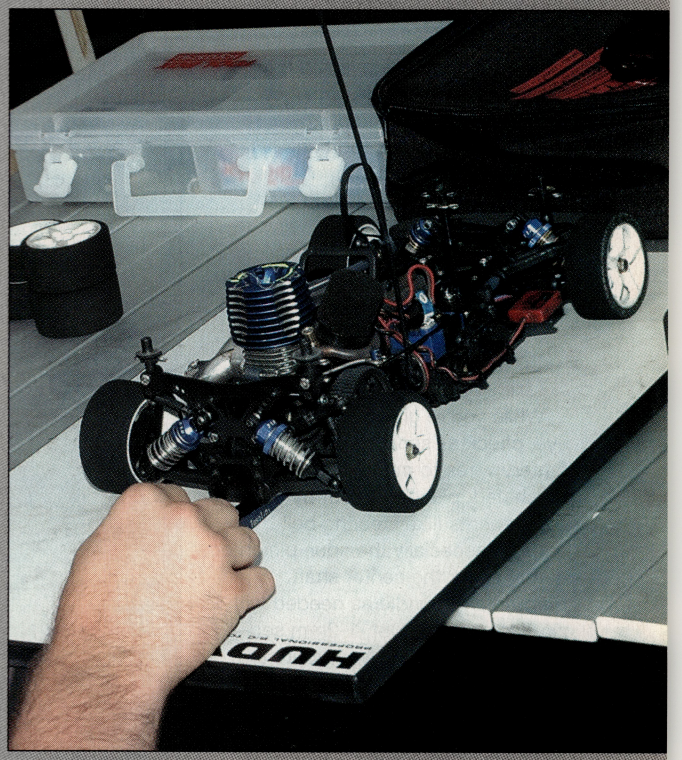

**To dial in an RTR R/C, you'll need (from top left) shock oil, CA glue, bearing lube, diff/shock fluids, grease, threadlock, zip-ties, shrinkwrap and lengths of fuel line.**

## STEP 2)

Remove the shocks and make sure that the two fronts are the same length and the two rears are the same length. If the shocks are cantilever, like with the Revo and F1 cars, make sure the riser pairs are exactly the same length. While you're at it, change the shock oil, make sure there are no air bubbles, and fill each to the exact-same level. Make sure preload is equal on each, too. Pros even test the shock springs to make sure they're the same rate. When mounting on the vehicle, make sure all pivot-mounts are free; test-bounce the RTR to make sure it returns to the same level each time.




**Check to make sure pairs of shocks are the exact same length; to shorten or lengthen a shock, wrap the shaft with cardboard and grip with pliers, then turn the bottom shock-end clockwise or counterclockwise, respectively.**



**Chris Tosolini's Kyosho V-One RRR isn't an RTR, but you can see how important ride-height is with an on-road R/C. Chris is using a sano Associated ride-height gauge.**

## STEP 3)

While the shocks are off of the RTR, test each suspension arm to see if it operates smoothly and freely (do the same for anti-roll bars if so equipped). An RTR that fails the bounce-test often has a tight hingepin; remove the offending pin and test for straightness (roll it on glass). Ream out the A-arm (or camber link) hingepin hole with the proper-sized drill bit (by hand; you don't want slop!) and re-assemble. You want the RTR to return to the same ride-height every time you test-bounce it. As a baseline, the rear A-arms (or dogbones) should be level, and the fronts should be slightly above level. Adjust preload as needed.

## STEP 4)

Electric RTRs usually come with the ball-diffs set spot-on, but they might not have enough grease. Nitro RTRs (except most 1/10-scale gas trucks) usually come with bevel-gear differentials, and these probably aren't packed with grease or may have too-light silicone fluid, in the case of RTR 1/8-scale buggies. Jammin'/OFNA has a webpage that gives complete set-up sheets, so savvy RTR owners can setup their three diffs with the same fluids Jay Halsey uses. If a ball-diff feels the least bit gritty in operation, disassemble and regrease both sets of balls.

# DIAL A READY-TO-RUN

## STEP 5)

Check and adjust the slipper clutch as needed on electric and 1/10-scale nitro RTRs, and check and adjust the pinion/spur gear mesh. If the mesh is too tight, it'll create heat and friction that robs power; if too loose, it'll strip the plastic spur. On nitro RTRs, also check the slop in the clutch bell. If there's too much play, the bell could rub the side of the spur and melt it.

## STEP 6)

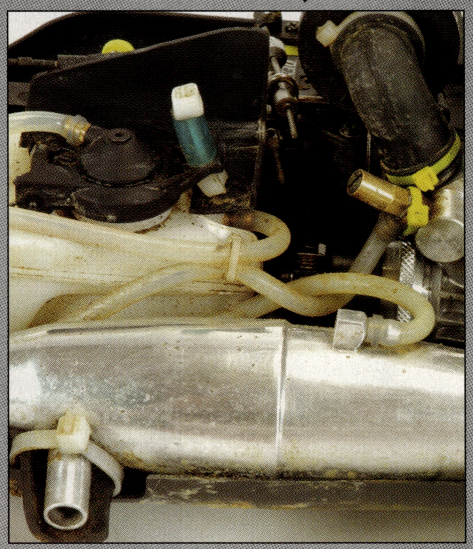
While you're giving the RTR the eye, check all servo, receiver and battery wires to make sure they can't be chafed, pinched or cut by other components (like steering bell-cranks), especially the spur, pinion or outdrives for the center shaft. Reroute and bundle as needed with zip-ties or, better yet, 1-2mm sections of fuel tubing. Also, route the antenna wire as far away from the other electronic wires as possible, as this will reduce radio glitching.

## STEP 7)

While you're giving the receiver antenna love, you might as well secure the tube to the RTR. This can be done with CA glue (be careful not to glue the wire into the tube), a small drill and a set screw or an optional screw-on, clamp-type tube mount. And don't run the plastic tube-cap if the receiver wire is longer than the tube; we've had the wire pull out of the receiver in a crash - not good!

## STEP 8)

On nitro RTRs, check and adjust the brakes, as too-tight brakes can melt plastic discs, and too-loose ones can cause crash damage. Make sure the caliper screws are turned into the mount the same amount, and adjust the brake linkage as needed. We also prefer to run a short (10-15mm) section of fuel tubing on the linkage to give the brakes a progressive feel. On electric RTRs, the braking circuit on the ESC can sometimes be adjusted with a tiny plastic pot-driver.



To finish first, first you must finish. Lumpy armed his OFNA/Jammin' RTR with fuel-line keepers, a thin zip-tie to secure the airboot, and a large one to keep the pipe in place when he cases jumps. Fuel-line on exposed rod-ends promote safety.

## STEP 9)

Nitro RTRs also need careful inspection of the throttle and brake linkages for free play and proper actuation. Remove the airfilter boot and make sure the throttle slide or rotary valve opens fully at full pull on the radio trigger. Ditto brakes. Make sure the airfilter has plenty of filter oil, then replace the filter/boot and secure with a small/thin zip-tie. Wider tie-wraps don't get down inside the groove on the carb inlet, so the boot/filter can fly off, as it did on our Hot Bodies GTX2 RTR. If it doesn't have one stock, also install a throttle-return spring or failsafe. Also, secure the fuel and pressure lines with 1-2mm sections of fuel line or zip-ties for safety.

## STEP 10)

Check and adjust camber and toe. Many RTRs don't have turnbuckles, so this may require removal of the camber and toe links. Measure to make sure each pair is the exact same length, then check angles when re-assembled. While you're at it, check shock uptravel and downtravel. Most 1/10-scale RTRs have enough suspension travel to have some extra "give" when the chassis is completely bottomed. This is uptravel. On 1/18-scale RTRs, downtravel is limited by set screws on the inner hingepin section of lower A-arms; make sure down travel is equal.



Monster Trucks and 1/8-scale buggies use in-axle set-screws to secure hex-hub pins; secure yours with threadlock then torque the wheel-nuts down as much as possible.

## STEP 11)

You probably had to remove the wheels to adjust camber. If not, remove them and make sure the axle bearings (or bushings) are lubed. Some 1/8-scales have set screws that hold the cross pins for the hex drives; Loctite as needed. Make sure the pins are seated properly in the hex hubs (if so equipped) and that the drive wheels are seated on the hubs (or cross pins on 1/18 and 1/10 RTRs). Tighten wheel-nuts as much as you can.

## STEP 12)

Finally, turn on the radio and RTR, and make sure all of the trims and steering ratios are set to give full throttle and brakes and equal and full steering, left to right. Put the RTR on the track and test handling for push, chassis roll, bottoming, etc. Adjust as needed (fight chassis roll by moving upper shock mounts upright) and record settings in your manual to create a baseline. Now your RTR is ready to roost!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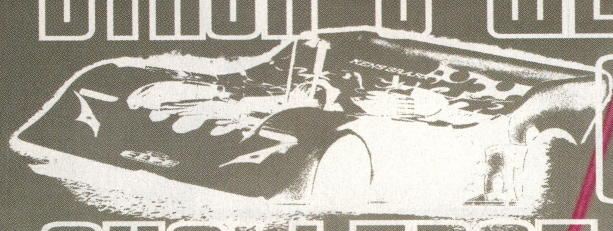
# BYRON'S WEST MEETS EAST ON-ROAD CHALLENGE






Mark Sweeney put in strong qualifying runs and held tough in the A-main for the win.

## First annual 200mm, 235mm and 1/8-scale 4WD nitro-fest

**Words and photos by Lumpy**

Byron Originals, the makers of premium R/C race fuel and sponsors of many nitro racers, wanted to bring the West and East coasts together for an epic nitro race, so they put together the West Meets East On-Road Challenge, with the inaugural event held in Kenosha, Wisconsin. You may not be familiar with Kenosha, a town located a few miles south of Milwaukee, which is definitely famous for its beer breweries and the Harley-Davidson assembly plant (two of the Lump's favorite things). Kenosha was the site of the Danskin Women's Triathlon this summer, but John Candy made it famous in the movie "Home Alone," as he was the leader of the Polka band called the "Kenosha Kickers."

Ira Schulz, Jr. dominated 200mm Sedan qualifying and the A-main.



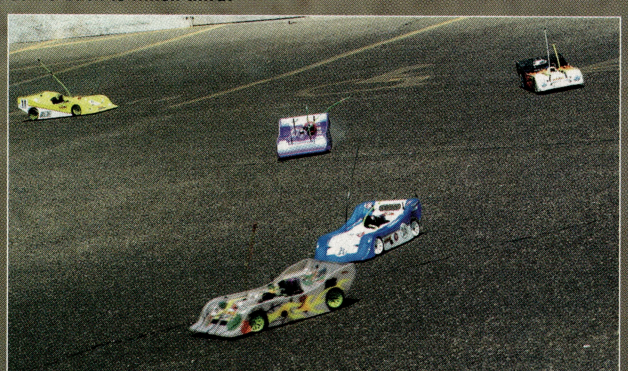
Spectators got up close and personal with the nitro-burners, and a good time was had by all.



Don Jones hit the wall early in the main, but he came back to finish third.



The Byron Originals West-Meets-East On-Road Challenge 1/8-scale A-Main gets underway with TQ Alex Frank on point.



Outlaw 235mm 4WD sedans take to the Indian Hills HS parking lot track with Mike Becker leading and Brad Johnson trailing.

# BYRON'S WEST MEETS EAST ON-ROAD CHALLENGE



Bob Block came through the pack in the 1/8-scale A-main to finish a strong second.

Byron's West-Meets-East On-road Challenge was hosted by the Racine Radio-Control Club, and a cool course was laid out in the parking lot of the Indian Trails High School. It featured a 176-foot back straight, three chicanes, and some nice, fast sweepers. But the coolest part of the on-road event was sponsorship and contingencies provided by Byron Originals, who paid each Byron-burning nitrohead $150 for making an A-main and another $300 for winning. The two-day event also served as a nice warm-up for the ROAR Sedan Nationals in Texas the next weekend.

## QUALIFYING FOR THE MONEY-MAINS

Saturday started with open practice, then went into three rounds of qualifying (IFMAR five-minute heats) for the 1/10-scale 200mm Sedan, 235mm Outlaw and 1/8-scale 4WD. With the first entry costing $25 and the second $15, Brad Johnson put a 235mm Alfa body on his 200mm Nitro TC3 and TQ the first round of the Outlaw class, but the extra wear and tear would be his downfall. In his first Sedan qualifier, he stripped a diff-pinion gear and finished with front-wheel drive, then he missed the next two rounds driving into Milwaukee for parts. Meanwhile, Ira Schulz, Junior was dominating 200mm Sedan qualifying with his Mugen, and Mike Becker put his Serpent 710 into TQ position in 235mm Outlaw.

Mark Sweeney, Kurt Lechel and Tory Block put on some epic battles in their 1/8-scale heats, with Sweeney putting in a 19-lapper and all putting in mid-15-second laps. But Alex Frank dominated his three qualifiers and was turning consistent 15.1-second laps; he turned in the TQ run of 20/5:13.1 in the second round. He backed it up with a 19/5:04 after hitting a couple of curbs in the third IFMAR-style qualifier. Lechel edged out Sweeney as runner-up qualifier in 1/8-scale, and Brad Johnson got his NTC3 back together in time to qualify third in 200mm Sedan behind Schulz and Tom Esposito.

In all, 26 of the 27 drivers to make the three A-Mains used Byron fuel, so Byron Originals paid out $3900 in contingencies before an A-Main lap was run.




City buses were on hand to shuttle spectators.

Brad Johnson slapped a 235mm body on his 200mm Touring Car and raced a second class.

Infield chicanes kept things interesting, especially in lapped traffic.

When you're at a temporary pavement track, the timing loop can't be buried.

Ira Schulz has a good way to keep his fuel-bottle stopper from getting lost; secure the nozzle with a zip-tie then run the end through the rubber cap.

Harley-Davidsons are as common in Wisconsin as Fords.

Kurt Lechel leads Tory Block here, but he'll drop out with less than five minutes to go. Lechel will still finish fifth, but Block wasn't so lucky.

## A-MAIN A-GAMES

In 235mm Outlaw, TQ Mike Becker took the point and checked out while Johnson started last and had to work through the pack. Brad was into second by the five-minute mark of the 30-minute main and closing in on Becker. Johnson caught Becker, who kicked in the afterburners. The two battled for several minutes until both were shunted by a lapper. Becker got some breathing room, then Johnson flamed out and lost a lap, but not his runner-up spot.

Next up, the 200mm Sedans lined up for their A-Main. Schulz got the jump on Esposito, Mark Zitzlsperger (pronounced "Mark"), Nick Smrt and Johnson. By the 15-minute mark of the one-hour main, Johnson had lost his center-shaft and once again was relegated to 2WD, and Ira had lapped up to Esposito in second. Schulz put Esposito a lap down a few minutes later, and Tom flamed out with six minutes to go. At the buzzer, Schulz had three laps on the field and an extra $300 in his pocket. Esposito held onto second over Zitzlsperger.

All heck broke loose in the one-hour 1/8-scale A-Main, as Alex Frank, who had TQ every round of qualifying, broke in the first minute. Kurt Lechel and Tory Block battled over the lead for a quarter of the race, until Tory lost drive and made a quick pit to fix it. Lechel led another five minutes, then flamed out; he lost several minutes changing his glowplug, and dropped to fifth. Through the chaos, Sweeney was moving up from a midpack start and playing it safe. He took the lead on lap 73 and was never challenged again; he lapped the field twice and turned in a 222/60:15.98. Bob Block was second with a 220/60:07.00, while Don Jones worked through the carnage for third with a 218/60:03.74.

With Byron Originals paying the top three finishers in each class (all used Byron's to get there), total A-Main payout was in excess of $5500. In fact, I talked to a fellow racer from Illinois the next weekend in Texas; he was bummed that he didn't race the West-Meets-East Challenge and saved his money for the ROAR race. "If I'd have gone to Kenosha," he lamented, "I would've made the money to come to Texas!"

# BYRON'S WEST MEETS EAST ON-ROAD CHALLENGE



Top Qualifiers (from left) Chris Sabo (Novice), Alex Frank (1/8), Ira Schulz, Jr. (200mm) and Mike Becker (235mm) grin for the lens.



The Racine R/C Club presented Byron's Mark Jenson with a recognition award.



IFMAR 200mm Touring Car podium.



It was a tight-knit group at the West-Meets-East Challenge.



Outlaw 235mm Sedan top three.



The 1/8-scale 4WD fastest finishers.

## RESULTS: BYRON'S WEST MEETS EAST CHALLENGE

### 1/8-SCALE 4WD A-MAIN

| F | Q | Driver | Chassis | Engine | Pipe | Fuel | Servos | Gearing | Radio | Tires | Body |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | Mark Sweeney | Mugen MRX-4 | RB Cncpt Rdy-C5 | RB Concept | Byron Race | KO Propo | N/A | KO Propo | CRC | Parma Audi R8 |
| 2 | 8 | Bob Block | Mugen MRX-4 | NovaRossi | RD Logic | Byron's | KO Propo | N/A | KO Mars-R | Super Gs | Protoform |
| 3 | 7 | Don Jones | Serpent 950 | Mega .21 | 086 | Byron's 30% | JR 8800 | N/A | JR R1-Pro | 35 Elligis | Lola Delta |
| 4 | 6 | Chris Nichols | Delta | NovaRossi | N/A | Byron's | KO 2173/-74 | 15/48 | KO Propo | Delta 35 | Delta Lola |
| 5 | 2 | Kurt Lechel | MRX-4 | R&B C5 | Maxi | Byron's | Airtronics | 46/19-49/16 | Airtronics | Kawahara | Protoform Lola |
| 6 | 5 | Jody Flipse | Kyo Evolva/Delta | R&B 1005-C | Nova 9886 | Byron's Race | Airtronics/JR | 16/49-20/44 | KO Helios | CRC 35 | Parma Audi R8 |
| 7 | 4 | Tory Block | Delta XP4 | Rex P321 | RD Logics | Byron's | KO 2344 | MSR/Delta | KO Helios | Super Gs | Delta |
| 8 | 9 | Mark Zitzlsperger | Delta XP-4 | NovaRossi | RD Logics | Byron's 30% | Hi-Tec 945s | 15/48 | Futaba 3PJ | Delta 35 | Lola |
| 9 | 10 | Joe Zaier | Serpent 950R | NovaRossi | N/A | Byron's | Futaba 9402 | 16/48-19/45 | Futaba | Super Gs | Serpent |
| 10 | 1 | Alex Frank | Kyosho | NR Fusion Plus-3 | NovaRossi | Byron's | KO 2363/-64 | 16/49-20/45 | KO Propo | Kyosho | Protoform |

### 1/10-SCALE 200mm SEDAN A-MAIN

| F | Q | Driver | Chassis | Engine | Pipe | Fuel | Servos | Gearing | Radio | Tires | Body |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Ira Schulz, Jr. | MTX-3 Prospec | MX12MAX53 | Mugen | Byron's | Air 359/737 | 21/59-27/53 | Air M8 | Kawahara | Proto Stratus 3.1 |
| 2 | 2 | Tom Esposito | Serpent 710 | Maxx Power | Mega 2110 | Byron 30% | JR 8800s | 17/60-22/57 | JR R-1 | Elligis 40/42 | Stratus |
| 3 | 4 | Mark Zitzlsperger | MTX-3 | NovaRossi | RD Logics | Byron's 30% | Hi-Tec 925 | N/A | Futaba 3PJ | Twister 40s | Protoform Alfa |
| 4 | 5 | Brian Koch | Factory Tm TC3 | O.S. 12TR | Associated | Byron's Race | JR 8450 | N/A | KO Helios | Twist 40-26/30mm | Parma Alfa |
| 5 | 9 | Mario Liberman | Serpent 710 | RB | RB X12 | Byron's 30% | Hi-Tec 5295 | N/A | KO/Spektrm | Ellegi | Proto Stratus 3.1 |
| 6 | 7 | Nick Smrt | Serpent 710 | Mugen JP Mod | Max Power | Byron 30% | Futaba 9451 | 16/61-22/55 | JR/Spektrm | 42 Shore Jaco's | Proto Stratus 3.1 |
| 7 | 8 | Mark Angotti | SchumacherR-12 | Collari | Power Racing | Amer. Hobby | Hi-Tec/JR | N/A | R-1/Spektrm | GS Racing/TakeOff | Proto Mazda 6 |
| 8 | 3 | Brad Johnson | Associated TC3 | O.S. 12TR | Associated | Byron 30% | KO 2364 | N/A | KO EX-10 | Twister | Parma Alfa |
| 9 | 6 | Bob Profeta | Serpent 710 | Mugen | Mugen | Byron's | Futaba | OEM | Futaba | 42 Ellegis | Proto Stratus |
| 10 | 10 | Rod Morney | NTC3 | NovaRossi Rex | Associated | Byron's 20% | JR 8450 | N/A | Futaba | 37 Shore Twister | Proto Cadillac |

### 1/10-SCALE 235mm OUTLAW A-MAIN

| F | Q | Driver | Chassis | Engine | Pipe | Fuel | Servos | Gearing | Radio | Tires | Body |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Mike Becker | Serpent | RB | RB | Byron | JR 8800 | N/A | JR | Ellegis | Parma Lola |
| 2 | 7 | Brad Johnson | Associated | O.S. 12TR | Associated | Byron 30% | KO 2364 | N/A | KO EX-10 | Twister | Parma Alfa |
| 3 | 5 | Gerald Argalas | Serpent | Mega | Mega | Byron | JR 4750 | N/A | JR | Ellegis | Parma Lola |
| 4 | 4 | Chris Sabo | NTC3 | Sirio | Associated | Byron 30% | N/A | 22/54-26/50 | JR R-1 | Twister | Lola |
| 5 | 3 | Tony Gagliardo | Serpent 710 | Nova Mega | N/A | Byron's | Futaba | OEM | Futaba | Twister | Serpent Lola |
| 6 | 2 | Allen Broecker | Serpent 835 | Mega | Mega | Byron | Hi-Tec 605 | 16/49-19/45 | Airtronics | Ellegis | Lola |
| 7 | 6 | Mark Sierzega | NTC3 | NovaRossi MT | Associated | Byron 30% | Futaba 3003 | 24/50-20/54 | Futaba 3PJ | Twist 40-26/30mm | Lola |



"Rubber" was laid down at the temporary on-road course by a previous club race.

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# THE ADVENTURES OF "JOE RACER" PART 3

## Competing at the RC Pro Series in Columbus, Ohio

By Scott Cramer

I can't believe it, I'm finally done building. Maybe now I can get some feeling back in my hands and get some sleep. In case you missed the first two installments of "Joe Racer," the build consisted of a new Mugen ProSpec 1/8-scale buggy and an Associated MGT monster truck, which were to be raced in the RC Pro Series North Division at CRCRC in Columbus, Ohio.

### THURSDAY

We're all racing junkies, but that's not the only reason we go to races; half the fun is getting away and hanging with your friends. So for this trip, I decided to ride shotgun with one of our MaxSpeed team drivers and salesman of the year, Chris Arnold. I would go into some of his nicknames, but I don't have enough space.

On the way to the race, I learned that Pro-Line shipped us some top secret, NASA-developed, high tech tires (prototype Inside Jobs, actually).

Once we arrived at the hotel and got everything unloaded, I had to paint a body for another MaxSpeed team driver, Dave Mettetal. Sorry about the sink. By the time we got everyone out of our room, it was 2 a.m.

### FRIDAY

Whether BMX, karting or R/C, I get really excited about seeing a track for the first time. Even though I love living in the Midwest, there are a few pitfalls. One is the extremely unpredictable weather in the spring, and the other is indoor nitro racing because of said weather. Since CRCRC is indoor, that took care of one of them, but the weather was an unseasonably sweet 55 degrees.

Because the race was sold out (there were 215 entries), CRCRC had a circus tent with sides put up outside to accommodate all the people. The funny part is that most people decided to pit inside and suck in all the nitro fumes.

I thought the layout looked kind of cool, but there were a few sections that I knew would raise some eyebrows. But, as they always say, it's the same for everyone. I didn't care, I was just dying to try out my new rides, especially my Associated MGT, as I've never raced a monster truck in my life.

First up was Monster Truck. Once we fired up the MGT using our Black & Decker "starter box" (the Associated monster uses a drill-starter), I hit the track. All I could think of after the first few laps is how much fun these things are, and my Associated MGT was absolutely dialed. It was a blast to drive, it rotated really well in the turns, and it jumped pretty good for a 12-pound truck. Despite the box stock engine, it had a lot of punch, some of which I knew was due to the Nova RC clutch shoes and Pro-Line Bow-Tie tires. The setup seemed dialed, so I didn't change a thing. After several rounds of practice, I felt very comfortable with my MGT, so it was time to set a goal. We had approximately 40 drivers in standard Monster Truck, so my aim for my first ever MT race was to solidly make the B main.

Next up was 1/8-scale Buggy. Switching back and forth between an MT and a buggy, you really begin to understand how awesome 1/8-scale truly is! Right out of the box the new Mugen ProSpec was great. The new prototype






tires that Pro-Line sent us were pretty good and the OS Vspec was purring like a kitten. I had the layout down, had the jumps down, and was feeling good.

Right off the bat I was running lap times on par with those of the top dogs. The problem is that I figure out the track and I'm quick right away, but then I plateau: the top drivers keep getting faster. Regardless of my lap times, I was having an absolute blast. I really didn't make too many setup changes, I was more interested in getting the feel for driving an 1/8-scale buggy again. When I did make some changes, they were a snap with our Hudy Set-Up station.

Several more practice rounds and it was time to set a goal for buggy. This was a little different considering there were over 85 drivers in this tough class. I decided I'd be happy with an E-main finish. That would put me in the middle of the group.

By the time we finished practicing and cleaning up our stuff, it was 11 p.m. We headed back to the hotel, got something to snack on and finally crashed at 12:30 a.m.

## SATURDAY

The alarm went off at 6:30 a.m. like a time bomb. Like a bunch of zombies, we showered, ate breakfast and headed to the track. They were going to run the program a little differently: The truck classes (standard Monster Truck, Unlimited Monster Truck and 1/10-Scale Truck) would run all four qualifiers and then they'd run all four buggy qualifiers. Great plan, but terrible results.

As we lined up on the gate for the first round of MT, the butterflies were out of control. Believe it or not, I love getting butterflies; it lets me know how excited I am to be racing and not here just making laps. Nearly every sanctioning body runs IFMAR-style qualifying (everyone is on their own clock), but not the RCPS. When the gate drops, everyone is on the same clock fighting for position (the key word here is "fighting").

As this was my first MT race, I took it easy on the start and let things pan out. Throughout the race I slowly worked my way through the pack, trying to be as consistent as possible. I knew off the bat that the Revos would be the trucks to beat and, lo and behold, I was fighting a Revo for the lead. In the end, he got me by one hundredth of a second. My friends picked on me because I was driving my MGT like it was a sedan. All I could say is that it worked, didn't it?

The RCP also uses "Qual Points" scoring, which means every single round counts, and the best two out of four is what seats you in the main.

The second round was up and so was my confidence. Bam! Holeshot! But before I could finish the first lap, I got hit hard and snapped an axle and tie rod. I guess someone forgot to tell this driver that you win the race on the last lap, not the first. With this truck being so new to me, I didn't have a lot of spares. Out of the shadows came a mysterious figure (actually it was Chris Gosch, father of up-and-coming driver Matt). He had enough spare parts to build a few MGTs, so in no time I had my truck rebuilt and ready to run. This actually turned out to be a blessing in disguise, as I decided to run Pro-Line's 23mm hubs to eliminate a potential weak link (which may have actually created a new one). The fix was simple: install a larger O.D. washer behind the axle pin and problem solved—haven't broken one since.

Even though I had a DNF for the second round, the RCPS re-sorts after the second round and they use your best score which for me was a "two." This put me in the A-main group for the third and fourth rounds.

At this point, the racing was going good, but the weather was going really bad. That nice 55 degree temp dropped down to 35 and it started raining hard; it was one giant mud bath outside. The nice part was they gave us a giant "torpedo" heater for the tent. At one time we had it up to 100 degrees inside the tent while the people inside the track were freezing and choking on nitro fumes.

The third round was just a nice solid, clean run, and I finished third. Remember I said great plan, terrible results? Between all the computer hardware problems and Doug Haye of RC Scoring Pro rewriting the program right at the track (Doug is the man), it was already late afternoon and we still had to run the fourth qualifier for Truck. After a major debate, Carlton put his big Texas boot down and made a decision: the fourth round of Truck will be run in the morning. No biggie, right? Wrong.

Buggy time began and so did the controversy. All I wanted was to have a clean run and to respect everyone with whom I shared the track. When the gate dropped, so did all the respect. Because of the tight track, there was a lot of banging. What do you expect when you put a tiger inside of a paper bag? The buggy was handling well, but the tires

# THE ADVENTURES OF "JOE RACER" PART 3

## damage control

*During my first two articles I promised to let you know what broke, how I fixed it, and if there is a way to make sure it doesn't happen again. I intend to make good on that promise.*

n Mugen Seiki MBX-5 ProSpec—The Mugen worked flawlessly all weekend and I didn't have any problems. I will definitely work on a different setup for tight, indoor tracks (an oddity in nitro off-road).
n Associated Monster GT —As I mentioned, I broke two things: an axle and a titanium tie-rod. To fix the tie-rod problem, I'll be switching to Lunsford's heavy duty titanium rods. For the axle problem, I'll make two changes: first, I'll use a larger O.D. washer behind each axle pin for more support, and I'll replace all axles and center driveshafts with MIP's heavy duty CVDs. This should give me more strength and greater efficiency.



didn't have the grip I truly needed. My fellow Pro-Line teammates Dave Mettetal and Matt Gosch fared really well with the new tires. Dave ended up winning his qualifier; not by running the fastest laps, but by out-driving everyone and being consistent.

All I wanted in the second round was a clean run. Dave and Sonny O' decide to make a last minute adjustment to my top end and got me on the gate. The gate dropped and we were off. My car was flying, and all of a sudden it died. There was no way I could have blown my engine; it was brand new. After I came off the stand, I noticed that my crew caught the fuel lines outside the body and pinched them. Don't worry, Dave and Sonny; I still have the utmost confidence in you.

Before the third round began, a group of drivers demanded of Carlton that drivers using the prototype Pro-Line tires have their runs with those tires disqualified. The RCPS does have a rule stating that a tire must be available to the public two weeks prior to the event. I admit we didn't read the rules, and by no means were we trying to pull a fast one. We switched to a Pro-Line tire that has been in existence for several years. The funny part was that everyone running the other brand of tires was turning faster laps, and the only reason the Pro-Line protos out-qualified them was by mistake-free driving.

The later it got, the more the tempers rose and rough driving was coming into play. It was already 10:30 and we were only on the third round. This had us finishing well after midnight. I just wanted another clean run—especially after my DNF. That wasn't about to happen. From the start of the race people were driving so rough I couldn't believe my eyes. I got slammed so many times that I pulled off the track. After the race they shut down everything and held a "tough love" drivers meeting. From that point on, the driving definitely cleaned up.

I ran my forth round at 2 a.m. It actually worked out great because several drivers left and it gave us a wide open track. The car was dialed. I had a great run and it was just what I needed to be seated fairly well in the mains. It's funny, because all of the MaxSpeed team drivers had great runs late at night. Do you think that has anything to do with us being sponsored by Monster Energy Drink?

### SUNDAY IS MAIN DAY

All I can say is I feel sorry for that poor alarm clock at 6 a.m. We still had to run our fourth round of truck. All I wanted to do is make sure I locked myself into the A-main, and that's just what I did. After setting a goal to make the B-main, I ended up as third qualifier in the A-main. I qualified eighth in the D-main in 1/8-scale (32nd out of 85 drivers), again exceeding my goal.

The 1/8-scale D-main was ten minutes long, so it would require one pit stop. From the drop of the gate, I moved up quickly to the front. A couple of mistakes dropped me back a little, but after my fuel stop, I charged up again finishing a very respectable fourth place. Most people might be upset, but I was stoked. I out-qualified my goals and finished a few spots higher than I started, and this was my first time racing my Mugen ProSpec. Once again, my O.S. Vspec performed flawlessly all weekend long, and my "legal" Pro-Line tires worked great.

The Monster Truck A-main was for all the marbles and every other dumb cliché in the books. Before the race began, I noticed that I had the only Associated MGT and the only set of Pro-Line tires on the line. After talking to Rich Holmes, who was driving a Losi LST, we noticed that we had the only two big block trucks. The remaining eight trucks were Revos. We looked at each other and agreed we were going to get spanked by these lighter, nimbler trucks. At this point in time, my dad's voice popped into my head and reminded me of the two most important rules of racing: In order to finish first, first you must finish. As this was a 30-minute main, this was pretty important. The second one helped turn my BMX career around: race the track, not the other racers.

The gate dropped and we were off—all except for me. My plan was to let everyone go and take each other out in the first turn, and I would drive by the carnage. I was in seventh place on the first lap. I knew the only chance I had was to drive consistently. By the fourth lap I was in second place behind a very familiar racer— Jessie Wolkenheim. Jessie is from back home, so I knew we would race cleanly.

I was just hanging out and was in the lead before I knew it. The more amazing part was that Rich's LST was behind me in second. We swapped positions every few laps for what seemed like five hours, but I never once worried about going after Rich or attacking him. My pit stops were perfect — how could they not be when you have a whole team of guys helping out? Chris came over to the stand and yelled up at me that we had a lap on the field and just keep driving smoothly. He came back again and said we now had two laps on the field. The two biggest and heaviest trucks were running one-two. This would change on lap 76, when Rich's truck flamed out after landing from a big jump, and couldn't be restarted.

I received this good news with less than five minutes to go, and was advised by my crew to "put it on cruise control." As I crossed the line, I heard the familiar voice of Doug Haye saying "You're done," and I finally realized I 'd actually done it. Once I got off the track, I immediately called the wife and kids to tell them how I did; I think my son was just as excited as I was.

### CONCLUSION

I survived my first official pro race. I have to give a special thanks to all my MaxSpeed team drivers who helped promote our product like it was their own, Mr. Torres for handling the RCPS stickers for me, and my loyal pit crew for keeping me running all weekend. The driver of the weekend would definitely be Chris Arnold. In Unlimited Monster Truck he bumped from the B to the A-main and in Buggy, he bumped from the C to the B, to the A. Once again, thanks to all of our awesome sponsors who make this possible! The next article will cover the second round of the RCPS at Hardesty's Raceway in Hamlet, Indiana.

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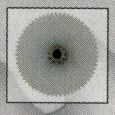




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| HSC-5998TG | 35998S or J | 249.96 oz./in. | 0.19sec. | DUAL | Standard | Monster Trucks |

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# RISING STAR

## A New Young Gun of R/C!

By Brian Skinner

Since *R/C Car* does a lot of race coverage, it only seems natural that we would spot new and upcoming talent, not to mention racers who are getting on their game and stepping it up a notch.This year, one young gun has stuck out to us; his name is Greg McGlothlin, a mild-mannered 16-year-old who is anything but mild on the track! Over the last two years, Greg has consistently improved his game to the point that he has picked up a few major sponsors and has turned pro. Now that Greg has joined the ranks of the rich and famous, we decided to catch up with him at the races to get know him a little better and to introduce this young gun to you.



## GREG MCGLOTHLIN SPECS:

**Age:** 16
**Hometown:** Beautiful downtown Hemet, California.
**Been racing for:** Three years, currently racing 1/8-scale buggy (turned pro this year), gas truck and truggy
**Sponsors:** Mugen, Pro-Line, Byron Fuels and McGlothlin Racing
**Best classes to race:** 1/8-scale buggy and truggy
**Favorite pastimes:** Football and biking—anything with two wheels!

## MEET GREG McGLOTHLIN

At just 16, Greg has become a pro driver in relatively short time. Just three years ago, Greg was racing a Nitro Stampede, and he has progressed to racing 1/8-scale buggies with the big boys—and doing a good job of it. Here, in his own words, Greg talks candidly to us about R/C and himself, so sit back and enjoy!

***RCC:** Who's your biggest help at the races?*
**GM:** I would have to say the Mugen team; they really take the time to help me out with setup and all of that.

***RCC:** What about your mom, I see here at the events all of the time.*
**GM:** Um, yeah, she just pays for everything.

***RCC:** Whoa! That's quite a lot; Mom should get more credit than that!*
**GM:** Yeah, she really does help me a lot, and she backs me all the way on racing.

***RCC:** So now that you're racing with the big dogs, how does it feel, this being your first year in the pro ranks?*
**GM:** It's kind of scary, they're pros and they know what to do and stuff, and I'm just starting out. I get a little intimidated because I need more experience with them.

***RCC:** How did you get your start in R/C?*
**GM:** Well, my dad got a T-Maxx and was racing around the front yard, and I kind of liked it, so he got me a Nitro Stampede. Then I got an OFNA Hyper 7 and started racing that. One time, I finished a five-minute race, and my mom got all excited and started jumping up and down. A few months later, the Mugen guys started helping me out, and I've been doing better ever since!

***RCC:** So, at 16, would you recommend R/C racing to your buddies?*
**GM:** Well, yeah, I would recommend it to anybody; it's a great pastime, you learn a lot, and it keeps you out of trouble by giving you something to do. It's a good experience.

***RCC:** Have you learned a lot from R/C?*
**GM:** Sure, you learn mechanical stuff, electrical stuff, sportsmanship, and I've made a lot of good friends, too.

***RCC:** Do you have any recommendations for kids your age who are getting into R/C and racing?*
**GM:** Yeah, just take it easy, you'll get good, and don't worry, people at the track are really helpful, so don't be afraid to ask for help. R/C is really fun!



## R/C MOM—DARLENE MCGLOTHLIN

Since mom McGlothlin was standing next to us, I thought I would ask her a few questions as well; I thought it would be good to get an idea of what R/C moms think about all of this, too. When Darlene is not working she helps Greg out by taking him to the hobby shops and to the races. And, for you single R/C guys, Darlene is currently unattached and looking for the perfect R/C guy to complete the perfect R/C family. Darlene and Greg really enjoy going to the races, and this is what Darlene has to say about R/C.

***RCC:** As an R/C mom, what do you think of all of this?*
**DM:** I think this is a wonderful thing for kids to do, and I really enjoy it. We live in Hemet, and we're lucky enough to race at The Dirt Raceway, where Joey really helps out and works to make drivers better, plus the hobby shops have been helpful as well. Without all of their help, Greg would not be where he is today.

***RCC:** How is it being an R/C mom—is it taxing, is it fun?*
**DM:** It has its moments, but I really enjoy it. Greg and I are competitive, and I want us to give 100 percent if we're going to do this, and I want him to have the best equipment possible, or at least what I can afford, and that can be hard sometimes. Thankfully, Mugen has really helped us, not only with equipment, but in teaching Greg the ins and outs of the sport; it's all been really positive, and I like that.

***RCC:** Any advice for other families that might be looking at this hobby as something they can do together?*
**DM:** This is a great pastime; I would say, don't get short with your kids—and have patience. So often, in baseball or football, you see parents push too hard on their kids or lose patience or get angry. It's really sad to see that. R/C is a wonderfully positive experience for kids; there's so much to learn that will carry over to life. I can see a difference in Greg now that he's racing R/C; he's more mechanically inclined, has a better attitude, is more confident about himself, and, best of all, his grades are much better because he knows that, if he does well in school, I'll continue to support his racing. Overall, it's a positive environment and experience for both of us.

# 2005 ROAR OFF-ROAD MODIFIED NATIONALS

## American Worlds warm-up

**Another year has passed and we find the *R/C Car* magazine crew at the 2005 ROAR Modified Off-Road Nationals. With the IFMAR World Championships in Italy only two weeks after the Nationals, this even naturally had the tightest racing we've seen on the American off-road racing scene all year. This year the Nationals were hosted in sunny Enfield, Connecticut, at RC Madness. RC Madness has every type of racing you can think of on a weekly basis: electric and gas off-road, gas and electric outdoor on-road, electric indoor on-road, and 1/18-scale indoor off-road on their carpet track. Led by Chris Marcy, the RC Madness crew is a class act; they even held a banquet on Thursday night after practice. This is the first time we ever had a banquet at a ROAR Modified Off-Road National, and it was appreciated by all. There was a total of 284 entries, dividing up with 117 in Modified Truck, 94 in 2WD Modified, and 73 in 4WD Modified. The entry total was definitely up from previous years.**

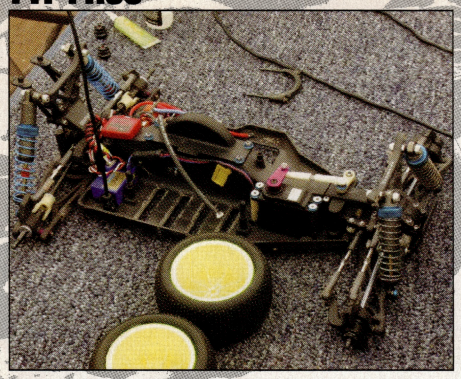
### RACING HIGHLIGHTS

In 2WD Modified qualifying, the Losi team was very strong, putting Mike Truhe in the TQ spot and Travis Amezcua in second. Team Associated driver Ryan Cavalieri qualified third for the A-main grid. In the mains, Team Losi driver Truhe laid down two perfect runs in A1 and A2, holding off a hard-charging Cavalieri. Both drivers raced perfectly cleanly and put on a great show for all the spectators.

In the 4WD Modified class there were a total of five manufacturers vying for the top ten positions in the main. Those cars were the BJ4, X5, Kyosho, Team Losi and MRC/Academy. Only three of them made the top ten, however. It's great to see such an expanding number of manufacturers filling out this exciting category of racing. This will only increase at the upcoming IFMAR worlds with Yokomo, Durango, and TTech also putting their cards on the table for the 2005-2006 world championship title.

In qualifying it was Ryan Maifield, with his Reedy-powered JConcepts BJ4, who took the pole, with teammate Cavalieri in second and Team Losi/Trinity driver Mike Truhe in third. In qualifying, there were four different top qualifiers who took "zero" points for the round. Those drivers included Maifield, Greg Hodapp, Cavalieri and Amezcua. In A1 it was Maifield taking the win with a Hodapp in second. In A2 and A3 it was X-5/Peak driver Hodapp taking the wins and winning the overall championship. Not bad for a guy who is 35 years old! Great job by the X-5 crew and Greg Hodapp.

The biggest class of the event was Modified Truck. Travis Amezcua sat on top of the leader board after four grueling qualifiers, putting his Team Losi MF2 on the pole. However, there were three hungry Team Associated T4s on his tail going into the first turn. Unfortunately, Travis had difficulty translating his TQ spot for an overall victory. In A1 it was a fierce Mike Truhe never giving up and taking the win with Midwest hero Dave Montgomery taking second. In A2 the AE boys decided to lay it down and took the top three spots with Maifield on top and Tebo in second. In A3 it was Tebo taking the win and the overall with his Checkpoint-powered Factory Team-T4. Team Associated trucks went first, second and third to dominate the 2005 ROAR Nationals.



Greg Hodapp's ROAR National Champion X-5.



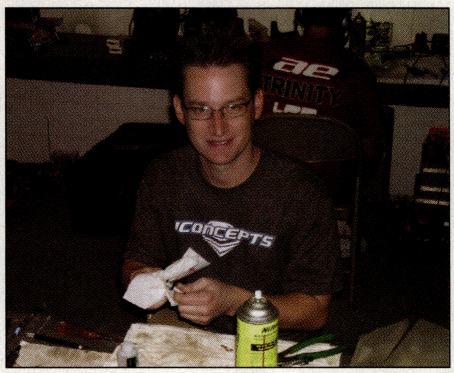

Ryan Maifield was TQ of the 4WD Division with his BJ4. He also took the win at the 2005 Cactus Classic.



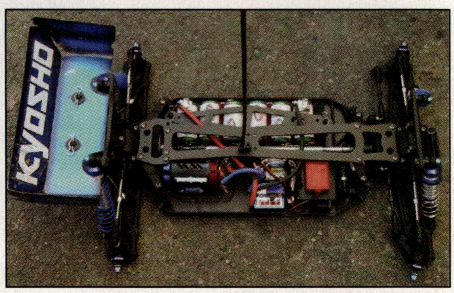

One year ago Mark Pavidis gave up his Team Associated ride to design and race for Team Kyosho in the 1/10 electric off-road segment. Mark has been busy designing new 2WD and 4WD off-road kits. He ended up in both B-mains, but at times the car look really good going around the track.



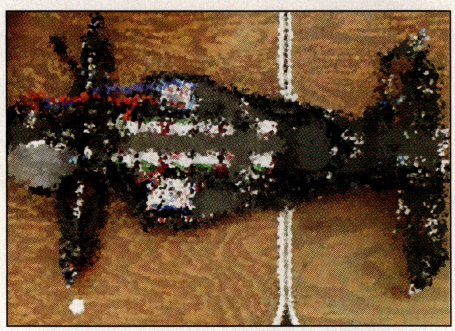
Greg Hodapp made a big decision this year by signing a contract with X-Factory, whose X-5 is a single-belt conversion for the Losi XX-4. Owner Chazz Sinclair decided a few years ago he still loved the Team Losi XX-4, but he wanted to incorporate a single belt drivetrain into the car. So he decided to design a chassis and have it injection molded. Not too many people are aware of this, but it's extremely expensive to make a mold for plastics. This was no big deal to Mr. Sinclair. He did it without blinking an eye. X-5 is also a very large promoter of 4wd off-road racing throughout the world. You can check his website out at *www.4wdrc.com*. They have some great information about 1/10 4WD off-road racing throughout the world. They also have interviews with all the top drivers in the USA in their podcast section. If you love 4WD, you'll love the X5 website.




About two years ago Team Associated drivers Jason Ruona and Brad Reelfs decided to make a 4WD car out of the parts from their TC3 touring cars. Jason and Brad debuted the car at the 2003 IFMAR Worlds at Minnreg RC in Clearwater, Florida. Jason qualified 13th, which is great for a new car. This started the revolution of the JConcepts and the new BJ4, which won the 2004 ROAR Stock Nationals, 2005 Cactus Classic, 2005 Team Losi Champs, and now TQ of the 2005 ROAR Modified Off-Road Nationals. The BJ4 is rapidly becoming the fastest 4WD car to hit the track, ready to take on the competition. To check out more information on JConcepts and the BJ4, check *www.jconcepts.net*.

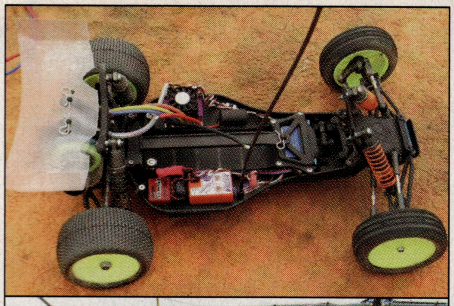



Mark's Peak-powered Kyosho 4WD buggy.



"Spy" photo of the still-in-development Kyosho 2WD buggy (this is the only way Mark would let us photograph his car).







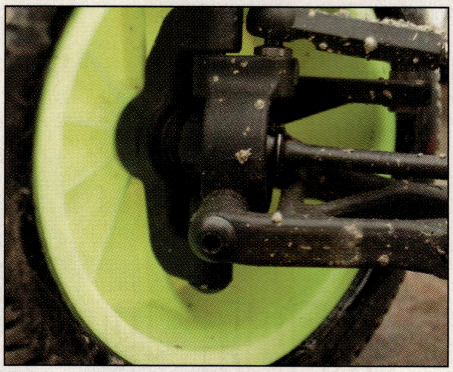
Team Novak was on hand with a few drivers showing how good the Velociti brushless is on off-road tracks. On hand was Novak Team Manager Charlie Suangka and drivers Charlie Perez and 16-year-old Charles Pearson (shown in the photo). We watched the Novak equipment throughout the weekend and the motors ran great and had the perfect power band on the bumpy and slippery track. In the end, Pearson was the top driver on the team, qualifying his Losi truck in the 15th position. That's not bad considering this was Charles' first ROAR nats.



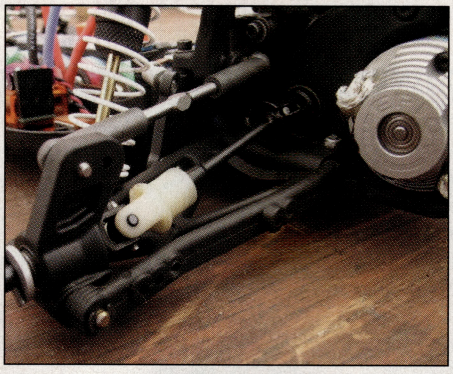
Team Losi ran great this weekend and you can tell they have been working hard to catch up to the young Associated team. This year they had Team Manager Todd Hodge and Team Losi car designer Gil Losi Jr. on hand assisting with setups and lap times. Losi had some new products in the pits which included new bladder-type off-road shocks for the 2WD car.



A new truck body called the FXT for the Team Losi XXX-T.



Touring car-inspired LCDs (Losi Constant Drive) shafts for the XX-4 and XXX-4 buggies.



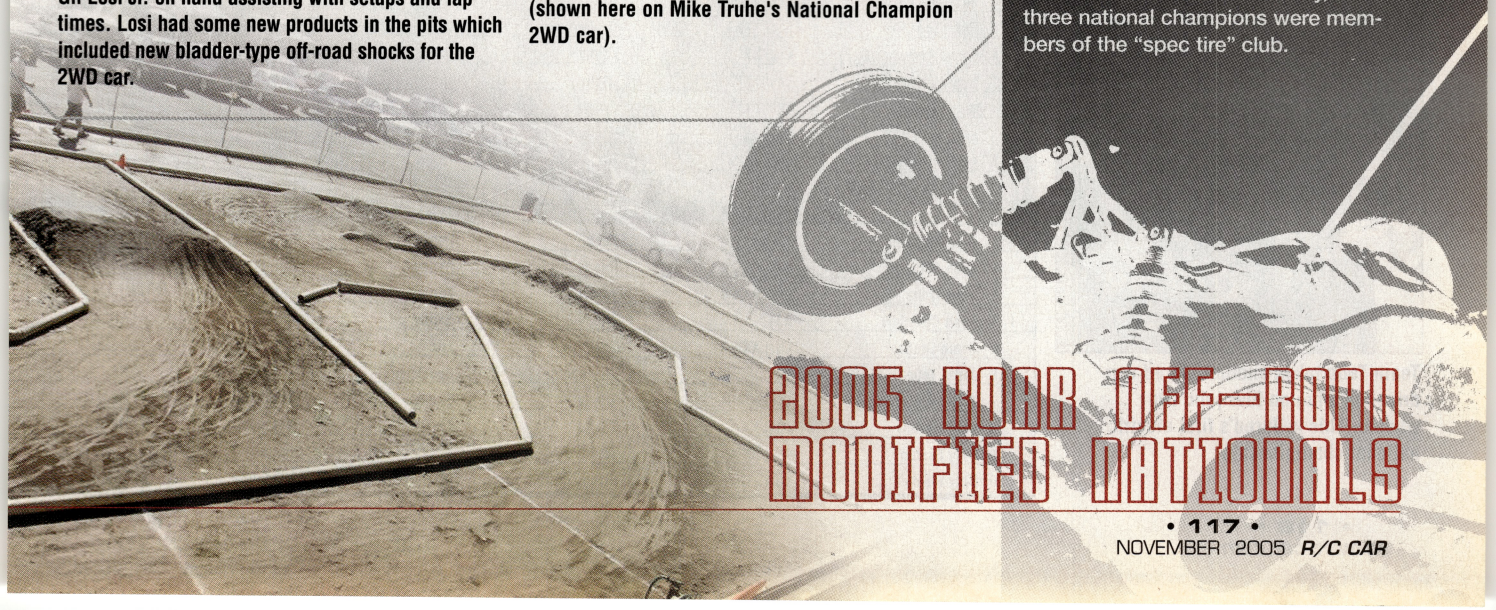
Losi team drivers were sporting some "retro" parts on their cars. Some were using XX 'CR' rear pivots with standard-length arms. The arms mated to the outside holes in the BK2 hubs. Some drivers were also using the BK2 diff in the original XXX tranny with the BK2 short dogbones (shown here on Mike Truhe's National Champion 2WD car).



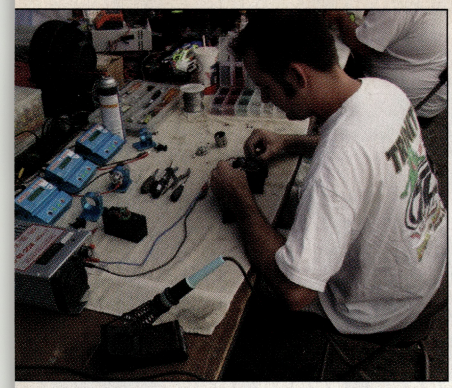
## racers stage spec tire protest

ROAR decided this year to make the ROAR Modified Off-Road Nationals an "open tire" event. This was good in some ways and bad in other ways. The plus was the development of different tire designs and compounds from the manufacturers. However. this creates a dilemma for the average racer to come and compete against these types of technology. Fortunately, all the manufactures came to an agreement to only use the same tires that will be used in Italy for the IFMAR World Championships. Some people were a little irritated that this was being done by saying the chosen tires would not work on the track conditions of the RC Madness track. In the end it all worked out perfectly and even the average un-sponsored racers were using the tires that were in the proposed agreement. Hopefully ROAR will change this rule in 2006. Using a spec tire creates less cost for everyone and creates a more level playing field.

In accordance with the upcoming Worlds in Italy, the selected tires were Pro-Line M3 Holeshots for 2WD rear (front tire choice is open), Losi Red X2000 rear tires and Red Blockhead fronts for 4WD, and Pro-Line M3 Holeshot rear and Losi Red Directional front tires for truck. Incidentally, all three national champions were members of the "spec tire" club.



# 2005 ROAR OFF-ROAD MODIFIED NATIONALS



Team Trinity motor guru Chad Phillips was on hand cutting motors for his Team Losi and Team Associated drivers. Chad told us less motor was desired at the RC Madness track due to low bite and the short back straightaway. In 2WD and Truck top drivers were using 14-turn motors; they were using ten and 11 turn-motors in 4WD. Mike Truhe used the new EPIC Shock to win the 2WD title.



Pro-Line's Scott Hughes was on hand to help out Mark Pavidis. Scott's holding Mark's all-new Kyosho ZX-5 4WD buggy.




Somebody forgot to tell Adam Drake that this wasn't a gas race.




The question of the week was "Where is Brian Kinwald?" Unfortunately, Brian has been sick. No worries though, it's nothing life-threatening. Hepefully we'll see him in Italy. The Dirtinator is always a threat at the Worlds.




Team Tebo takes another. Jared can drive anything on four (and two) wheels. This is Jared's first electric national championship.

# 2005 ROAR OFF-ROAD MODIFIED NATIONALS

## 2WD MODIFIED

| Finish | Driver | Car | Motor | Battery | Radio | ESC |
|---|---|---|---|---|---|---|
| 1 | Mike Truhe(TQ) | TL XXX | Trinity | Trinity | Airtronics | Novak |
| 2 | Ryan Cavalieri | Assoc. B4 | Trinity | Trinity | Airtronics | LRP |
| 3 | Ryan Maifield | Assoc. B4 | Reedy | Reedy | Airtronics | LRP |
| 4 | Travis Amezcua | Losi XXX | Trinity | Trinity | Airtronics--LRP | |
| 5 | Billy Easton | Losi XXX | Trinity | Trinity | Futaba | Novak |
| 6 | Jared Tebo | Assoc. B4 | Checkpoint | Checkpoint | Futaba | LRP |
| 7 | Adam Drake | Losi XXX | Trinity | Trinity | Airtronics | LRP |
| 8 | Jesse Robbers | Losi XXX | Fantom | SMC | KO | Novak |
| 9 | Matt Francis | Losi XXX | Trinity | Trinity | Airtonics | LRP |
| 10 | Dave Montgomery | Assoc. B4 | Reedy | Reedy | Airtronics | LRP |

## TRUCK MODIFIED

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Jared Tebo | Assoc. T4 | Checkpoint | Checkpoint | Futaba | LRP |
| 2 | Ryan Maifield | Assoc. T4 | Reedy | Reedy | Airtronics | LRP |
| 2 | Dave Montgomery | Assoc. T4 | Reedy | Reedy | Airtronics | LRP |
| 4 | Mike Truhe | Losi XXXT | Trinity | Trinity | Airtronics | Novak |
| 5 | Ryan Cavalieri | Losi XXXT | Trinity | Trinity | Airtronics | LRP |
| 6 | Travis Amezcua(TQ) | Losi XXXT | Trinity | Trinity | Airtronics | LRP |
| 7 | Adam Drake | Losi XXXNT | Trinity | Trinity | Airtronics | Novak |
| 8 | Billy Fischer | Losi XXXT | Orion | Orion | JR | Novak |
| 9 | Billy Easton | Losi XXXT | Trinity | Trinity | Airtronics | Novak |
| 10 | Matt Francis | Losi XXXT | Trinity | Trinity | Airtronics | LRP |

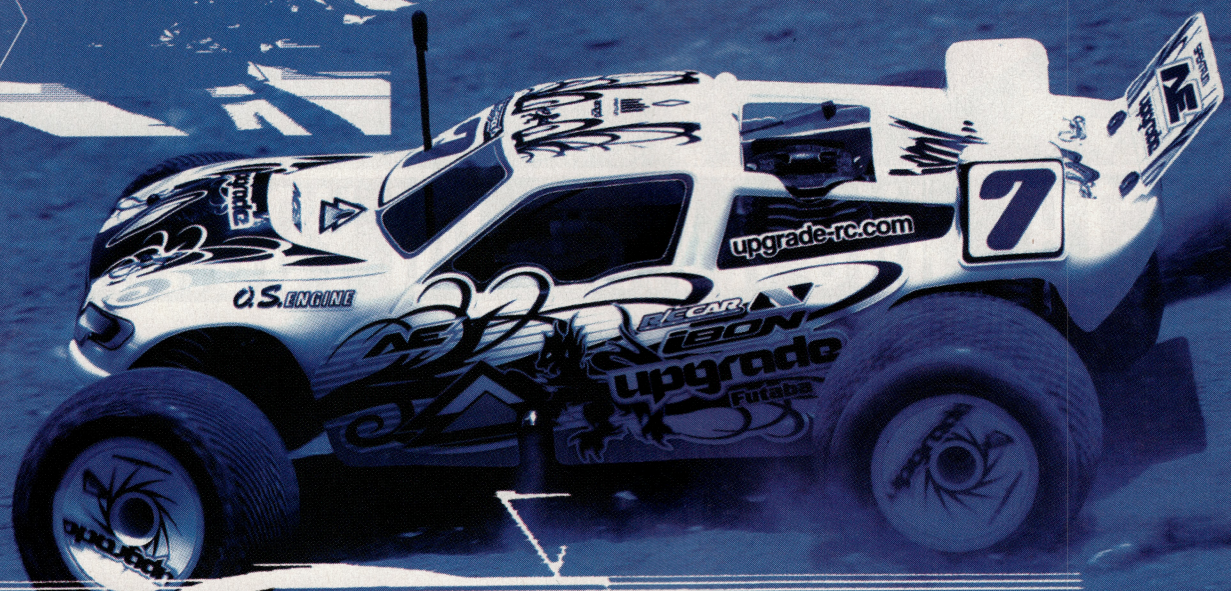
## 4WD MODIFIED

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Greg Hodapp | X-Five | Peak | Peak | Airtronics | Novak |
| 2 | Ryan Maifield | BJ4 | Reedy | Reedy | Airtronics | LRP |
| 3 | Mike Truhe | Losi XXX-4 | Trinity | Trinity | Airtronics | Novak |
| 4 | Ryan Cavalieri | BJ4 | Trinity | Trinity | Airtronics | LRP |
| 5 | Adam Drake | Losi XXX-4 | Trinity | Trinity | Airtronics | Novak |
| 6 | Jared Tebo | BJ4 | Checkpoint | Checkpoint | Futaba | LRP |
| 7 | Travis Amezcua | Losi XXX-4 | Trinity | Trinity | Airtronics | LRP |
| 8 | Matt Francis | Losi XX-4 | Trinity | Trinity | Airtronics | LRP |
| 9 | Billy Easton | Losi XX-4 | Trinity | Trinity | Futaba | Novak |
| 10 | Billy Fischer | Losi XX-4 | Orion | Orion | Airtronics | Novak |

# 2005 REEDY TRUCK RACE of CHAMPIONS

ae PROLINE R/C CAR UPGRADE

OCT 28-30, 2005

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saturday racing at 9 am / 2 rounds
sunday racing at 9 am / mains

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| ☐ | Factory Mod. Truck | FREQ 1 ____ 2 ____ | SPEK ☐ |
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| ☐ | 1/10 Factory Gas Truck | FREQ 1 ____ 2 ____ | SPEK ☐ |

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# INSTALLING A WING ON YOUR REVO

## So you think you can fly

**Words and photos by Brian Skinner**

You're inspired by the Steve Miller Band and you want to *Fly Like an Eagle*. You've been watching *The Jetsons* reruns recently and want a wing on your Revo so you can fly those big-gap jumps. The only problem is that no one makes a wing kit for your Revo, and your so-called buddies won't show you how they did theirs. Well, fellow astronauts, we can help you; our in-house factory wannabe, Jay "Factory J" Krug, has *the* cool wing setup on his Revo, and we're going to show you how to have a wing on your Revo just like "Factory J" in in 20 minutes or so.

### WHY DO YOU WANT A WING?

There are several reasons drivers want a wing on their monster truck, and, if you ask us, the main reason is looks, but that is debatable because some people like the look, while others hate it. We've taken an unofficial poll of drivers who use a wing on their Revo, and this is what people say about the wing:

Number one responses: adding a wing to your monster truck increases downforce and traction at high speeds; it also makes the truck more stable while launching off big jumps. It's said that, in the air, the big trucks tend to nose dive or want to lift up—the wing helps to level out the truck in the air, thus making it more controllable.

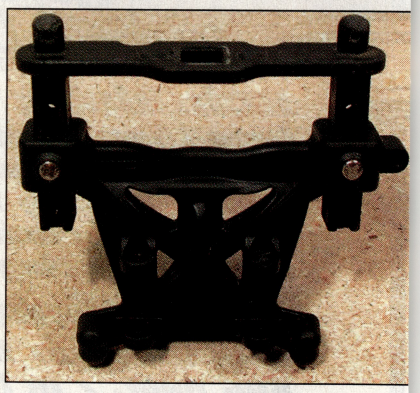
Number two responses: the wing looks cool and protects the truck or body when your truck flips and crashes. It absorbs some of the impact off the body, and, if your truck loops out, it will act as a wheelie bar and protect the rear portion of the body from hitting the ground. Good point; almost all monster trucks we have seen with wings do have clean-looking bodies.

Additionally, if you're going racing, you'll be glad to know that the plans for making wings on monster trucks illegal are off the books, and 1/8-scale wings are acceptable. There's no need to cut your wing and all of that fun stuff, but, if you want to trick out your new wing setup, by all means do.

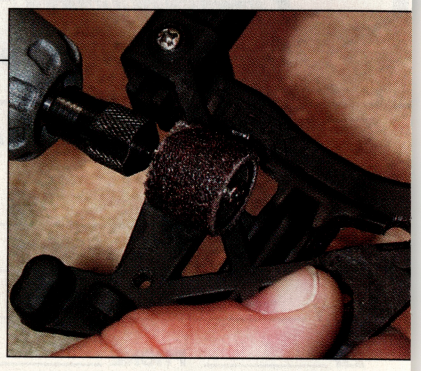
### WHAT WILL YOU NEED?

We're guessing you have a Revo. You'll need a wing; the most-used is a Pro-Line buggy wing, but any 1/8-scale wing will do. If you want something smaller, a Kyosho Half-8 wing will be cool, or, if you can find them, Kyosho makes a TR15 1/10-scale buggy with a wing that would be more scale to the Revo. Next, you'll need a wing mount; any 1/8-scale buggy-wing mount will work. We chose the Mugen MBX-5 mount because it's well made and has screws to hold the wing to the mount instead of body clips. Besides, factory Mugen driver Chad Bradley was at our *R/C Car* technical facilities and offered up his old one. Thanks, Chad. Next you'll need four screws and four nuts. The tools you'll need are a Dremel, a trimming knife, a 1/8-inch drill bit, Allen drivers and pliers.

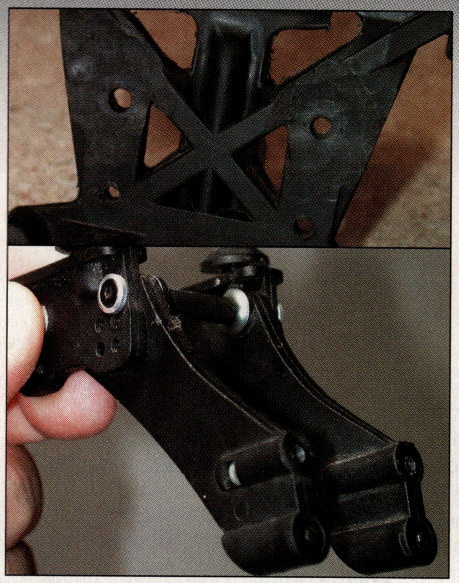
### HERE'S HOW TO DO IT



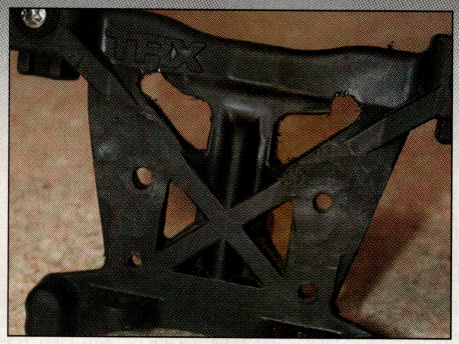
**Step 1.** Remove the Revo's rear body mount from the chassis and take off the bumper mounts so it looks like this. You can see the screw-mount tabs for the bumper in the center of the part; you will need to remove these two tabs with a knife or small saw, or use the Dremel if you wish. Be careful!



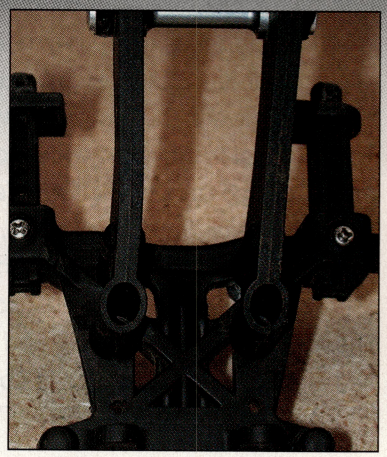
**Step 2.** After you have removed the bumper tabs, take your Dremel with a sanding barrel and flatten out the area where your wing mounts will be installed. This is the area where your bumper mounts used to be; there is no need to Dremel the other side of the part.



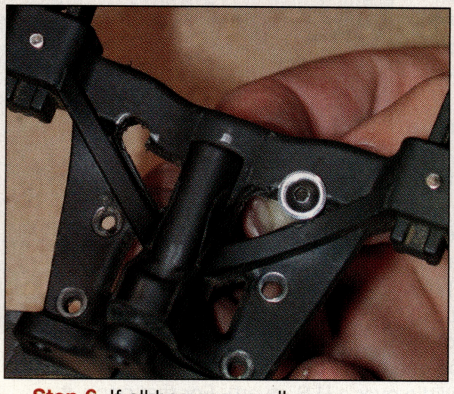
**Step 3.** Now that the mounting surface is flat, your next step is to drill the holes for the wing brace. Assemble the wing brace *(see bottom photo)* and pair it up to the body bracket to make sure it fits flush and all looks well. If it looks uneven, sand the body mount so that it's totally flat. Try not to remove too much material; you need as much on there as possible to keep the body mounts strong.



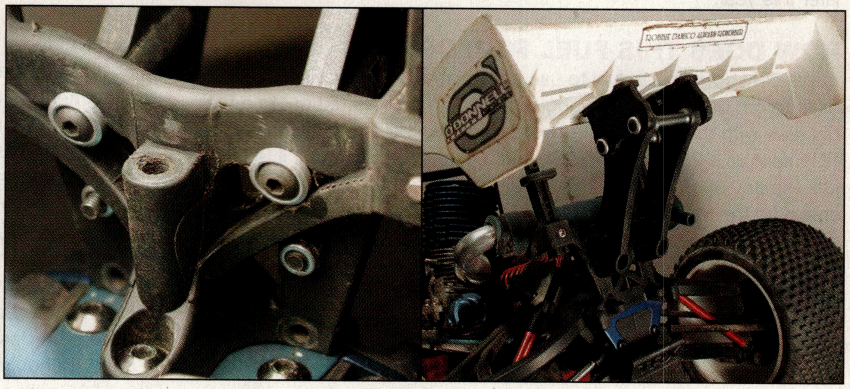
**Step 4.** Now that everything is ready, it's time to drill holes. In the photo we have two holes drilled, and, in the upper brace section (where the TRX logo is), we sculpted the upper brace a little to allow for our bolt to squeeze in. Unfortunately, it's the only way to mount the upper bolts; the body bracket just does not have enough material there to drill a clean hole. Nevertheless, Factory J's wing mount has been raced many times and has yet to fail, so it's sturdy. There are three holes to give an option of mounting the wing higher or lower on the truck. We have found that it works better on the upper mount, but you have a choice—you can drill all three or you can choose two. For the sake of the story, we went with the upper mounting position.



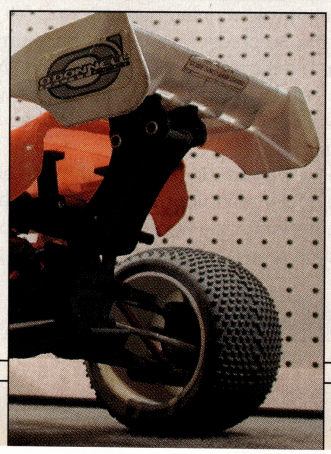
**Step 5.** Take the two parts and line them up as in the photo, then take a nail or something sharp and scribe a mark through the bolt holes onto the body mount. This is where you'll drill your holes, so make sure you're close to alignment (remember; "measure twice, cut once"). You don't have to be exact, because we're using an 1/8-inch drill bit, and this wll allow you to "fudge" it a little when you bolt it all together.



**Step 6.** If all has gone well, you should have some holes that look like the photo. Now, it's time to mount the wing bracket and get it on your Revo. First, you'll need to find a washer that fits the upper bolt hole; we used an aluminum dish washer. This seems to work the best, but you can use any washer that will cover the gap of the brace area. After you have your washers picked out, take the nuts and bolts that came with your wing mount kit and assemble.



Now that you have bolted the bracket together and remounted the body bracket to your Revo, you should have something that looks like this. Make sure the wing mount is perpendicular to the chassis and is square; this is the time to fudge it around in the screw holes. You're ready to mount the wing and the body to your Revo.



## AND WE'RE DONE!

If you've done it all correctly (hopefully we've guided you well), your Revo's rear end should look like ours; it's a thing of beauty now and ready for doing battle.

Happy Roosting—Brrraaap!

# TORNADO FUELS

## The world has used it for years; is America ready?




Tornado fuel: if you live in the western hemisphere (U.S. and Canada), chances are you may have never heard of it before. If you live in the rest of the world, you know this fuel very well. Tornado fuel is the most widely-distributed fuel in the world; you can go to the four corners of the Earth (except ours, until now), and you will find Tornado there. For some reason, it was never marketed in the U.S. and Canada, but that's about to change.

RC1-Racing of Canada has worked a deal with Tornado to import this fine fuel into North America, and finally, our neck of the woods will get to see what all the global fuss is about.

### WHAT IS IT?

It's fuel, silly; we use it for our nitro engines. More to the point, it's a very well-blended fuel that uses only the purest of ingredients for your racing needs, and it's the only non-American-made fuel to be sold in the USA.

### WHAT DOES TORNADO HAVE TO OFFER?

Other than its premium brand of fuel, Tornado offers blends with 10, 16, 20, 25, and 30 percent nitro content, plus premium methanol and caster oil. Tornado also has its own secret blend of ingredients to prevent foaming and other nasty things that your engine doesn't like. They also offer a line of "oil plus" that's used for engine break-in as well as for the first-time nitro R/C hobbyist. Later this year, Tornado will introduce a special fuel for monster trucks and truggies; it will be a 35 percent nitro with an oil content designed to help give relief to the over-burdened engines in our big trucks. Look for a test later this year.

### HOW DOES THIS FUEL PERFORM?

We only got enough fuel to use for one race weekend, so we'll have to get back to you on long-term testing, but we did get to run a big race with the fuel. We got two days of real race-condition testing. RC1 sent us a 25 percent race blend fuel and told us that it'll feel just like any 30 percent fuel we've used, and also that we need not shake up the fuel bottle like other manufacturers suggest. That all sounded fine, but using a 25 percent did have us wondering how our 1/8 scale would feel compared to the 30 percent we use normally. Race day arrived, and we cleaned out the buggy's fuel cell and flushed out the engine and fuel lines. We left the carb settings as they were and fired up the engine with the new Tornado fuel.

It fired up instantly, so we set out for the track test. To our surprise, the buggy felt great; it was running perfectly and felt like it had the same power as the 30 percent we use. In fact, it might have felt a little snappier, but it could be our imagination. We did have a couple of drivers come over and ask what engine we were using—they thought it was fast and actually said it looked like the quickest buggy on the track.

Another interesting thing we experienced was that the engine was running 10 degrees cooler than normal (remember, we made no adjustments), yet the performance was great. This is how the whole race went; each time on the track it gave the same performance, and we could hardly tell a difference between our normal 30 percent fuels and the 25 percent Tornado fuel. Not only did the Tornado fuel feel good, our test buggy placed the highest it has at the races. Was it the fuel or just coincidence? The world may never know.

### WHAT DO WE THINK?

We have to say that the Tornado fuel seems to rank right up there with the top fuels you see at the race tracks around America. It would have been nice to do a long-term test, and eventually we'll get to that, but, from our weekend race, it seems that this fuel (even at the 25 percent level) has what it takes to be up there with the best of the best. It should be one of the best, as its price is on the high side at $65 a liter (a little over a U.S. quart). For *that* price, it should put you in the winner's circle every time. Other than the price, this fuel is worth looking into if you're a serious racer; it feels crisp and it seems to have what it takes to be competitive.

### ATTENTION RACERS!

Tornado is looking for racers in the U.S. to fly the Tornado colors. If you think you're fast enough and have a pretty good resume, Tornado is looking to sponsor you. Send in your information to the address below and hurry, it's "first come, first served."

### get to know tornado

Tornado fuel is manufactured in Holland by Jonker Specialized Quality Products. They produce a wide variety of fuels for all forms of R/C, as well as after-run oils and fuel tubing. Mr. Ir. A.M.H. Jonker is the owner and creator of Jonker and is involved with most of the fuels his team of chemists produce. They are all avid hobbyists and work continuously to produce the finest fuel to stay on the cutting edge of competition. Tornado uses "tins" instead of plastic fuel bottles, which are the norm in the U.S. These UN-approved tins are made according to European standards, and all tins wear a safety cap and tactile warning label (triangle for sight-impaired people). Tin preserves the potency of the fuel better than plastic, as it isn't porous, and the fuel is better protected from sunlight and other elements that can weaken the blend.

**SOURCES**

- RC1 Racing, 51, Ravine Court, L4L 7C1 Woodbridge, ONT.,CANADA; Tel: 001-416-565-3230 Web: *www.tornado-products.com*

Sanction #RN06-008

# ROAR OFFROAD STOCK NATIONALS

## SPONSORED BY

TEAM ORION TEAM LOSI

## OCTOBER 20-23

## HOSTED BY SCOTTSDALE RC SPEEDWAY

Entry is limited to 300. There will be AAA Mains for all classes. Awards for 1-10 in A-Mains and 1-3 in all others. First Class is $70 and each additional class is $65. Each paid entry will receive 1 stock motor and full set of tires for that class. Initial entry also includes T-Shirt. Late fee of $20 for entries received after September 1. No personnel air compressors. Also no RV or Trailer parking available. If shipping items please ship to address listed below. The handout motor will be the Team Orion Core Stock for all classes. 2 additional motors may be purchased.

Controlled Tires for the event will be avalable at the track for a discounted rate
Truck: Front: TL Silver Taper Pins Rear: TL Red Taper Pins
2wd: Front: TL Silver Taper Pins Rear: TL Red BK Bars
4wd: Front: TL Red Taper Pins Rear: TL Red Bk Bars
3 Sets of Tires will be allowed and one additional set of tires if you are in the A main.

Schedule
Thursday - 9 AM Controlled practice
Friday - 9 AM 2 rounds of qualifying
Saturday - 9 AM 2 rounds of qualifying
Sunday 9 AM - Main Events

Motels
Days Inn (480) 947-5411
Motel 6 (480)946-2280
Hospitality Suites (480)949-5115

Contact SRS at 480 945-2186(DAYS) or 602 619-5750(Nights) for any additional information

Name_____Phone_____
Address_____
City_____State_____Zip Code_____
T-Shirt Size: S M L XL XXL Email_____
Roar #_____(if none, membership available at track)
Membership Expiration Date _____
With this signature, I agree to abide by ROAR Rules and the decisions of the Race Director and ROAR Official director
Signature_____

First Class $70 _____
Additional $65 ea _____
Late Fee $20 _____
Total _____
Send Check or Money Order to: Scottsdale RC Speedway
3023 North Scottsdale RD
Scottsdale AZ, 85251

2wd Buggy Stock ____ FRQ 1___2___3___ *Spektrum* ____
2wd Truck Stock ____ FRQ 1___2___3___ *Spektrum* ____
4wd Buggy Stock ____ FRQ 1___2___3___ *Spektrum* ____
2wd Buggy Juniors ____ FRQ 1___2___3___ *Spektrum* ____

WWW.SCOTTSDALERC.COM

# KYOSHO FRIENDSHIP RACE




## Kyosho has some fun on the Fourth of July

**Words and photos by Brian Skinner**

Adam Drake slips through the shadows for another win at the "RC World 10th Anniversary Kyosho—The Dirt Challenge;" Drake dominated Gas Truck and had an epic battle in Pro Buggy for his second win.

**What did you do on your Fourth of July weekend? I spent mine pulling trigger with 79 other lucky drivers. This adventure started out with a phone call from Kyosho America just a few days before the Fourth of July weekend; they needed drivers for a last-second event they put together. There was a Japanese magazine coming to California to cover some races, and they wanted to include an off-road event; they were also doing a promotional video for Japan. Kyosho, being a Japanese company as well, stepped in to put a small race together called the "Kyosho Friendship Race."**

So, on July third I showed up at The Dirt in Hemet, California, for some fun on my long weekend. I brought my lovely and understanding wife along as well and my best friend Buster, to keep the peace in the family and have a little R/C vacation. As we rolled into the parking lot, it was pretty full for a last-second event. Around 80 drivers had heeded the call and showed up to race. Once there, I found out it was *RC World* magazine from Japan that was doing all of the filming, and I also found out that *RC World* had really gotten into this whole race idea and decided to make this an annual event. It's now called the "*RC World* 10th Anniversary Kyosho—The Dirt Challenge." That's a mouthful. I must say this was a fun and relaxed race and Kyosho did an excellent job of putting it together so quickly. I hate to say it, but if you weren't there, you missed out on some marvelous prizes from Kyosho and a lot of fun racing. Let's walk around and see what you can look forward to for next year's "*RC World* 11th Anniversary Kyosho—The Dirt Challenge."

Jeremy Kortz heads towards the finish line jump that would ultimately cause his demise.

## FIREWORKS ON THE TRACK

There was something for everybody at this gathering; there were four classes—Gas Truck, Unlimited Monster Truck, and two classes of 1/8-Scale. Of course, 1/8-Scale was the big attraction because Kyosho was involved, and since Kyosho was sponsoring this extravaganza, they had their top gun, Jeremy Kortz, on hand to uphold the Kyosho name.

The final race of the day was probably one of the best races I've seen to date; after a crazy start, the lead was swapped many times, and, by the end of the 1/8- Scale A-main, it had boiled down to a scrap between Adam Drake and Jeremy Kortz. Drake had been leading when Kortz popped into second place after a long battle to the front. Finally, Kortz made a pass and was leading the last five or so minutes with Drake right on him. It became a classic battle of OFNA and Kyosho, and both were going at it with a vengeance. With one lap to go, Drake was literally inches behind Kortz, and they were going as fast as they could. It was a marvelous race to watch.

With seconds to go, and heading down to the finish line jump, it looked like Jeremy Kortz would win. All he had to do was make the jump, turn a corner and it was his. It wasn't a fairy-tale ending for Mr. Kortz; he hit the jump, and it kicked him off to the side and over the pipe. Drake, who was inches behind Jeremy, saw what was happening and hit the brakes in the air to miss whatever was going to happen to Jeremy. Drake hit the ground and recovered as he slid past Jeremy, who was already being thrown back on the track.

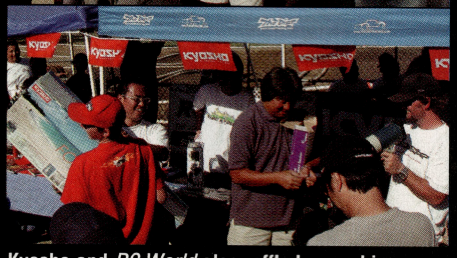
Both were on the gas, and Drake finished just ahead of Kortz. This closed the doors on the first "*RC World* 10th Anniversary Kyosho—The Dirt Challenge."

After the race Adam commented that he thought he was going to crash too when this epic finish took place, but his buggy just skated through the rough landing and he snuck by for the win. Adam dominated this inaugural Challenge by winning not only the Pro Buggy class but also Gas Truck class. It was truly an Independence Day for The Drake, OFNA, and Team Losi.



Sportsmen Buggy is always exciting; check out the first corner carnage in the A-main.





Kyosho and *RC World* also raffled some big prizes like a Kyosho Half-8 mini buggy and a 1/18 scale RTR boat. Lucky Drake had the winning ticket for the Kyosho Mini-Z.




Lesson one: Do you want to make your significant other happy? Give her your raffle tickets. Leslie bagged a Mini-Z PT Cruiser and was nice to me the rest of the day.

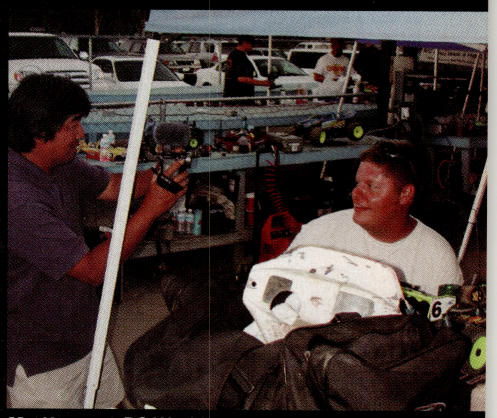


Joey loosens up before his big debut for Japanese video. *RC World* did a lot of filming, and I hope we here in the U.S. get to take a look; it should be pretty cool.

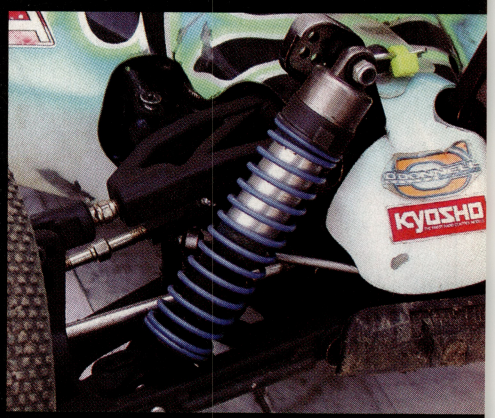


Check out the sweet prizes and trophies; everybody was gunning for the SP 777.

## Fireworks off the track



Mr. Yama of *RC World* magazine did a nice interview with double-winner Adam Drake, who had a great Fourth of July—two wins, a Kyosho Giga Crusher, and a Mini Mad Force. By the way ,"Yama" in Japanese means "big mountain."



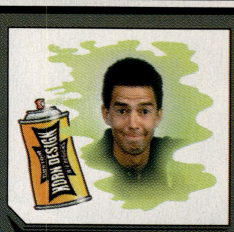

Attention Kyosho owners: I spotted these new shock springs on factory driver Jeremy Kortz's 777. These are a longer version of the original blue K springs, require fewer spacer clips and reduce spring binding. Kortz thinks they work "so far," he told me he had just gotten them.




Pro 1/8th scale A-main winners: Adam Drake (middle) first place and his OFNA buggy, Jermey Kortz (left) took second place with his Kyosho and Dean Sexton (right) finished third, also driving a Jammin OFNA buggy.

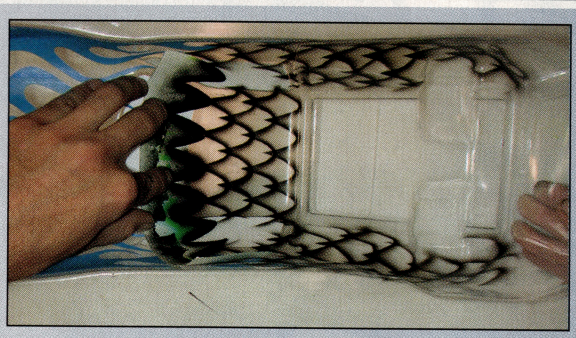


In previous issues I've covered many different types of designs and painting techniques. This month I'll revisit a few of these techniques and use them all together. There are three techniques that I'll use for this design: pinstripes, drop shadows and stencils. When the three completely different effects are used together in one design, you can create one sweet paint job!



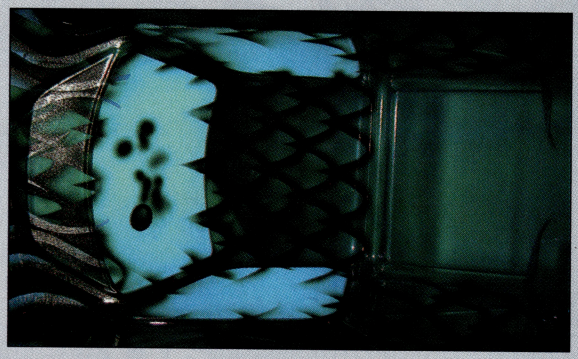
BY MARTY KORN

1)



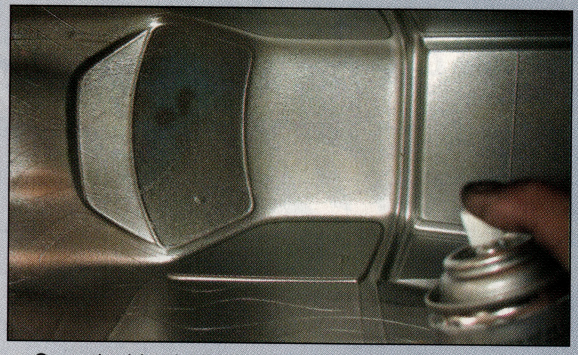
The first step to this paint job is the stenciling. I chose to use a scale type of stencil that I have had good results with in the past, and it has definitely become one of my favorites. I used black to stack row after row of the scale stencil to fill in the back of the body. I then did some drop shadowing along the bottom edges of the flames to bring some of the black to the front of the design.

2)



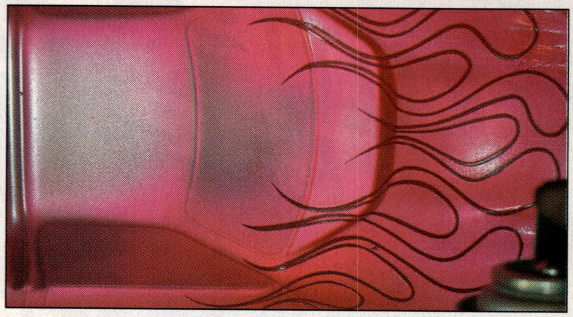
After filling the back of the body with black scales, I use two coats of candy blue to fill in the entire area.

3)



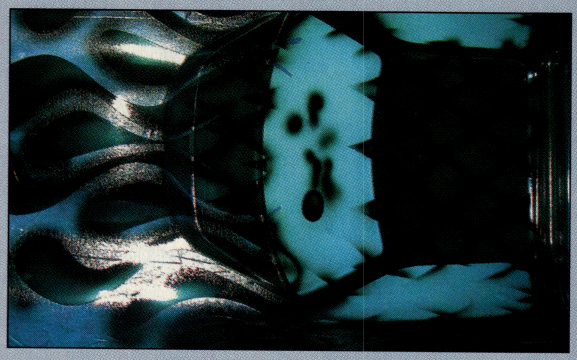
Once the blue had dried I backed everything in silver. I sprayed two light coats straight from the can making sure to cover the blue completely so the following colors would not show through.

4)



To get started on the flames I first cut a thin pinstripe along the flame design and peeled it out. Once I had completed peeling out the pinstripe I sprayed two light coats of fluorescent red to fill in the once- clear area.

5)



After allowing the fluorescent red to dry, I backed everything with two light coats of sprint white to back the fluorescent red.

Once the white had completely dried I peeled out the tape that remained in the front area of the flames. I then sprayed some more drop shadows along the bottom edges of the flames with candy blue. When the blue had had enough time to dry I backed the entire body in white.

## CONCLUSION

Those of you who have been reading Paint Shop the past year should be familiar with the techniques that I used for this paint job. Hopefully, you have even been using them to design your own paint jobs and perhaps even mastered them and use them in different ways to suit your own liking. Well now, not only do loyal Body Shop readers know each of the before mentioned techniques, but should also have a better understanding of how to use them together in one design. I hope this month's paint job has given you more ideas and the tools to allow you to make them a reality!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# - TOOLIN' AROUND -









## TIRE STRAP TOOL

Here's the ultimate tire-strap tool for gluing tires, and you can find it right in your kitchen. This cool device was spotted in the pits at a recent race, but the owner knew nothing about it. Fear not; we found some information for you. This is a Swiss-made kitchen tool by Zyliss, and it's meant for taking lids off of jars and runs around twelve dollars. The owner of this cool tool told us that it works on any size tire from 1/10-scale all the way up to monster truck-sized tires, and it's simple to use. All you need to do is turn the knob and adjust the stainless strap to fit the tire, and you're ready to start gluing. If you want, you can even tighten down the strap after your glue job to get a better seat and bond the glue better. Finding this tool will be a challenge, but your results will be worth it. Going to "upscale" bed and bath outlets would be a good start, but, if you enter Zyliss in a search engine on your computer, you will find on-line shops to help you out—good hunting.

## RECYCLE THOSE OLD TIRES!

So, you've got a pile of used R/C tires and need to know what to do with them? We found this neat little car stand at one of the races; this person has figured out how to recycle all those extra tires laying around in the garage. He just cut out the center of an old Pro-Line Bow-Tie tire and rubber-cemented it to the top of his car stand. This helps keep the car from sliding around on the stand, and it looks cool, too, plus it gives your old tires some use instead of throwing them away. There are many other ideas like this that could help use up the pile of tires we all have, and we here at *R/C Car* want to see your ideas on how to use up old tires, so send us your ideas in picture form and maybe we will send you a free subscription for your idea.

Send it to *brians@hi-torque.com*






## FROM THE PIT OF CHAD

Chad Bradley (factory team Mugen) was sporting this neat spray bottle of Zip Kicker; it's new and reportedly better than the older pump bottle of Zip Kicker. Chad tells us that with the pressurized Zip Kicker you get better penetration and coverage of the Zip over the CA glue and this New Zip Kicker supposedly keeps the CA glue from getting too hard and brittle. If you need to get your CA glue to dry quickly, Zip Kicker will dry it instantly. This new spray bottle runs around seven dollars, and you can find the new stuff at a hobby shop near you.

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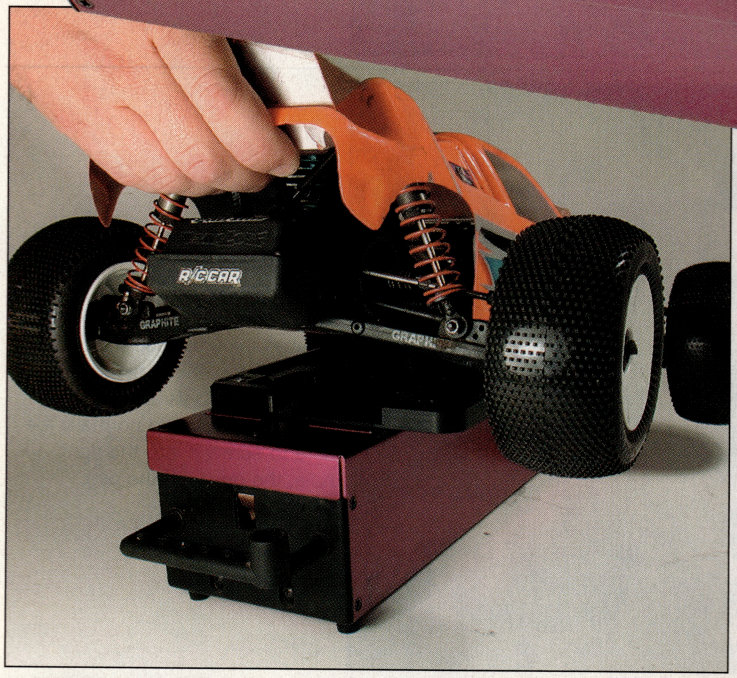


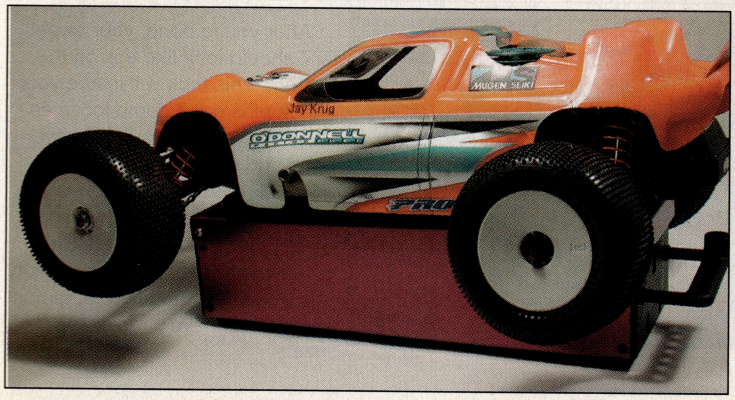


## START YOUR ENGINES 1-2-3

Here's a great idea for your starter box; it's called the Rev Tray and is basically a chassis template that you bolt to your starter box. The Rev Tray is currently available for the Team Losi XXX-NT Sport, NT Drake, and NT2 Drake Gas Trucks. Rev Trays for other models are coming in the future, and the cost is $29.95 (plus $3.89 for shipping and handling). We tried the Rev Tray and we have to say it's easy to use. The Rev Tray is machined from one-piece ABS plastic that is durable and will last longer than your car will. It has multiple mounts to precisely fit to almost any starter box, and, once you have it set, all you need to do is drop your car on the starter box and press downward. Sweet!

We had drivers ask us why you would need this when the standard pins work just fine on a starter box. True, the stock pins do work, but how many times has your pit guy been fiddling with your car to get it to fit right while the field is lapping you out on the track? With the Rev Tray even someone who has never used your starter box before will look like a pro as he just drops your car on the Rev Tray and starts it in a second.You eliminate all the guesswork by having the Rev Tray, and, for $29.95, that sounds like peace of mind to us. If you absolutely want the easiest system to start your car, check out Rev Tray. Contact them at:

RevTray c/o Miksovsky
2140 Fell Street, Suite 202
San Francisco, CA 94117
Email: *chris@miksovsky.com*
Web: *www.revtray.com*

You can view a one minute video of how the Rev Tray works at their website.

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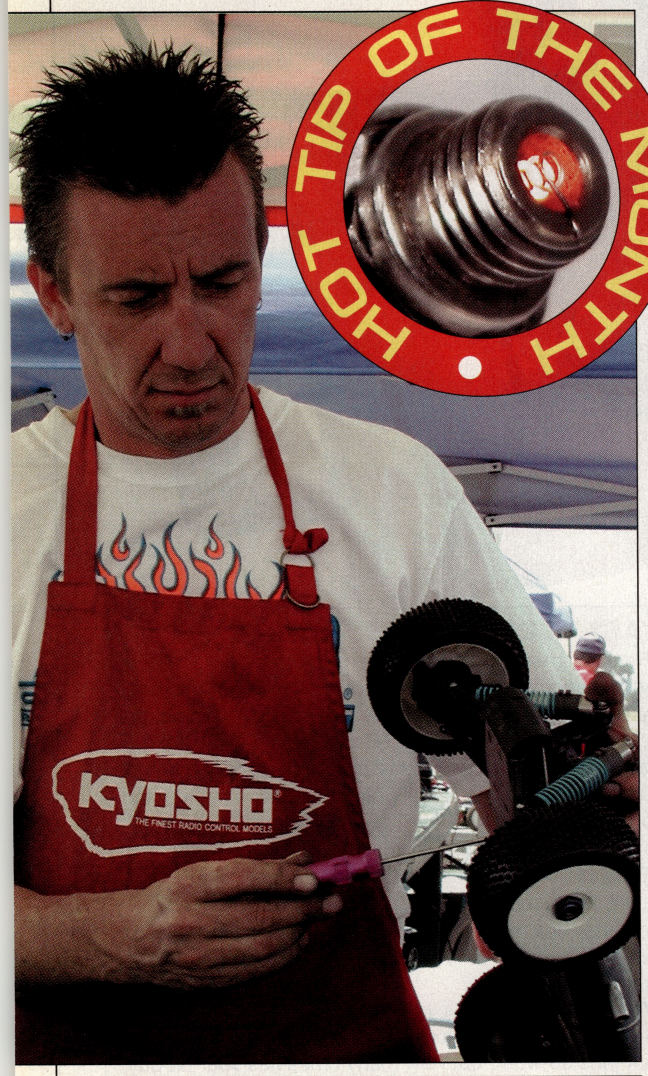


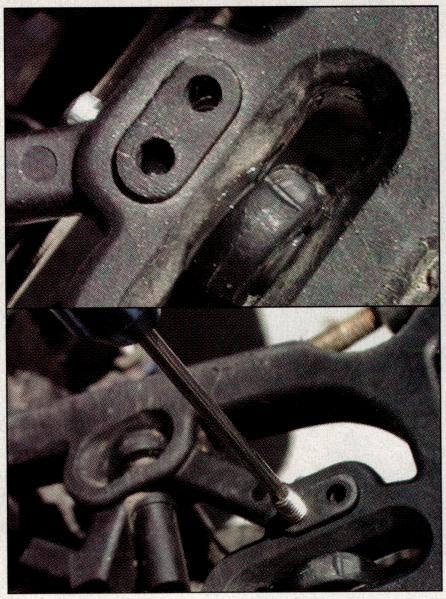

## HOT TIPS FROM THE HIPPY!

It turns out that our account executive has a cornucopia of hot tips, and we plan on milking his brain dry. Charles (aka: "The Hippy") was prepping his sweet Kyosho 777 one day for an A-main, and we saw him adding some extra grub screws into his lower shock-pin mounts. Curious, we asked what he was doing; he told us that by adding an extra grub screw on the shock pin that it would help keep it secure and that, if the upper screw came loose, the lower one would be a back-up to keep it in place, or visa-versa. Sounds good to us; why didn't we think of that?

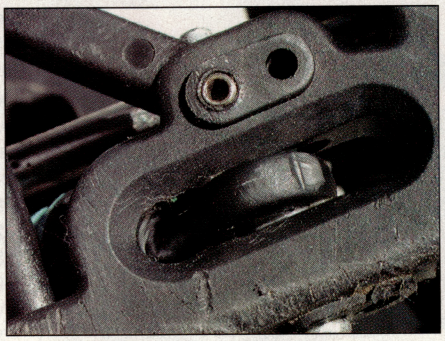


## HERE'S WHAT YOU DO:

Here's the top pin setting and what it looks like, if you want (recommended), loosen the top screw, remove the lower shock pin and grind a flat edge on the top and bottom of the pin where the screws set. This helps the screw keep the pin in place better and will keep the pin tighter, longer.



If you pulled the pin and did the flat-edge trick, re-insert the pin and tighten down the top grub screw. Now flip the buggy over and you will see the two holes for the shock pin; insert another set screw and tighten down as you would normally (be sure to screw it into the right hole, the one with the pin).



After you're done, your sweet 777 should look like this on the bottom. This trick will insure your shock pins don't come loose as they have a tendency to do over time, and you may also want to know that this will work on all models of Kyosho buggies and most other makes as well. Be creative and use your imagination; this tip can be modified for almost all cars that have shocks.

# TCS
## TAMIYA
## *Championship Series*
# 2005 RACE SCHEDULE

**Are you ready for TCS 2005?** The Tamiya Championship Series will begin its 11th season this February, with competitors racing in categories such as F-1, GT-1, GT-2, GT-3 Mini, to name a few. The TCS series will be traveling around the country at some of the best R/C Hobby outlets in the U.S.A., and winners will have the chance to compete at the North American Finals. NAF Champions will be given the opportunity to compete in Japan for the World Championships. Go to www.tamiyausa.com for rules, registration, locations, and further details.

**February 26-27**
TrackSide Hobbies, Brookfield, WI

**March 20**
R/C Outfitters, Hanover, PA

**April 30**
Toys for Boys, Kennesaw, GA

**July 10**
Hobbytown USA, Memphis, TN

**August 7**
Burien Toyota, Burien, WA

**March 6**
Hobbytown USA, Newark, CA

**April 3**
World of Hobbies, Cincinnati, OH

**June 5**
Tamiya America, Inc. Aliso Viejo, CA

**July 31**
Hobby Works, Laurel, MD

**August 27-28**
TCS North American Finals, Aliso Viejo, CA



Last year's TCS North American Finals at Tamiya America headquarters in Aliso Viejo, CA.

**Register at WWW.TAMIYAUSA.COM**

TAMIYA
www.tamiyausa.com

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# "PREFERRED" HOBBY

## ALABAMA

| | | | | |
|---|---|---|---|---|
| BRYANS HOBBY SHOP | 900 COMMONS DR. #105 | Dothan | 36302 | 334-793-2439 |
| CULLMAN RC HOBBIES | 14 COUNTY RD. 1471 # B | Cullman | 35055 | 256-775-2491 |
| HOBBYTOWN USA/RCWY | 450 SCHILLINGER RD S. | Mobile | 36608 | 334-633-8446 |
| HOBBYTOWN USA | 1713 MONTGOMERY HWY. #139 | Hoover | 35244 | 205-403-9978 |
| OAK MOUNTAIN HOBBIES | 2659 PELHAM PARKWAY | Pelham | 35124 | 205-685-8980 |
| PYRAMID HOBBIES | 214 2ND AVE. SW | Cullman | 35055 | 256-739-6679 |
| RC HI TECH RACEWAY | 3303 MERIDIAN ST. | Huntsville | 35811 | 256-539-1347 |

## ALASKA

| | | | | |
|---|---|---|---|---|
| ALASKA HOBBIES/COLLTBL. | 303 BAWDEN ST. #B | Ketchikan | 99901 | 907-225-4022 |
| HOBBYCRAFT. | 800 E. DIMOND BLVD., #136 | Anchorage | 99515 | 907-349-5815 |
| KODIAK'S HOBBY HOUSE | 3377 SPRUCE CAPE RD. | Kodiak | 96615 | 907-654-7645 |

## ARKANSAS

| | | | | |
|---|---|---|---|---|
| HOBBYTOWN USA | 9101 W. MARKHAM STE #18 | Little Rock | 72205 | 501-223-5155 |
| HOBBYTOWN USA | 1415-A HWY. 71st. | Fort Smith | 72901 | 479-649-9229 |
| MARKS HOBBY SHOP | 2516-G CANTRELL RD. | Little Rock | 72202 | 501-296-9956 |
| LAKE AREA RADIO SHACK | 1001 HWY 25 B NORTH | Heber Springs | 72543 | 501-362-5050 |

## ARIZONA

| | | | | |
|---|---|---|---|---|
| COMPETITION HOBBIES | 3930 W. COSTCO DR. | Tucson | 85741 | 520-297-8162 |
| D&D HOBBIES | 6247 E. MAIN ST. #5 | Mesa | 85205 | 480-981-7709 |
| FRANK'S HOBBY HOUSE | 12008 N. 32 St. | Phoenix | 85028 | 602-992-3495 |
| HOBBY ACTION | 606 W. SOUTHERN AVE. #1 | Tempe | 85282 | 480-829-1226 |
| HOBBYTOWN USA | 1915 E. BASELINE RD. | Gilbert | 85233 | 480-837-7674 |
| HOBBYTOWN USA | 3700 E. SPEEDWAY | Tucson | 85716 | 520-882-8888 |
| HOBBYTOWN USA | 485 E. WETMORE RD. #109 | Tucson | 85705 | 520-888-9777 |
| HOBBYTOWN USA | 8664 E. SHEA BLVD> #42 | Scottsdale | 85260 | 480-348-7825 |
| NORTHLAND HOBBIES | 2634 N. STEVE'S HOBBIES | Flagstaff | 86004 | 928-526-9255 |
| SCOTTSDALE R/C RACEWAY | 3023 N. SCOTTSDALE RD. | Scottsdale | 85251 | 480-945-2186 |

## CALIFORNIA

| | | | | |
|---|---|---|---|---|
| BEE GEE HOBBIES | 234 GOLF CLUB RD. | Pleasant Hill | 94523 | 925-798-5133 |
| BETTY'S TOY BOX & HOBBIES | 716 E. MAIN ST. | Grass Valley | 95945 | 530-274-7229 |
| BIG BOYS TOYS | 1554 W BRANCH | Arroyo Grande | 93420 | 805-481-1476 |
| BOSS ROBOT HOBBY | 2953 COLLEGE AVE. | Berkeley | 94705 | 510-841-1680 |
| BUSY BEE HOBBY SHOP INC. | 461 W. HIGHLAND AVE. | San Bernardino | 92405 | 909-886-2669 |
| CAPITOLA HOBBIES | 3555 CLARES ST. STE .#JJ | Capitola | 95010 | 831-462-3555 |
| COVINA HOBBY SHOP | 140 N. CITRUS | Covina | 91724 | 626-331-1910 |
| CYCLE ART RACING | 2211 N. PLEASANT WAY | Fresno | 93705 | 559-233-3665 |
| DELTA R/C RACE&HOBBY | 1201 W 10th ST. | Antioch | 94509 | 925-778-2965 |
| D & J HOBBIES | 96 SAN THOMAS AQUINO RD. | Campbell | 95008 | 408-379-1696 |
| DYNAMIC HOBBIES | 530 1/2 E FLORIDA | Hemet | 92543 | 909-925-9331 |
| EG HOBBIES | 11647 ARTESIA BLVD. | Artesia | 90701 | 562-924-5868 |
| EXTREME MOTOSPORTS | 2750 JEFFERSON | Napa | 94558 | 707-251-9876 |
| EXTREME RPM | 22474 A BARTON RD. | Grand Terrace | 92313 | 909-370-3379 |
| E & H HOBBY ENTRPRSES | 2372 BUTTE HOUSE RD | Yuba City | 95993 | 530-751-0225 |
| ELITE HOBBY SHOP | 606 SHOPPERS LN. | Covina | 91723 | 626-858-8999 |
| FAST HOBBIES | 7635 AUBURN BLVD. #B | Citrus Heights | 95610 | 916-725-1722 |
| FAMILY HOBBIES | 9367 MISSION GORGE RD. | Santee | 92071 | 619-448-6847 |
| FOOTHILL HOBBIES | 973 W. FOOTHILL BLVD. | San Luis Obispo | 93405 | 805-544-8697 |
| FRANCISCIAN HOBBIES | 1920-A OCEAN AVE. | San Francisco | 94127 | 415-584-3919 |
| GIZMO'S HOBBY | 2010 WEST BURBANK BLVD. | Burbank | 91506 | 818-842-8200 |
| GOLD COUNTRY RC | 4313 S SHINGLE RD. #3 | Shingle Springs | 95682 | 530-672-2581 |
| HOBBY CENTRAL | 13461 COMMUNITY RD. | Poway | 92064 | 858-513-0373 |
| HOBBY CITY | 148 BROWNS VALLEY PKWY. | Vacaville | 95688 | 707-449-1010 |
| HOBBIES TOYS & MORE | 17600 COLLIER AVE. #H172 | Lake Elsinore | 92530 | 909-245-1147 |
| HOBBYTOWN | 2085 MONTIEL RD. #105 | San Marcos | 92069 | 760-739-0672 |
| HOBBYTOWN USA | 4420-A TREAT BLVD. | Concord | 94521 | 925-685-3802 |
| HOBBYTOWN USA | 3069 WEST BULLARD AVE. | Fresno | 93711 | 559-435-3342 |
| HOBBY TOWN USA | 39152 FREMONT HUB. | Fremont | 94535 | 510-796-2744 |
| HOBBYTOWN USA | 27031 McBEAN PKWY. | Valencia | 91355 | 661-253-4999 |
| HOBBYTOWN USA DC MALL | 72-399 HWY. 111, #A | Palm Desert | 92260 | 760-341-5699 |
| HOBBIES UNLIMITED | 17950 HESPERIAN BLVD. | San Lorenzo | 94580 | 510-278-1150 |
| HOBBY WAREHOUSE | 4105 EAST SOUTH ST. | Lakewood | 90712 | 562-531-8383 |
| HOBBY WORLD | 6148 BOLLINGER RD. | San Jose | 95129 | 408-873-2109 |
| HOBBY WORLD | 6901 MONTEREY RD. | Gilroy | 95020 | 408-847-8799 |
| HOT ROD HOBBIES | 25845 SAN FERNANDO RD. #21 | Saugus | 91350 | 661-255-2404 |
| JAKES PRFORMCE HOBBY | 6650 COMMERCE BLVD. #21 | Rohnert Park | 94928 | 707-586-3375 |
| KIT & CABOODLE | 425 SAN PABLO AVE. | Albany | 94706 | 510-524-9942 |
| MARTY'S HOBBIES | 1728 N. MOORPARK RD. | Thousand Oaks | 91360 | 805-497-3664 |
| MASSIE'S HOBBY HOUSE | 9564 E. LAS TUNAS | Temple City | 91780 | 626-285-7111 |
| MODESTO HOBBIES | 401 BANGS AVE. H | Modesto | 95356 | 209-529-7310 |
| PACIFIC COAST HOBBIES | 1747 PACIFIC COAST HWY. | Lomita | 90717 | 310-530-7127 |
| PIT STOP R/C HOBBIES | 3554 STATE ST. | Santa Barbara | 93105 | 805-898-3902 |
| PARADISE HOBBIES | 491 PEARSON RD. | Paradise | 95969 | 530-877-6447 |
| RACERS HAVEN | 7401 WHITE LANE #12 | Bakersfield | 93309 | 661-835-0441 |
| R/C COUNTRY HOBBIES | 6011 FOLSOM BLVD. | Sacramento | 95819 | 916-731-5868 |
| SAVAGE MOTORSPORTS | 948 MAIN ST. | Ramona | 92065 | 760-788-7733 |
| SHELDON'S HOBBIES | 2135 OLD OAKLAND RD. | San Jose | 95131 | 408-943-0220 |
| SHOWTIME R/C SPEEDWAY | 3824 CHESTER AVE. | Bakersfield | 93311 | 661-328-1481 |
| SO CAL R/C RACEWAY | 19118 BROOKHURST ST. | Huntington Beach | 92646 | 714-963-7484 |
| SRS & HOBBIES | 407 FRONT ST. | Salinas | 93901 | 831-424-4044 |
| THE HOBBY PLACE | 10549 W. PICO BLVD. | Los Angeles | 90064 | 310-441-0075 |
| ULTIMATE HOBBIES | 2378 N. ORANGE MALL | Orange | 92865 | 714-921-0424 |
| VIP HOBBIES | 1221 N. GRAND AVE. | Walnut | 91789 | 909-595-1598 |

## COLORADO

| | | | | |
|---|---|---|---|---|
| COLPAR HOBBIES | 804 S. HAVANA ST | Aurora | 80012 | 303-341-0414 |
| DON'S HOBBIES | 815 10th ST. | Greeley | 80631 | 970-353-3115 |
| JNC | 5934 URBAN COUT | Arvada | 80004 | 720-275-3300 |
| HOBBYTOWN USA | 4348 S. COLLEGE | Fort Collins | 80525 | 970-226-3900 |
| HOBBYTOWN USA | 9120 WADSWORTH BLVD. | Westminster | 80021 | 303-431-0482 |
| HOBBYTOWN USA | 800 SOUTH HOVER RD. | Longmont | 80501 | 970-226-3900 |
| MHOR R/C RACEWAY | 15540 E. BATAVIA DR. | Aurora | 80011 | 303-343-0151 |
| HOBBY HUT MODELS | 811 N. 12th | Grand Junction | 81501 | 970-242-8761 |
| HOBBYTOWN USA/MKT SQR | 12039 W. ALEMEDA PKWY .#Z | Lakewood | 80228 | 303-716-0312 |

## CONNECTICUT

| | | | | |
|---|---|---|---|---|
| ACES NITRO R/C | 1125 NORTH AVE. | Bridgeport | 06604 | 203-330-1788 |
| DANBURY HOBBY CENTER | 366 MAIN ST | Danbury | 06810 | 203-743-9052 |
| THE HOBBY SHOP | 1717 FOXON RD. RT 80 | N. Branford | 06471 | 203-481-4067 |
| TIME MACHINE HOBBY LLC | 71 HILLIARD ST. | Manchester | 06040 | 860-646-0610 |
| RC MADNESS TRACK & HOBBY | 640 ENFIELD | Enfield | 06082 | 860-741-6501 |
| WOLCOTT HOBBY & AIRSOFT | 1254 WOLCOTT RD. | Wolcott | 06716 | 203-879-7766 |

## DELAWARE

| | | | | |
|---|---|---|---|---|
| HOBBY STOP SPEEDWAY | 22762 SUSSEX HWY. | Seaford | 19973 | 302-629-3944 |

## FLORIDA

| | | | | |
|---|---|---|---|---|
| ACE HOBBIES | 2127 S. RIDGEWOOD AVE. | Daytona Beach | 32119 | 904-761-9780 |
| ACTION RC HOBBIES | 769 NORTHLAKE BLVD. | North Palm Bch | 33408 | 561-842-7747 |
| ARTS HOBBY SHOP | 1475 ATLANTIC BLVD. | Neptune Beach | 32266 | 904-246-0601 |
| AMERICAN HOBBIES | 8940 S.W. 40th ST. | Miami | 33165 | 305-227-0063 |
| B&B HOBBIES | 15926 US HWY 19N | Hudson | 34667 | 727-862-4849 |
| BOB'S HOBBY CENTER | 7333 LAKE UNDERHILL RD. | Orlando | 32822 | 407-277-1248 |
| COLONIAL PHOTO & HOBBY | 634 N. MILLS AVE. | Orlando | 32803 | 407-841-1485 |
| COMPU HOBBIES | 2653 N.W. 79TH AVE. | Miami | 33122 | 786-845-8705 |
| CRAFT HOUSE HOBBY SHOP | 1379 N. MILITARY TRAIL | West Palm Beach | 33409 | 561-683-0764 |
| CROWN HOBBIES | 7439 S.W. 24TH ST. | Miami | 33155 | 305-264-3964 |
| FELIX HOBBY | 13394 W. DIXIE HWY. | North Miami | 33161 | 305-895-5362 |
| G & C HOBBIES | 1228 HYPOLUXO RD. | Lantana | 33462 | 561-547-3812 |
| GRAND PRIX OF FT.PRC. | FORT PIERCE | Fort Pierce | 34945 | 772-473-2130 |
| HOBBY NUT INC. | 12679 DIXIE HWY | South Miami | 33156 | 305-235-9584 |
| HOBBYTOWN USA | 2464 W. BRANDON BLVD. | Brandon | 33511 | 813-655-6366 |
| HOVER HOBBY | 3657 S. ORLANDO DR. Hwy.17/92 | Sanford | 32773 | 407-688-1161 |
| HYPER HOBBIES | 11373 SW 211 ST. #12 | Miami | 33189 | 305-253-1303 |
| JACKS HOBBIES | 1720 N.W. 4th AVE. #101 | Ocala | 34475 | 352-351-2224 |
| JR HOBBY | 4153 W.VINE ST. | Kissimmee | 34741 | 407-944-4913 |
| LEMON BAY HOBBIES | 3835 TAMIAMI TRAIL | Port Charlotte | 33952 | 941-625-5524 |
| MDI RACING | 10351 SOUTHERN BLVD. | Royal Palm Beach | 33411 | 561-798-2433 |
| PHIL'S HOBBY SHOP | 6050 PARK BLVD. | Pinellas Park | 33781 | 727-545-1251 |
| QUALITY AIRCRAFT&RC | 6839 S US HIGHWAY 1 | Port Saint Lucie | 34952 | 772-460-2844 |
| R.C. HOBBIES | 6800 N. UNIVERSITY DR. | Tamarac | 33321 | 954-721-5720 |
| RC HOBBY ZONE | 13346 LINCOLN RD. | Riverview | 33569 | 813-234-0899 |
| RACING HOBBIES | 10722 WILES RD. | Coral Springs | 33076 | 954-346-2226 |
| SLOT CAR RACEWAY | 2125 MARINER BLVD. | Spring Hill | 34609 | 352-684-7355 |
| SOUTHEAST RC HOBBIES | 1901 WEST COPANS | Pompano Beach | 33064 | 954-978-6050 |
| SPACE COAST HOBBIES | 2135 PALM BAY RD. NE #1 | Palm Bay | 32905 | 321-722-3696 |
| SUPERIOR HOBBIES | 1478 E. SEMORAN BLVD. | Casselberry | 32707 | 407-834-9299 |
| WARRICK CUSTOM HOBBIES | 7676 PETERS RD. | Plantation | 33324 | 954-370-0708 |

## GEORGIA

| | | | | |
|---|---|---|---|---|
| ANTHONY'S VICTORY LANE | 129 EAST HWY 80 | Pooler | 31322 | 912-748-0847 |
| HOBBY MART | 6889 PEACHTREE INDUST. # H | Peachtree Corners | 30092 | 770-840-8495 |
| HOBBYTOWN USA | 6770 VETERANS PKWY # 1 | Columbus | 31909 | 706-660-1793 |
| HOBBYTOWN USA | 800 E. BARRETT PKWY | Kennesaw | 30144 | 770-426-8800 |
| HOBBYTOWN USA | 3360 SATELLITE BLVD. #14 | Duluth | 30096 | 770-418-0850 |
| R/C TOYS FOR BOYS | 2220 COBB PARKWAY N. | Kennesaw | 30152 | 678-797-0406 |
| BIG BOY TOYS HOBBY SHOP | 5035 MT. ZION PARKWAY | Stockbridge | 30281 | 770-507-6288 |
| RC HELIS & HOBBIES | 1441 HWY 81 #C | Loganville | 30052 | 770-466-1408 |

## HAWAII

| | | | | |
|---|---|---|---|---|
| THE HOBBY COMPANY | 98-1005 MOANALUA RD. | Aiea | 96701 | 808-487-2473 |

## IOWA

| | | | | |
|---|---|---|---|---|
| BOX KAR HOBBIES T&C CTR | 3649 FIRST AVE. SE | Cedar Rapids | 52402 | 319-362-1291 |
| EXTREME RC | 5547 WESTMINSTER DR | Cedar Falls | 50613 | 319-234-6000 |
| EXTREME RC | 202 GILBERT RD | Evansdale | 50707 | 319-234-6000 |
| HOBBY HAVEN | 2575 86th ST. | Urbandale | 50322 | 515-276-8785 |
| HOBBYTOWN USA | 11107 PLUM DR. | Urbandale | 50322 | 515-278-9060 |
| HOBBYTOWN USA | 901 E. KIMBERLY RD. | Davenport | 52807 | 563-355-2071 |
| HOBBYTOWN USA | 2737 16TH AVE S.W. | Cedar Rapids | 52404 | 319-364-3289 |
| HOBBYTOWN USA | 620 LINCOLN WAY #6 | Ames | 50010 | 515-232-9060 |
| OUTBACK HOBBIES | 709 EVANS ST. | Sloan | 51055 | 712-253-0087 |
| THE HOBBY CORNER | 1672 SYCAMORE ST. | Iowa City | 52240 | 319-338-1788 |
| WILD BILLS R/C HOBBIES | 901 W. JONES | Knoxville | 50138 | 641-842-5973 |

## IDAHO

| | | | | |
|---|---|---|---|---|
| DAPCO HOBBIES | 2211 GARRETT WAY | Pocatello | 83201 | 208-233-8163 |
| HOBBYTOWN USA | 1870 W. PULLMAN RD. | Moscow | 83843 | 208-882-9369 |
| HOBBYTOWN USA | 3317 N. COLE RD. | Boise | 83704 | 208-376-1942 |
| JD HOBBIES | 1320 LINCOLN RD | Idaho Falls | 83401 | 208-529-9500 |
| THE TOY SHOP | 837 POLELINE RD. | Twin Falls | 83301 | 208-734-2725 |

## ILLINOIS

| | | | | |
|---|---|---|---|---|
| ALLEN'S R/C CARS | 3115 LEACH RD. | Rochester | 62563 | 217-498-7345 |
| AL'S HOBBY SHOP INC. | 121 ADDISON, BOX 449 | Elmhurst | 60126 | 630-832-4908 |
| CENTRAL RC HOBBIES | 817 E.WAR MEMORIAL DR. | Peoria Heights | 61616 | 309-686-8004 |
| CIP HOBBIES | 611 W. GLEN AVE. | Peoria | 61614 | 309-691-2769 |
| CORNER HOBBY | 308 NORTH VIRGINIA AVE. | Swansea | 62220 | 618-277-6030 |
| DEPOT HOBBY SHOP | 180 SOUTH SEMINARY ST. | Galesburg | 61401 | 309-342-9323 |
| GATEWAY RC | 108 EAST MAIN ST. | Collinsville | 62234 | 618-345-7468 |
| HIS N HERS HOBBIES | 1206 TOWANDA PLAZA #2 | Bloomington | 61701 | 309-827-0204 |
| HOBBYLAND | 616 N. MAIN | Bloomington | 61701 | 309-828-1442 |
| HOBBYTOWN USA | 1000 LAKE ST. | Oak Park | 60301 | 708-445-8056 |
| HOBBYTOWN USA | 3627 EAST MAIN ST. | St. Charles | 60174 | 630-587-1256 |
| HOBBYTOWN USA | 3782 N. ALPINE RD. | Rockford | 61114 | 815-282-0727 |
| HOBBYTOWN USA/G.PRIE | 5201 W. WAR MEMORIAL #475 | Peoria | 61615 | 309-692-3002 |
| HOBBYTOWN USA, Oak Mill Mall | 7900 N. MILWAUKEE AVE. | Niles | 60714 | 847-470-9577 |
| JIMS HOBBIES | 814 FRONT ST. #B | McHenry | 60050 | 815-363-0333 |
| LEISURE HOURS HOBBIES | 2712 N. PLAINFIELD RD. | Joliet | 60436 | 815-439-1477 |
| PAT'S HOBBIES & CRAFTS INC. | 5730 W. 95th ST | Oak Lawn | 60453 | 708-424-6131 |
| PLAZA PET & HOBBIES | 18415 S HALSTED ST. | Glenwood | 60425 | 708-755-1380 |
| RJD TOY'S | 1302 ST RT 10 | Lincoln | 62656 | 217-732-4300 |
| SPRFLD HAMMERS HOBBIES | 2448 S 10th ST. | Springfield | 62703 | 217-523-0265 |
| VENTURE HOBBIES | 23 HUNTINGTON LANE | Wheeling | 60090 | 847-537-8669 |
| WIMPY'S HOBBY WORLD | 263 N. CONVENT AVE. | Bourbonnais | 60914 | 815-932-6100 |

## INDIANA

| | | | | |
|---|---|---|---|---|
| BE COMICS & KARDS & ROCKETS & HOBBIES | 130 W.VAN BUREN ST. | Columbia City | 46725 | 260-248-8020 |
| BIG BOY HOBBIES | 8893 PENDLETON PIKE | Indianapolis | 46226 | 317-898-6284 |
| CUSTOM MADE HOBBIES | 1600 MORNINGSTAR LN. | Decatur | 46733 | 260-724-3040 |
| FINISH LINE PETS/HOBBIES | 1209 E. STATE RT 2 | LaPorte | 46350 | 219-326-0921 |
| FIRST PLACE HOBBIES | 117 E. MARKET ST. | Bluffton | 46714 | 260-827-0765 |
| G & G HOBBIES | 105 E. MAIN ST. | Griffith | 46319 | 219-924-6686 |
| GRANGER HOBBY STOP | 12131 STATE RD. 23 UNIT L | Granger | 46530 | 574-243-2390 |
| HAPPY HOBBIES | 1398 EASTERN BLVD. | Jeffersonville | 47129 | 812-282-0060 |
| HOBBY HANGER | 189 PERRY ST. | Vernon | 47282 | 812-346-6497 |
| HOBBY LAND | 416 W. COLISEUM BLVD. | Fort Wayne | 46805 | 260-483-8186 |
| HOBBYLAND INC. | 2564 MIRACLE LANE | Mishawaka | 46545 | 574-255-1722 |
| HOBBYTOWN USA | 6336 E. 82ND ST. | Indianapolis | 46250 | 317-845-4106 |
| HOBBYTOWN USA | 1858 E. 80TH PLAZA | Merrillville | 46410 | 219-736-0255 |
| JOE'S HOBBY BARN | 1950 E. SPRINGHILL DR. | Terre Haute | 47802 | 812-299-5773 |
| MAPLE CITY HOBBIES | 102 SOUTH MAIN | Goshen | 46526 | 574-534-9661 |
| PHILS HOBBY SHOP | 1722 LAKE AVE. | Ft. Wayne | 46805 | 260-424-0065 |
| PHIL'S HOBBY SHOP | 3112 N. CLINTON | Ft. Wayne | 46805 | 219-471-1340 |

## KANSAS

| | | | | |
|---|---|---|---|---|
| HOBBY HAVEN | 10560 METCALF | Overland Park | 66212 | 913-381-3111 |
| HOBBYTOWN USA | 8229 EAST KELLOGG | Wichita | 67207 | 316-683-7222 |
| HOBBYTOWN USA | 9270 METCALF | Overland Park | 66212 | 913-649-7979 |
| FINLEY'S HOBBIES | 5640 E CENTRAL | Wichita | 67208 | 316-683-4221 |
| HANGER HOBBIES | 2243 NORTH TYLER # 115 | Wichita | 67205 | 316-773-4022 |
| R/C HOBBIES | 115 W. 7TH | Junction City | 66441 | 785-238-1877 |

## KENTUCKY

| | | | | |
|---|---|---|---|---|
| BLUEGRASS HOBBIES | 274 LAMPTON LN. | Columbia | 42728 | 270-384-9131 |
| HOBBYTOWN USA | 12615 SHELBYVILLE RD. | Louisville | 40243 | 502-254-5755 |
| McDONALD'S MOTOR CYCLE REPAIR | 40 STRONG BRANCH RD. | Liberty | 42539 | 606-787-7560 |
| BAD HOBBIES | 131 NORTH 4TH STREET | Nicholasville | 40356 | 859-887-3540 |
| HOBBY STATION HOUCHENS | 300 SYCAMORE ST. | Elizabethtown | 42701 | 270-737-2000 |
| SCALE REPRODUCTIONS | 3073 BRECKINRIDGE LN. | Louisville | 40220 | 502-456-5883 |
| SLICK HOBBIES | 8591 HIGHWAY 27 | Burnside | 42519 | 606-561-0343 |
| X-TREME HOBBIES | 1003A BURLEW BLVD. | Owensboro | 42303 | 270-683-4693 |

TO HAVE YOUR SHOP LISTED HERE CALL: 1-800-767-0345. ATTENTION: YOU MUST SELL R/C CAR MAGAZINE TO BE IN THE SHOP LISTING.

# SHOP LOCATOR

## LOUISIANA

| | | | | |
|---|---|---|---|---|
| HARES ART & HOBBY | 4529 LEE STREET | Alexandria | 71302 | 318-443-2755 |
| HOBBY HUT | 5029 VETERANS BLVD. | Metairie | 70006 | 504-885-0804 |
| CHALMT, HRDWR/HOM CTR | 223 EAST JUDGE PEREZ DR. | Chalmette | 70043 | 504-271-5191 |
| HOBBIES X-TREME | 1605 BENTON RD., STE. B | Bossier City | 71111 | 318-741-5501 |
| SLIDELL HOBBIES | 1065 HWY 190 WEST | Slidell | 70460 | 985-643-7176 |
| SMITH PETTY | 200 E. KINGS HWY. | Shreveport | 71104 | 318-869-3548 |
| TRI CITY HOBBIES/CRAFTS | 1029 Victory II Blvd.. | Morgan City | 70380 | 985-702-1000 |

## MAINE

| | | | | |
|---|---|---|---|---|
| OUT OF CONTROL RACING | 859 W. BOYLSTON ST. | Worcester | 01606 | 508-853-3363 |
| R/C SPEEDWAY & HOBBIES | 87 MAIN ST. | Fairfield | 04937 | 207-453-4588 |

## MARYLAND

| | | | | |
|---|---|---|---|---|
| DOUG'S HOBBY | 24404 THREE NOTCH RD. | Hollywood | 20636 | 301-373-6674 |
| GPA HOBBIES | 2431 CROFTON LANE # 6 | Crofton | 21114 | 301-858-0004 |
| HOBBY CITY | 15751 COLUMBIA PIKE | Burtonsville | 20866 | 301-421-5977 |
| HOBBYTOWN USA | 919-C NORTH EAST ST. | Frederick | 21701 | 301-694-7395 |
| HOBBYTOWN USA | 6714-D GOVERNOR RITC | Glen Burnie | 21061 | 410-590-4950 |
| HUNT VALLEY HOBBIES | 10824 YORK RD. | Cockeysville | 21030 | 410-666-1098 |
| STONELEIGH HOBBY INC. | 6717 YORK RD. | Baltimore | 21212 | 410-377-4447 |
| S&J HOBBIES | 10476 CAMPUS WAY S. | Largo | 20774 | 301-324-6680 |
| THE TRACK | 16806 OAKMONT AVE. | Gaithersburg | 20877 | 301-417-9630 |

## MASSACHUSETTS

| | | | | |
|---|---|---|---|---|
| BARN SPEED HOBBIES | 109 CENTER ST | Lee | 01238 | 413-243-2651 |
| CENTERLINE HOBBIES | 167 CORPORATION RD. | Hyannis | 02601 | 508-771-1244 |
| DAVE'S HOBBIES | 281 CABOT ST | Beverly | 01915 | 978-921-1559 |
| HENRY'S HOBBY HOUSE INC. | 67 W. BOYLSTON ST | West Boylston | 01583 | 508-835-6165 |
| HOBBY FEVER | 130 MIDDLESEX RD. | Tyngsboro | 01879 | 978-649-2221 |
| HOBBY WORLD | 171 GROVE ST. | Adams | 01220 | 413-743-7223 |
| HOG HEAVEN HOBBIES | 494 MAIN ST. | Fiskdale | 01518 | 508-347-9350 |
| LAND SEA & AIR HOBBIES | 1282 PARKER ST. | Springfield | 01129 | 413-782-2115 |
| MASTER HOBBIES | 565 MAIN ST. | Cherry Valley | 01611 | 508-892-1440 |
| HOBBYTOWN USA | 258 HARTFORD AVE. | Bellingham | 02019 | 508-966-3559 |

## MICHIGAN

| | | | | |
|---|---|---|---|---|
| ACTION HOBBIES | 211 EAST MAIN | Niles | 49120 | 616-687-8550 |
| ANYTHING GOES | 5108 ROCHESTER RD. | Troy | 48085 | 248-740-2277 |
| ARMSTRONG'S SPRT/HOBBY | 200 LAKE ST | Whitehall | 49461 | 231-894-6753 |
| DIRT BURNER RACING | 3295 HAGGERTY RD. | Commerce | 48390 | 248-926-1140 |
| EAST BAY HOBBIES | 364 W. HOUGHTON LAKE DR. | Prudenville | 48651 | 989-366-5306 |
| FST HOBBY SHOP | 3537 FORT ST | Wyandotte | 48192 | 734-285-9093 |
| GREAT ESCAPES | 136 N. US 31 S. | Traverse City | 49684 | 231-943-9800 |
| HOBBYTOWN USA | 12821 S. SAGINAW | Grand Blanc | 48439 | 810-695-9088 |
| HOUSE OF HOBBIES | 962 W. BROADWAY | Muskegon | 49441 | 231-759-4555 |
| HOBBY-SPORTS.COM | 9782 PORTAGE RD. | Portage | 49002 | 616-323-3686 |
| JOE'S HOBBY CENTER | 35151 GRAND RIVER RD. | Farmington | 48335 | 248-477-6266 |
| KECK HARDWARE & HOBBY | 2132 WEST RD. | Trenton | 48183 | 734-676-2282 |
| LARRY'S PERFORMANCE R/C'S | 42246 MOUND RD. | Sterling Heights | 48314 | 586-997-4840 |
| NANKIN HDWRE & HOBBY | 35101 FORD RD. | Westland | 48185 | 734-722-5700 |
| P & D HOBBY SHOP | 31280 GROESBECK HWY | Fraser | 48026 | 586-296-6116 |
| PROP SHOP HOBBIES, INC. | 23326 VAN DYKE | Warren | 48089 | 586-757-7160 |
| RIDER'S HOBBY | 32115 JOHN "R" RD. | Madison Heights | 48071 | 248-589-8111 |
| RIDER'S HOBBY | 42011 FORD RD. | Canton | 48187 | 734-981-8700 |
| RIDER'S HOBBY SHOP | 22789 NORTHLINE RD. | Taylor | 48180 | 734-287-7405 |
| RIDER'S HOBBIES | 2061 S. LINDEN RD. | Flint | 48532 | 810-720-2500 |
| RIDER'S HOBBY | 4417 S. WESTNEDGE AVE. | Kalamazoo | 49008 | 616-349-2666 |
| RIDER'S HOBBY SHOP | 2055 28TH ST S.E. UNIT 12 | Grand Rapids | 49508 | 616-247-9933 |
| RIDER'S HOBBY SHOP | 4035 CARPENTER RD. | Ypsilanti | 48197 | 313-971-6116 |
| RIDER'S HOBBY SHOP | 30991 FIVE MILE RD. | Livonia | 48154 | 734-425-9720 |
| RIVERTOWN HOBBIES | 8450 ALGOMA AVE NE #B | Rockford | 49341 | 616-863-3600 |
| ROGER'S HOBBY CENTER | 5620 STATE | Saginaw | 48603 | 989-790-0080 |
| THE RC ENTHUSIAST | 1110 GARFIELD #1 | Bay City | 48708 | 989-893-8723 |

## MINNESOTA

| | | | | |
|---|---|---|---|---|
| AREA 51 OF PARK RAPIDS | 116 S MAIN AVE | Park Rapids | 56470 | 218-732-7551 |
| BAKERS HOBBY | 2738 WEST DIVISION ST. | St Cloud | 56301 | 320-252-0460 |
| DON'S HOBBY | 1416 N. RIVERFRONT DR. | Mankato | 56001 | 507-387-1330 |
| EXTREME HOBBY | 15895 HWY 7 EAST | Hutchinson | 55350 | 320-234-6969 |
| HOBBY TOWN USA | 7916 BROOKLYN BLVD. | Minneapolis | 55445 | 612-424-6052 |
| HOBBY WAREHOUSE | 7120 CHICAGO AVE S. | Richfield | 55423 | 612-861-5587 |
| HOBBY ZONE | 1960 CLIFF LAKE, STE 128 | Eagan | 55122 | 651-905-9523 |
| HUB HOBBY CENTER | 82 MINNESOTA AVE. | Saint Paul | 55117 | 651-490-1675 |
| HUB HOBBY CENTER | 6410 PENN AVE. S | Richfield | 55423 | 612-866-9575 |
| R.C. CAR KINGS | 1307 EAST HWY 13 | Burnsville | 55337 | 952-895-9643 |

## MISSOURI

| | | | | |
|---|---|---|---|---|
| AWESOME TOYS & HOBBIES | 627 N. BELT HWY | St. Joseph | 64506 | 816-364-0766 |
| BATTLEFIELD STATION | 220 W BATTLEFIELD | Springfield | 65807 | 471-887-5592 |
| CHECKERED FLAG HOBBIES | 4491 LeMAY FERRY RD. | St. Louis | 63129 | 314-892-5353 |
| FASTLANE RCWY/HOBBIES | 2850 W 40 HWY EAST STE. F | Blue Springs | 64015 | 816-220-0100 |
| HOBBYTOWN USA | 524 N.W. ENGLEWOOD RD. | Kansas City | 64118 | 816-459-9590 |
| HOBBYTOWN USA | 3906 PEACHTREE DRIVE, STE C | Columbia | 65203 | 573-817-0698 |
| HOBBYTOWN USA | 1759 WEST STATE HIGHWAY J | Ozark | 65721 | 417-581-3561 |
| MARK TWAIN HOBBY CTR | 2793 WEST CLAY ST. | Saint Charles | 63301 | 636-946-2816 |
| NOVELTY RCWY/HOBBIES | 5TH AND MAIN | Novelty | 63460 | 660-739-4530 |
| REAL R/C RACEWAY | 24204 EAST STATE RT 58 | Pleasant Hill | 64080 | 816-358-0238 |
| SCHAEFER'S HOBBY CTR | 11659 GRAVOI RD. | St. Louis | 63126 | 886-818-5183 |
| XTREME R/C HOBBIES/COL | 414 MISSOURI BLVD. | Scott City | 63780 | 573-264-3363 |

## MISSISSIPPI

| | | | | |
|---|---|---|---|---|
| FUN 4 ALL HOBBIES | 7915 HIGHWAY 51 | South Haven | 38671 | 662-393-9788 |
| HOBBYTOWN USA | 6380-D RIDGEWOOD COURT | Jackson | 39211 | 601-957-9900 |
| HUB CITY HOBBY | 5182 OLD HIGHWAY 11, STE. #3 | Hattiesburg | 39402 | 601-264-1040 |

## MONTANA

| | | | | |
|---|---|---|---|---|
| EXTREME HOBBIES | 1515 14th STEET W. | Billings | 59102 | 406-259-8505 |
| HOBBYTOWN USA | CITY PLAZA/1421 11TH AVE. | Helena | 59601 | 406-442-2568 |
| NORTHLAND HOBBIES INC. | 1325 HWY 2 WEST | Kalispell | 59901 | 406-257-1808 |
| PRAIRIE UNIQUE | 114 S. LOGAN ST. | Terry | 59349 | 406-635-5598 |
| THE TREASURE CHEST | 1612 BENTON AVE. | Missoula | 59801 | 406-549-7992 |

## NEBRASKA

| | | | | |
|---|---|---|---|---|
| HOBBYTOWN UNLIMITED | 220 NORTH 66th ST. | Lincoln | 68505 | 402-434-5056 |
| HOBBYTOWN USA | 10020 SCOTT CIRCLE | Omaha | 68122 | 402-498-8888 |
| HOBBYTOWN USA CONESTOGA MALL | 3404 WEST 13th ST. | Grand Island | 68803 | 308-382-3451 |

## NEW HAMPSHIRE

| | | | | |
|---|---|---|---|---|
| 106 RACE PARK | 743 CLOUGH MILL RD. | Pembroke | 03275 | 603-224-7223 |
| HOBBY ETC. INC. | 90 WEST PEARL ST. | Nashua | 03060 | 603-883-4919 |
| HOBBYTOWN USA | 5 PAISTOW RD. #C-25 SHAW'S SHOPPING CTR. | Plaistow | 03865 | 603-382-6583 |
| LEISURE TIME HOBBIES | 140 MONADNOCK HWY #12 | Swanzey | 03446 | 603-357-9975 |

## NEW JERSEY

| | | | | |
|---|---|---|---|---|
| CHAMPION HOBBIES | 632 RT 22 EAST | Hillside | 07205 | 908-206-9600 |
| CHAMPION HOBBIES | 772 RIVERSIDE AVE. | Lyndhurst | 07071 | 800-335-7272 |
| CHICK'S HOBBY CENTER | 924 BERKELY ROAD | Gibbstown | 08027 | 856-423-0773 |
| CRUIZIN WITH RC'S INC. | 54 EAST MAIN ST. | Ramsey | 07446 | 201-825-4884 |
| G&S HOBBIES | 44 ANCHOR BLVD. | Old Bridge | 08857 | 732-727-7871 |
| HOBBY WORKSHOPS | 510 WEST KINGS HWY | Mount Ephraim | 08059 | 856-931-2400 |
| JACKSON HOBBY SHOP | 2275 W. COUNTY LINE RD. | Jackson | 08527 | 732-364-3334 |
| JO JO'S RACING COLLECTIBLES | 1826 RT 35 NORTH | South Amboy | 08879 | 732-553-0200 |
| RC HOBBY CENTER | 336 RT 232 WEST | Greenbrook | 08812 | 732-752-6030 |
| PLANET PETS/HOBBY WLD | 3391 RT 27 | Franklin Park | 08823 | 732-951-8500 |
| TECH TOYS | 370 RT 46 W. | Parsippany | 07054 | 973-227-7012 |
| THE HOBBY SHOP | 1077-C STATE HWY 34 | Aberdeen | 07747 | 732-583-4189 |
| WIDE WORLD OF HOBBIES | 974 TEANECK RD. | Teaneck | 07766 | 201-862-9393 |
| XTREME RC | 846 KINDERKAMACK RD. | River Edge | 07661 | 201-599-0066 |
| ZEPPELIN HOBBIES & RACEWAY | 92 RT. 23 RIVERDALE SQR MALL | Riverdale | 07457 | 973-831-7717 |
| VC'S HOBBIES & SERVICES | 223 ATLANTIC CITY BLVD. | Beachwood | 08722 | 732-349-2500 |

## NEW MEXICO

| | | | | |
|---|---|---|---|---|
| BIG BOYS TOYS | 1735 JUAN TABO N.E. | Albuquerque | 87112 | 505-298-1023 |
| HOBBIE'S & STUFF | 2801 EUBANK N.E. #P | Albuquerque | 87112 | 505-293-1217 |

## NEVADA

| | | | | |
|---|---|---|---|---|
| B & B HOBBIES | 65 W. CENTER ST. | Fallon | 89406 | 775-423-3101 |
| DANSEY'S INDOOR R/C HOBBIES | 741 N. NELLIS BLVD. | Las Vegas | 89110 | 702-453-7223 |
| HOBBYTOWN USA | 5085 W. SAHARA AVE. #134 | Las Vegas | 89146 | 702-889-9554 |

## NEW YORK

| | | | | |
|---|---|---|---|---|
| ACTION HOBBIES | 1070 MIDDLE COUNTRY RD. | Selden | 11784 | 631-736-1574 |
| AGGRESSIVE HOBBIES | 4278 ARTHUR KILL RD. | Staten Island | 10309 | 718-605-9447 |
| BRUCKNER HOBBIES | 3587 E. TREMONT AVE. | Bronx | 10465 | 800-288-8185 |
| BROWNIES PRO/SPORT HOBBY | 124 BENNETT ST. | Staten Island | 10302 | 718-727-2194 |
| COMPETITION HOBBY SUP | 1006 LOUDON RD. | Cohoes | 12047 | 518-786-3622 |
| CRAFT WLD/ACTION HOBB | 509 W 3rd ST. | Jamestown | 14701 | 718-484-1780 |
| ELMSFORD HOBBIES | 129 E MAIN ST. | Elmsford | 10523 | 914-592-0600 |
| FANTASIA HOBBIES | 17169 46TH AVE. | Flushing | 11358 | 718-460-5671 |
| FORDHAM HOBBIES | 2446 CRESTON AVE. | Bronx | 10468 | 718-562-1906 |
| FOUNTAIN RACEWAY | 1744 RT 104 | Ontario | 14519 | 315-524-4991 |
| GJ'S HOBBIES | 38-40 WASHINGTON AVE. | Endicott | 13760 | 607-754-3003 |
| GOT GEAR? | 7508 NORTH BROADWAY | Red Hook | 12571 | 845-758-6006 |
| HOBBYTOWN USA | 1814 CENTRAL AVE. | Albany | 12205 | 518-435-9961 |
| HURRICANE HOBBIES | 2425 MIDDLE COUNTRY RD. | Centereach | 11720 | 631-737-3157 |
| LANTZ TRAIN SHOP | 101 S. MAIN ST. | Horseheads | 14845 | 607-795-5038 |
| MARDEL HOBBY/CRAFTS | 351 ALTAMONT AVE. | Schenectady | 12303 | 518-346-6500 |
| MW HOBBY & CRAFT | 12019 E. MAIN ST. | Wolcott | 14590 | 315-594-2609 |
| NORWOOD HOBBY SHOP | 2 SOUTH MAIN ST.. | Norwood | 13668 | 315-353-6621 |
| NYC HOBBIES | 65-62 MYRTLE AVE. | Glendale | 11385 | 718-366-6262 |
| LONG ISLAND RACEWAY & HOBBY | 909 CONKLIN ST | Farmingdale | 11735 | 631-845-7223 |
| PERFORMANCE HOBBIES | 15 WEST MAIN ST. | Webster | 14580 | 716-872-4990 |
| RACING CITY HOBBIES | 110 MAIN ST. | South Glens Falls | 12803 | 518-792-7272 |
| RAMPAGE R/C & HOBBIES | 1164 RT 9G | Hyde Park | 12538 | 845-229-1379 |
| RMC HOBBIES | 2485 ROCHESTER RD. BLDG. 1 | Canandaigua | 14424 | 585-394-1210 |
| SUNRISE HOBBIES | 3353 MERRICK RD. | Wantagh | 11793 | 516-783-4343 |
| THE HOBBY HOUSE | 2378 LYELL AVE. | Rochester | 14606 | 585-429-6280 |
| TONY'S HOBBY SHOP | 220 HARRISON AVE. | Harrison | 10528 | 914-835-4765 |
| TRANS BORDER CUSTOMS | 1320 RT 9 | Champlain | 12919 | 514-687-6214 |
| WALT'S HOBBY | 2 DWIGHT PARK DR. | Syracuse | 13209 | 315-453-2291 |
| WILLIS HOBBIES | 300 WILLIS AVE. | Mineola | 11501 | 516-746-3944 |
| XTREME HOBBIES | 1815 D DEER PARK AVE. | Deer Park` | 11729 | 631-254-9873 |
| XTREME HOBBIES | 52 S. MAIN ST. | Pearl River | 10965 | 845-735-1914 |

## NORTH CAROLINA

| | | | | |
|---|---|---|---|---|
| ALBEMARLE HOBBIES | 134 W MAIN ST, | Albemerle | 28001 | 704-986-6008 |
| APEX RC AND HOBBIES | 1204 LAURA VILLAGE RD. | Apex | 27523 | 919-303-8388 |
| FUN/FUNKY TOYS & HOBBY | 111 S MARKET ST., STE #J | Madison | 27025 | 336-427-8697 |
| GBI HOBBIES | 315 HWY 70 W | Havelock | 28532 | 252-463-4073 |
| HAYES HOBBY HOUSE | 809 ELM ST. | Fayetteville | 28303 | 910-485-2337 |
| HOBBY BARN | 101 S. JEFFERSON AVE. | West Jefferson | 28694 | 336-846-2276 |
| RACE FACTORY HOBBIES | 521 E CHATAM ST | Cary | 27511 | 919-460-8797 |
| THAK'S GAMES & HOBBIES | 343 WILSON RD. | Sanford | 27332 | 919-776-9002 |
| HOBBY TOWN USA | 8332 PINEVILLE MATHEWS RD. | Charlotte | 28226 | 704-544-2303 |
| HOBBYTOWN USA | 3346 ROBINHOOD RD. | Winston Salem | 27106 | 336-774-2324 |
| K/C HOBBY INC | 10948-G NORTH MAIN ST. | Archdale | 27263 | 336-434-3482 |
| KING R/C | 614 S. MAIN ST. | King | 27021 | 336-983-3969 |
| Z N Z HOBBIES | 972 TALBERT BLVD. | Lexington | 27292 | 336-249-6127 |

## NORTH DAKOTA

| | | | | |
|---|---|---|---|---|
| AEROPORT HOBBY SHOPPE | 2112 N. BROADWAY | Minot | 58703 | 701-838-1658 |
| HOMETOWN SEASONS & HOBBIES | 611 W.VILLARD | Dickenson | 58601 | 701-483-9750 |
| WHEELS WINGS-N-HOBBIES | 4018 MEMORIAL HWY | Mandan | 58554 | 701-667-7200 |

## OHIO

| | | | | |
|---|---|---|---|---|
| BELLS & WHISTLES HOBBIES | 21638 LIBBY RD. | Maple Heights | 44137 | 216-587-7300 |
| CAPSTONE HOBBIES | 562 W. SCHROCK RD. | Westerville | 43081 | 614-899-6313 |
| FUTURETRONICS | 2055 N. RIDGE | Lorain | 44055 | 440-277-8004 |
| DIVE IN SCUBA CENTER | 3182 WARREN SHARON RD. | Vienna | 44473 | 330-856-6275 |
| FREDDY'S HOBBIES | 100 ROMITO ST #A | Ravenna | 44266 | 330-296-4354 |
| GRANDVIEW HOBBIES | 1460 W. FIFTH AVE. | Columbus | 43212 | 614-486-3532 |
| HOBBY STOP WEST | 4550 MONROE ST. | Toledo | 43613 | 419-471-1108 |
| HOBBYFORCE | 1183 PARK AVENUE W | Mansfield | 44906 | 419-884-0001 |
| HOBBYTOWN USA | 8000 PLAZA BLVD. STE #9 | Mentor | 44060 | 440-946-5588 |
| HOBBYTOWN USA | 1574 SPRING MEADOWS DR. | Holland | 43528 | 419-867-9490 |
| HOBBYTOWN USA | 14785 PEARL RD. | Strongsville | 44136 | 440-846-1770 |
| HURRICANE HOBBIES | 8911 SOUTH OLD STATE RD. | Lewis Center | 43035 | 614-848-4386 |
| OMS RC RACING | 6166 STATE RT 139 | Lucasville | 45648 | 740-456-4423 |
| PHIL'S HOBBY SHOP | 422 CLINTON ST. | DeFiance | 43512 | 419-782-8020 |
| RIDER'S HOBBY SHOP | 5700 MONROE ST. | Sylvania | 43650 | 419-843-2931 |
| ROFFEE HOBBY SHOP | 254 WEST MAIN ST. | Byesville | 43723 | 740-685-8586 |
| SPRINGFIELD HOBBY SHOP | 43 S. FOUNTAIN | Springfield | 45502 | 937-322-1113 |
| STRONGSVILLE HOBBY SHOP | 13325 PROSPECT RD. | Strongsville | 44149 | 440-572-0430 |
| THE WORLD OF HOBBIES & GAMES | 11755 MOSTELLER RD. | Sharonville | 45241 | 888-299-0245 |
| THE HOBBY SHOP | 153 N. SPRINGBORO PIKE | Miamisburg | 45449 | 937-436-6161 |
| WINGS WHEELS & WAVES | 14 LINCOLN WAY E. | Massillon | 44646 | 330-830-7755 |

## OKLAHOMA

| | | | | |
|---|---|---|---|---|
| ACTION HOBBIES | 4955 S. MEMORIAL DR. | Tulsa | 74145 | 918-663-8998 |
| AERO SPORT & HOBBY | 17941 N.E. GLISAN | Portland | 97230 | 503-669-7665 |
| BARGAIN BIN | 1941 NE STEPHENS | Roseburg | 97470 | 541-673-8266 |
| COYOTE HOBBY | 1128 MAIN ST. | Oregon Ctiy | 97045 | 503-656-2172 |
| D's TOYS & HOBBIES | 926 NEW GREENWOOD AVE. #D | Bend | 97701 | 541-389-1330 |
| EUGENE TOY & HOBBY | 32 E. 11th AVE. | Eugene | 97401 | 541-344-2117 |
| FLORENCE COMPUTER & RC HOBBIES | 1780 W 20th | Florence | 97439 | 541-902-9221 |
| HOBBY HABIT | 411 FIR | La Grande | 97850 | 800-963-9602 |
| LEISURE HOBBIES | 982 LANCASTER DR. N.E. | Salem | 97301 | 503-588-9884 |
| R C ADDICTION | 830 S. FRONT ST. | Central Point | 97502 | 541-665-2700 |
| R/C PLUS HOBBIES | 1685 25th ST. | Salem | 97302 | 503-364-9188 |
| OREGON TRAIL HOBBIES & GIFTS | 61 NE 1st. AVE. | Ontario | 97914 | 541-889-3747 |
| TAMMIES HOBBIES | 12024 S.W. CANYON RD. | Beaverton | 97005 | 503-644-4535 |

TO HAVE YOUR SHOP LISTED HERE CALL: 1-800-767-0345. ATTENTION: YOU MUST SELL R/C CAR MAGAZINE TO BE IN THE SHOP LISTING.

# HOBBY SHOP LOCATOR

| | | | | |
|---|---|---|---|---|
| TRUMP'S HOBBIES | 2401 NW KINGS BLVD. | Corvallis | 97330 | 541-753-7540 |
| ULTIMATE HOBBIES | 1210 JANTZEN BEACH CTR | Portland | 97217 | 503-247-8194 |
| **OREGON** | | | | |
| ISLAND HOBBIES | 1224 JANZTEN BEACH CTR | Portland | 97217 | 503-285-3917 |
| **PENNSYLVANIA** | | | | |
| A.B. CHARLES & SON | 3213 W. LIBERTY AVE. | Pittsburgh | 15216 | 412-516-1615 |
| ACTION HOBBY | 8616 NEW FALLS RD. | Levittown | 19054 | 215-949-9750 |
| ADAM & EVES PET & HOBBY | 313 LATROBE 30 PLAZA | Latrobe | 15650 | 412-539-7130 |
| AIRWAYS | 520 AIRPORT RD. | Lititz | 17543 | 717-625-3661 |
| ALLIED HOBBIES | 114 EXTON SQUARE MALL | Exton | 19341 | 610-363-6988 |
| AMERICAN HOBBY CENTER | 2668 BRODHEAD RD. | Aliquippa | 15001 | 724-378-3930 |
| AMERICAN RIBBON | 827 B ANN ST. | Stroudsburg | 18360 | 570-421-7470 |
| CALMAN'S RC HOBBIES | RR 1 BOX 161 J | Monroeton | 18832 | 570-265-9208 |
| CRANBERRY HOBBY DEPOT | 20555 ROUTE 19 CRAN-MAR PLAZA | Cranberry Twnshp | 16066 | 724-776-3640 |
| HI POWER HOBBIES | 64 DUCHESS ST. | Reedsville | 17084 | 717-667-4629 |
| HOBBY EXPRESS INC. | 1713 ROUTE 228 #L 1 | Cranberry Twnshp | 16066 | 724-779-2000 |
| HOBBY CITY | 4094 WASHINGTON RD. | McMurray | 15317 | 734-942-2557 |
| HOBBYTOWN USA | 150 E. BALTIMORE PIKE | Springfield | 19064 | 610-544-7007 |
| HOBBYTOWN USA | 3100 ROBINSON LN. | Pittsburgh | 15205 | 412-788-1000 |
| HOBBYTOWN USA | 12F WINGCO LN. | Reading | 19605 | 610-916-4477 |
| HOBBYTOWN USA | 1502 WEST CHESTER PIKE | West Chester | 19382 | 610-696-9049 |
| HOBBYTOWN USA | 700 LeHIGH VALLY MALL | Whitehall | 18052 | 610-366-9960 |
| HOBBY HUT | 609 TROOPER RD. | Audubon | 19403 | 610-635-1062 |
| HOBBY UNIVERSE | 4427 WEST RIDGE RD. | Erie | 16506 | 811-424-6229 |
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**G & C Hobbies,** 1228 Hypoluxo Rd., 33462; (561) 547-3812
**Kissimmee R/C Racing,** Osceola Square Mall, 3831 West Vine St., Ste/ 60, Kissimmee, 34741; (407) 944-4913
**Means R/C Raceway,** 1550 Pondell Rd., North Ft. Myers, 33903; (941) 772-2251
**Newred Hobbies & Indoor Race Facility,** 609 N.W. 4th Ave. #C, Ocala, 34475; (352) 671-7302
**Ocala R/C Club,** 2612 N.E. 24th St., Ocala, 34478; (352) 369-1895, www.orccc.org
**PBG Motor Park,** 6351 Barbara St., Palm Beach Gardens, 33418; (561) 627-2608
**Pro Hobbies Speedway,** 715 N. Lake Pleasant Rd., Apopka, 33712; (407) 886-4615
**Sarasota RC Speedway,** 8475 Cooper Creek Blvd., University Park, 34201; (941) 358-7047
**Triple Nickle R/C Raceway,** 1/3 Mile South of HWY 60, on CO rd 555 Bartow, 33820; (863) 533-0539 (no info on amenities)

## GEORGIA

**Anthony's Victory Lane,** 129 East Hwy. 80, Pooler, 31322; (912) 748-0847
**Big Boy Toys Hobby Shop,** 5035 MT. Zion Parkway, Stockbridge, 30281; (770) 507-6288 www.bigboytoyshobbyshop.com
**Hobbytown Raceway,** 2301 Airport Thruway, Columbus, 31904; (706) 660-1763
**Loganville R/C Speedway,** 1441 Hwy. 81, Loganville, 30052; (770) 466-1408. www.bellsouthp-wp.net/r/c/rcspeedwayrchobbys@bellsouth.net
**McConnell Hobbies & Race World,** 232 Brewer Rd., Kingston, 30145; (706) 290-0345
**Stinger Speedway,** 3769 Maysville Rd., Commerce, 30529; (706) 335-9044
**Sugar Bowl Speedway,** 5272 Nelson Brogdon Blvd., Sugar Hill, 30518; (770) 945-6709
**R/C Toys For Boys Raceway,** 2220 Cobb Parkway N. Kennesaw 30152; (678) 797-0406 www.tfbraceway.com

# TRACK DIRECTORY

## CHAMPIONS WILL BE MADE...

### HAWAII

**Maui Racing Association,** 230 Hana Hwy., #11, Kahului, 96731; (808) 873-0376
**Team PRC Racing Club,** 176 Mamo St., Hilo, 96720; (808) 935-3561

### IDAHO

**Almosta Ranch R.C.'s,** Idaho's largest outdoor track 1732 Eldridge Ave. Twin Falls, 83301; (208) 733-8219, or (208) 733-1572
**Dirt Stuff Plus,** 5344 N. Yellowstone Hwy., Idaho Falls, 83401; (208) 522-7576
**Monster Hobbies,** 267 W. Hayden Ave., Hayden Lake, 83835; (866) 772-0422

### ILLINOIS

**AJ's,** 10211 Keslinger Rd., DeKalb, 60115, (815) 756-2772 www.ajsraceway.com
**Allen's RC Cars,** 8801 Buckhart Rd., Rochester (217) 498-7291
**CIRCR/Precisoin RC Hobbies,** 1917 2nd St. Pekin, 61554; (309) 347-0975
**Change Leisure Hours RC Raceway,** 820 Brian Dr. #B, Cresthill, 60435; (815) 722-1330
**Depot Hobby Raceway,** 180 S. Seminary St., Galesburg, 61401; (309) 342-9323
**Glitcher's RC Raceway,** 214 S. Lake of the Woods Rd., Mahomet, 61853; (217) 647-4740. www.glitchersrc.com
**Hobbytown Niles Drag & Raceway,** Oak Mill Mall, 7900 N. Milwaukee Ave. Niles, 60714; (847) 470-577 www.htuniles@aol.com
**Hobbytown Raceway,** 2103 N. Veterans Pkwy., Bloomington, 61701; (309) 664-4451
**Leisure Hours R/C Raceway,** 24121 W. Theodore, Bldg. 1, Plainfield, 60544; (815) 439-1477
**Mid America R/C Club,** S. Maple-Schnieder Park Brighton, 62012
**Monee R/C Raceway,** 26049 Ridgeland Ave., Monee, 60449; (708) 799-5597
**Outlaw R/C Speedway,** 1614 Broadway, Mattoon, 61938; (217) 234-6229
**Quad Cities Raceway,** 541 1st Ave., North Silvis, 61282; (309) 751-9663
**Rector's R/C Raceway,** RR3, Box 104, Albion, 62806; (618) 842-9379, (618) 446-3282
**RJD Toy's,** 1302 St. Rt. 10, Lincoln, 62656; (217) 732-4300
**SIRCAR Raceway,** 1200 N. Marion, Carbondale, 62901; (618) 549-5885
**Stanton Hobby Shop,** 4718 N. Milwaukee, Chicago, 60630; (773) 283-6446
**Rivervalley Raceway,** 200 N. Washington Av. Unit A, Bradley, 60915; (815) 802-0334
**Wep Raceway,** RR #2, Box 44, Lawrenceville, 62439

### INDIANA

**Bremen Racing,** 308 N. Bowen, Bremen, 46506; (574) 546-3807
**Finish Line Pets & Hobbies,** 1209 East St., Rd 2 LaPorte, 46350; (219) 326-0921
**GM Raceway,** 1651 W. Franklin St., Elkhart, 46516; (219) 293-1827
**Hardesty Raceway,** 11 East Plymouth St., Hamlet, 46530; (219) 867-8600
**Hobby Barn Raceway,** 1950 Springhill, Terre Haute, 47802; (812) 299-5773
**Hobbytown USA,** 5385 E. 82nd St., Indianapolis, 46250; (317) 845-4106
**P&T Hobbies & Raceway,** RR2 (Hwy. 60), Mitchell, 47446; (812) 849 6666 www.pnthobby@bigfoot.com, www.pnthobby@safeshopper.com
**Planet RC Raceway,** 4375 Sellers St. Lawrence; 46226; (317) 377-0690
**R/C World of Indiana,** 2246 West U.S. Hwy. 36, Lynn, 47355; (765) 874-2464
**Summit Area Radio Cars,** 7000 Red Haw Dr., Ft. Wayne, 46805; (219) 492-2271
**Custom Made Raceway,** 1600 Morningstar Ln. Decatur 46733 www.custommadehobbies.com (260) 724-3040 Toll Free: 866-875-8840

### IOWA

**American Hobby & Supply,** 2186 E. Kimberly Rd. Davenport, 52807; (563) 441-9996
**Extreme RC,** 202 Gilbert Rd., Evansdale, 50707; (319) 234-6000
**Hobby Haven,** 2575 86th St. Urbandale, 50322; (515) 276-8785
**HobbyTown USA,** 2737 16th Ave. SW, Cedar Rapids, 52404; (319) 364-3289
**Outback Hobbies,** 2014 South Saint Aubin St. Sioux City, IA 51106, (712) 276-7079 or (712) 253-0087
**Radio Control Raceway Park,** 2100 First Ave. N., Ft. Dodge, 50501; (515) 576-3780
**Riverfront Speedway,** adjacent to Sunkist Meadows Golf Course, FT. Dodge, (515) 576-3780
**Wild Bill's Raceway,** 901 W. Jones, Knoxville, 50138; (641) 842-5973

### KANSAS

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

### KENTUCKY

**Somerset Raceway,** 188 Sycamore Dr., Bronston, 42518; (606) 561-4522 Halcomb@hyperaction.net
**Coyete Hobbies,** 218 N. Martin Luther King Blvd. Lexington, 40507; Danny Puchalsk: (859) 253-9330, www.coyetehobbies.com
**Radio Control Wheels or Water,** 1308 W. Shelby St. Suite 2 Falmouth 41040; (859) 654-1700 www.rcwow.com
**Trio Hobbies & RC,** 216 Redmar Plaza, Radcliff, 40160; (270) 351-7547

### LOUISIANA

**Apex R/C Raceway,** 9610 S Lebleu Rd. Lake Charles, 70607; (337) 598-4502
**Baton Rouge Velodrome,** 7122 Perkins Rd., Baton Rouge, 70815; (504) 665-5616

### MAINE

**Clay Bowl R/C Hobbies,** P.O. Box 61, Greene, 04236; (207) 946-5003
**R/C Speedway & Hobbies,** 87 Main St., Fairfield, 04937; (207) 453-4588

### MARYLAND

**Countryside Raceway,** 406 Pamela Rd., APt. C, Glen Burnie, 21061; (410) 761-6196
**HobbyTown USA,** 6714d Ritchie Hwy. Glen Burnie, 21061; (410) 590-4950
**The Track,** 16806 Oakmont Ave., Gaithersburg, 20877; (301) 417-9630

### MASSACHUSETTS

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

### MICHIGAN

**Beyond Extreme Racing,** 36159 Plymouth Rd., Livonia, 48150; (734) 513-7641 www.beyondextremeracing.com
**Down River Radio Controlled Racers (D.R. R/C),** 22789 Nortline Rd, Taylor, 48180; (734) 287-7405 www.downriverracing.com
**Dirt Burner Racing,** 3295 Haggerty Rd. Commerce, 48390; (248) 926-1140
**Hobbytown USA,** 2252 S. Main St., Ann Arbor, 48103; (734) 996-2444
**JT Superspeedway,** Golden Ave., Battle Creek, 49015; (616) 965-0116
**Larry's Performance R/C's,** 42246 Mound Rd., Sterling Heights, 48314; (586) 997-4840
**Lazer RC Speedway,** 2858 N. Wilmoth Hwy., Adrian, 49221; (517) 263-2806
**Motor City Speedway,** 16025 23 Mile Rd. Macomb Twp., 48042; (810) 677-2311
**N.M.R.C.C. Raceway,** Hobby Toy, Main St., Gaylord, 49735; (517) 732-3963
**R&L Hobbies & Racing,** 9782 Portage Rd., Portage, 49002; (616) 323-3686
**Sandhill off Road R/C,** Wood St at Vincent St. Saginaw, MI 48602,
**Village Hobbies,** 195 N. Elm St. Hesperia, 4942; (231) 854-1374

### MINNESOTA

**Elbow Creek R/C Racepark,** 8892 Townline Rd, P.O. Box 313, Forbes, 55738; (218) 744-5234 www.paintwerksracing.com
**Ray's Raceway Park,** 105 3rd Ave. NE., Glenwood, 56334; (320) 634-5246
**R/C Racing World,** 235 Main AVe., North, Harmony 55939; (507) 886-5931
**Southside Speedway,** 2241 Marion RD., SE Rochester, 55904; (507) 281-3233
**Twin Cities Hobby & Raceway,** 7577 Brooklyn Blvd. Brooklyn Park 55443; (763) 569-5069



**CEN RACING**
1800 E. Miraloma Ave., #F,
Placentia, CA 92870
(714) 792-1923 phone
(714) 792-1968 fax

www.cenracing.com

## MISSISSIPPI

**Patriot Racing,** 5531 Fox Meadow Dr., Meridian, 39307; (601) 483-7000
**Small Cars Unlimited,** 820 Cooper Rd., Jackson, 398212; (601) 372-FAST

## MISSOURI

**B&L Hobbies & Raceway,** 2800 Anchor Dr., Park Hills, 63061; (573) 431-9444
**Fastlane Raceways & Hobbies,** 2850 F West 40 Highway, Blue Springs 64015 (816) 220-0100 www.fastlaneshobbies.com
**Novelty R/C Raceways,** 6th & Main Novelty, 63460; (660) 739-4530
**St. Louis Dirt Burners,** Marshal Road, Kirkwood, (314) 831-2194
**St. Genevieve R/C Park,** #1 Matthews Dr., St. Genevieve, 63670; (573-883-3758
**Real Blue Vue Speedway,** 12019 E. 47th St., Kansas City, 64133; (816) 358-0238
**Real R/C Raceway,** 24204 State Rte. 58, Pleasant Hill, 64080
**R/C Race Place,** 3500 E. Kearney St., Springfield, 65803; (417) 865-5545
**R/C Motor Heads,**
268 Harrell Rd., Troy, 63379; (636) 236-2693 www.rcmotorheads.com

## NEBRASKA

**Goodyear Speedway,** 4021 North 56th, Lincoln, 68510; (402) 464- 5172
**Hobbytown USA Raceway,** 220 N 66th Lincoln, 68505; (402) 434-5056 www.eastparkracing.com
**Hobbytown USA Raceway,** 1st & Cornhusker Lincoln, 68505; (402) 434-5057 www.eastparkracing.com
**OTWG Carpet Raceway,** 55129 849th Rd., Norfolk 68701; (402) 644-7922

## NEVADA

**Dansey's Indoor R/C Hobbies,** 741 N. Nellis Las Vegas, 89110; (702) 453-RACE
**Outer Limits R/C Raceway,** 2365 Iron Ave. Sandy Valley, 89019; (702) 723-5243

## NEW MEXICO

**Big Boys Toys,** 1735 Juan Tabo N.E. Albq., 87112; (505) 298-1023

## NEW YORK

**American Hobbies,** 913 Portion Rd. Lake Ronkonkoma, 11779; (631) 736-6606
**Brownies Pro and Sport Hobbies,** 124 Bennett St. Staten Island, 10302; (718) 727-2194
**Racing City Hobbies R/C Raceway,** Midtown Center- 110 Main St. South Glens Falls, 12803 (518) 792-7272 or (888) 728-7273 www.racingcity.com
**Rampage R/C,** 782 Rt. 9G, Hyde Park, 11204; (845) 229-1379
**The Hobby Shop,** 119 Mt. Vernon Ave Mt. Vernon, 10550; (914) 668-3022
**MW Hobby & Craft,** 12019 E. Main St., Wolcott, 14590; (315) 594-2604 www.mwhobby.com

## NEW JERSEY

**Hobby Workshop,** 510 West Kings Hwy. Mt Ephraim, 08059; (856) 931-2400
**Alpine Lounge,** Blackhorse Pike, Turnersville
**Wide World of Hobbies,** 974 Teaneck Rd. Teaneck, 07666; (201) 862-9393 www.wideworldofhobbies.com
**Xtreme RC,** 846 Kinderkamack Rd. River Edge, 07661; (201) 599-0066 www.MyXtremeRc.com

## NEW HAMPSHIRE

**106 Race Park,** 743 Clough Mill Rd. Pembroke 03275, (603) 224-7223 www.106racepark.com

## NORTH CAROLINA

**Carolina Outlaw R/C Racing,** 411 Ruritain Park Rd. Stony Point, 28678; (704) 585-2996
**Inside Line Performance Raceway** 5678 US HWY 70 East Goldsboro, 27534; (919) 759-0095

## NORTH DAKOTA

**Wheels Wings-N-Hobbies,** 1800 40th Ave. S.E., Mandan, 58554; (701) 667-7200

## OKLAHOMA

**Action RC Speedway,** 3616 SE 59 Oklahoma City, 73135; (405) 670-7770 www.actionrc.com
**Enid R/C Speedway,** 1831 S. Van Buren, Enid, 73703; (580) 554-9400
**R/C RacePlace,** 3000 N. I-35 Service Rd., Oklahoma City, 73111; (405) 424-7777 www.rcraceplace.com

## OHIO

**Corcar-Low's,** 1675 Georgesville Square Dr. (614) 870-7159, Columbus 43228; www.corecar.com Bill Stevenson
**CRCRC, Franklin City Fairgrounds,** 4100 Columbia St., Hilliard, 43026 www.crcrc.com (614) 262-4883
**SHS Raceway Springfield Hobby Shop,** 43 South Fountain, Springfield, 45502; (937) 322-1113

## OREGON

**RC Speedcenter,** 2810 N. Pacific Hwy. Medford, 97501; (541) 779-8298 Betty Skelton www.rcaddiction.net

## PENNSLYVANIA

**R/C Outfitters Raceway,** 519 Broadway, Hanover 17331; (717) 633-9490 www.rcohobbies.com
**L.A. Speedway,** 1162 Lake Arie Hwy. Lake Ariel, PA 18436 (570) 698-7798
**Little Plum RC Hobbies,** 333 Little Plum Run Rd. Lock Haven, 17745; (570) 769-1984
**Marshall's Hilltop Hobbies,** RR4 Box 4265 PA Route 652 Honesdale 18431; (570) 729-7458
**Moore Raceway,** 810 Moore Rd. Washington, 15301; (724) 228-7291 www.mooreraceway@hotmail.com
**Steel City Hobbies,** 1155 Washington Pike # 38, Bridgeville, 15017; (412) 220-7515
**Wiley's R/C Speedway & Hobby Shop,** 560 East Camping Area Rd. Wellsville, 17365; (717) 292-5856 Hobby Shop, www.wileys-rc-speedway.4t.com, E-mail wiley_7@msn.com

## RHODE ISLAND

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

## SOUTH CAROLINA

**Carolina R/C Speedway,** 4148 Calhoun Memorial Hwy., Easley, 29640; Craig Prahl, (864) 295-1209; www.carolinarc.com
**Bandit's R/C Raceway Park,** 273 Auction Ave., Darlington, 29532; (843) 393-3333 www.banditshobbies.com
**Hwy 292 Raceway,** Hwy 292, Inman, 29349; (864) 266-1988 www.srcra.com
**Myrtle Beach R/C Park,** 5976 Grace Lane, Myrtle Beach, 29577; Brad Smith, (843) 234-0096
**The Grove Racing Center,** 939 S. Anderson Rd., Rockhill, 29730; Mike Durham or Don Faris, (803) 327-4121
**ORA Atomic Racing,** 373 Boyd Pond Rd., Aiken, 29803; Bill Felak, (706) 855-0846 or (803) 642-0314
**R/C Racing Connection Speedway** 4375 Juniper Bay Rd. Conway, 29527; (843) 397-0124
**Upstate Hobbies & R/C Racing,** 101 Chesnee Hwy. Extension, Spartanburg, 29303; (864) 528-0828

## TENNESSEE

**Cookeville Raceway & Hobbies,** 1641 E.Spring St., Cookeville, 38501; (931) 526-6017
**HobbyTown USA,** 206 B Cool Springs Blvd. # 205, Franklin, 37067; Bobby Mills, (615) 771-7441
**W.O.W. Raceway,** 59 Luray Rd., Beech Bluff, 38313; Kelly Bean, (901) 427-7874; windix60@pipeline.com
**XS Speed,** 5237 Hwy. 126, Blountville, 37617; (423) 323-1513
**HobbyTown USA,** 8901 Town & Country Circle Knoxville, 37923; (865) 690-6423
**Intense Raceway,** 2143 Payne Ave. Alcoa, 37701; (865) 379-8600 www.intenseraceway.com
**T N T Hobby,** 3550 Hwy 75 Kingsport, 37663; (423) 279-7344
**Maryville RC Raceway,** 3521 Calderwood Hwy. Maryville, 37801; (865) 856-6919
**Memphis Tennessee Model Railroad & Hobby,** 1266 Sycamore View Rd. #101, Memphis, 38134; (901-384-6500
**Model Railroad & Hobby,** 1266 Sycamore View Rd., Memphis, 38134; (901) 384-6500

# TRACK DIRECTORY

## CHAMPIONS WILL BE MADE...

### TEXAS

**Al's Hobbies,** 7121 HWY. 90 W. Suite San Antonio, 78222; (210) 645-1050
**215 Speedway**, 1814 County Rd. 215, Abilene, 79602; Clyde Gardner (915) 673-2351
**Big Mike's R/C Raceway,** 1405 W. Cotton St. Longview, 75604; (903) 297-7814
**Discount Hobbies,** 1722A West Anderson Loop, Austin, 78757; Tony Bermudex, (512) 458-2324
**Drycreek Raceway,** 2518 I 30-W Greenville, 75402;Micky Alphin, 903-527-5381, web.pulse.net/drycreek e-mail: dycreek@pulse.net
**Fastrak Hobbies,** 13318 Wallisville Rd. Houston, 77049; (713) 330-9500
**Hobbycraft Speedway,** 819 N. Main St., Corsicana, 75110; Keith Hoffman (903) 872-6761
**HobbyTown USA,** 1201 Austin HWY. #102, San Antonio, 78209; Joe Sena, or Clark Baisdon, (210) 829-8697
**Indy R/C World,** 2020 Saturn Rd., Garland, 75041; (972) 271-4844
**Issac's Race Track,** 18177 Gulf Frwy., Webster, 77598; Issac Ben-Ezra, (281) 488-8697
**J.S. Bodies Hobby Shop & Raceway,** 980 S. 4th St. Beaumont, 77701; (409) 813-1434
**Lunatic Hobbies,** 1631 Hwy. 6 South Houston 77077; (281) 496-1200 www.lunatichobbies.com
**Reflex R/C,**1106C Witte Rd., Houston, 77055; Jorge Tabush or Terry Schmid, (713) 464-4458
**Rio Grande Valley Gears R/C Track,** 400 Wichita, Harlingen, 78550; (956) 686-6521 www.oneallspecialtyhobbies.com
**Texas Speedway,** 6703 Chimney Rock Bellaire, 77401; (713) 661-7137 www.mmhobby.com
**T & T R/C Cars,** 3420 Ave. K Suite 154, Plano, 75074; (972) 633-2470, Joe Sullivan, San Antonio, 78222; (210) 645-1050
**Speed Racer's Hobby,** 816 South Sherman St. Richardson, 75081; (972) 437-1779

### UTAH

**Spooky's R/C Raceway,** 362 South 671 West Pleasant Grove, 84062; (801) 796-0992

### VIRGINIA

**Star/Car Raceway, Debbie's R/C World,** 2200 Commerce Parkway, Virginia Beach, 23454; (757) 340-6681
**Dirtona,** 515 Front Ave. Salem, VA 24153; Steve Cooper (540) 387-3044
**Linville Hobbies Raceway,** 7065 Wengers Mill Rd. Linville, 22834; (540) 833-2222 www.linvillehobbies.com
**Roanoke Race Club** 5080 Stable Rd. Roanoke, 24014; (540) 989-4529 www.roanokeraceclub.com
**RC Pro Racing,** 7106 Hayes Shopping Ct., Hayes, (804) 642-1114
**Shamroc Raceway,** 106 Cheviot Pl., Stephens City, 22655; Scott Janow, (540) 869-3551

### WASHINGTON

**Atomic Hobby,** 1175 NW Gilman Blvd. #B3, Issaquah, 98027; (425) 391-8890
**Alfie's,** 108 South K St., Aberdeen, 98520; (360) 533-6638
**A-Main Raceway,** 14011 NE 3rd Ct., Vancouver, 98685; Monty Coleman, (360) 571-8404
**Burien Toyota R/C,** 15025 1st Ave. South, Seattle, 98148; Ray Meek, (800) 654-6456
**Cedardale Raceway,** 16733 Cedardale Rd., Mount Vernon, 98273; Joe Madonia, (360) 659-0072; getchell@halcyon.com
**Four Season R/C Racing,** 2941 Sleater Kinney Rd. NE Olympia, 98506; Gary Brown (360) 491-2430
**Hobbytown USA,** 9324 North Division., Spokane, 99218; (509) 465-3267
**HobbyTown USA Lynnwood,** 18500 33rd Ave W Lynnwood, 98037; (425) 774-0819
**Mike's R/C World,** 2107 Iron ST., Bellingham, 98225; (360) 733-3662
**Northwest RC Hobbies & Indoor Raceway,** 5727 E. Sprague Ave., Spokane, 99212; (509) 535-5062
**Performance R/C,** 320 East Fairhaven Ave., Burlington, 98233; (360) 755-9464
**Rain City Raceway,** 2006 196th St. S.W #119, Lynnwood, 98036; Debbie Cartwright (425) 776-8241 www.raincityraceway.com
**Redmond Hobbies,** 16260 Redmond Way Redmond, 98052; (425) 885-3639 www.redmondhobbies.com
**Tacoma R/C Raceway,** 4802 S. Adams St., Tacoma, 98409; Scott Brown (253) 565-1935

### WEST VIRGINIA

**Burr-Fab Raceway,** 90 Davis St., West Union, 26456; Mark Travis, (304) 873-2487
**Fulton's R/C Raceway,** 3301 Chapline St., Wheeling, 26003; James Fulton (304) 233-5355
**WVRCA R/C Club,** 142 West Main, Bridgeport, 26330; D.W. Weed

### WISCONSIN

**ABC R/C Inc.,** 244 West Main St. Waukesha, 53186; (262) 542-1245 www.abcrchobby.com
**Hobbytown USA,** 2075 South Koeller, Oshkosh, 54901; (920) 426-1840
**Johns Hobbies,** 54 N. Main St., Hartford, 53027; (262) 673-7454 www.explorewisconsin.com
**Pro-Star Racing,** 726 Pine St., Green Bay, 54301; Chuck, (920) 494-1233
**Tom's Hobbies & Crafts,** 442 S. Albert Ave., Unit B Reedsburg, 53959; (608) 524-1569
**S&N's Trackside Hobbies and Raceway,** 6405 N. Green Bay Ave., Milwaukee, 53209; Scott Ernst, (414) 351-1910
**Road Rage Hobby Speedway,** 1538 Western Aven., Green Bay, 54303; (920) 405-5282 e-mail: www.roa dragehobbyspeedway.com

### WYOMING

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

### CANADA

**Canada,** GPMRA (Grande Prairie Model Racers Association) Grande Prairie, Alberta 450 De LaGrande Ligne St. Paul D' Abbotsford Quebec, (450) 776-3730
**Circuit Teleguide Off Rd. Granby,** 450 De LaGrande Ligne St. Paul D' Abbotsford Quebec, (450) 776-3730
**Mid-Canada R/C Auto Racing,** Winnipeg, Manitoba, (204) 444-4230 www.midcanada rcautoracing.com; email: midcanadarc@mts.net
**Nitro Extreme R/C Park,** Blackfoot MX PK Calgary, Alberta, www.nitroextreme.com, e-mail: information@nitroextreme.com
**R/C Speedway Niagra**, 253 East West Line, Niagra on the Lake, Ont, Canada Los 1JO

### FOREIGN

**Kuwait - Udairi Speedway,** Camp Udairi, Kawait, email: irispeedway@yahoo.com
**Australia-Bunbury On Road Radio Control Car Club,** Hay Park, Bunbury Western Australia, Phone Norbert on 9725 8177 home.iprimus.com.au/ jlindroth/borrccc/main page.html

## ATTENTION TRACK OWNERS!

**Have your track added to our list in R/C CAR Track Directory. E-mail: brianm@hi-torque.com, or mail to:**
**Hi-Torque Publishing**
**25233 Anza Dr.**
**Valencia, CA 91355**

**Track Name:** _____

**Address:** _____

_____

_____

**Phone:** _____

**Website:** _____

## AYK RACING BOOST

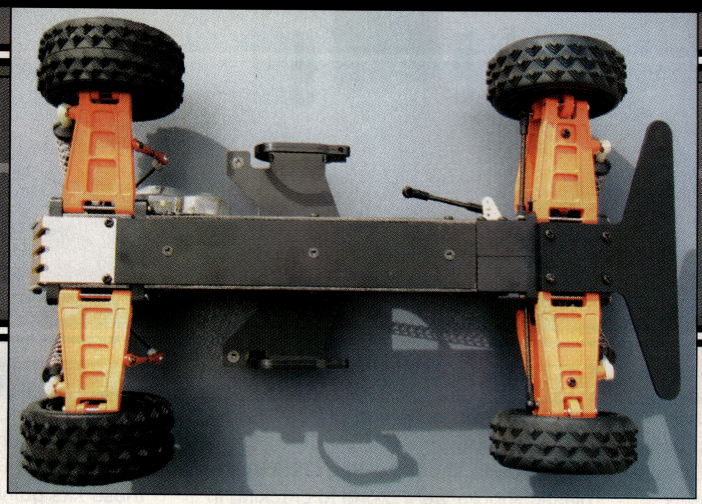
In the early months of 1989, AYK unleashed what was to be their last racing buggy on the market. The Boost was a culmination of all that AYK learned from its racing experience with cars such as the Viper, Radiant and lastly, the Maverick. The Boost was essentially a hopped up Radiant with some rather "colorful" additions. You could always tell there was a Boost on the track because all of its suspension arms and pivots were bright orange! This actually had a lot to do with the fact that Race Prep, the hop-up company associated with AYK, had a big role in the AYK family in the States—and hence the world. Sadly there was not a lot success to be had for the Boost, and to be honest, AYK was probably "flogging a dead horse" when it came to this chassis and drivetrain layout. With the major players like Kyosho, Yokomo, and Schumacher all developing and racing belt-driven cars with superior suspension dynamics, AYK was being hard pressed to remain competitive. The Boost still had some very nice features, and the car was typically AYK in that it was over-designed and engineered. These are the traits for which AYK is remembered most fondly.








A lightweight dual-bellcrank steering system worked within the confines of the Boost's chain-drive setup.





BY DARRYN JOHNSON
www.darrynsretrorc.rtox.com

## BOOST: NO TURBO NEEDED

If there is a strong positive note after my somewhat negative introduction, it is that the Boost was very easily the best handling and most efficient chain-drive car on the track at the time. The combination of the clean, open, free spinning design of the drivetrain, coupled with finely tuned suspension—which had been developed over several previous models—made the Boost a sweet car to drive.

Here are some of the features of the Boost:

- Limited slip ball differentials, front and rear
- Efficient twin-chain drivetrain
- Adjustable chain tensioner
- Built in servo-saver
- Double-wishbone front suspension
- Large oil-filled dampers
- Adjustable ride height
- Adjustable camber

Another interesting option was for a two-speed automatic gearbox! This was a "legacy" item from the previous model, the Maverick. While two-speed transmissions made the cars quite quick, most countries soon banned their use in sanctioned competition.

In truth, the Boost actually remained very competitive until cars such as the Optima Mid, Schumacher Cat and Yokomo Super Dog Fighter took over with their more efficient drivetrains and more effective suspension geometry. The Boost's rough track handling was more than acceptable for most tracks. The suspension's tunability was excellent.

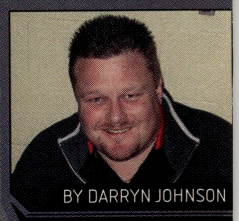
One design flaw, however, was the fact that the front suspension was not adjustable for camber. This omission at this stage of intense competition between the top manufacturers was disappointing to say the very least. When driving the Boost, the car felt very much "alive," as the chassis was extremely rigid, giving the suspension the chance to work rather than relying on chassis flex like some of the cars at the time.

## CONCLUSION

Most of you will think that I have been a little critical of the Boost, however I always try to be honest in my articles and this one is no exception. The Boost comes from a time where things were getting EXTREMELY competitive in the off-road world. Four-wheel-drive was by far the most popular class at that time. The Boost lacked the prowess to tackle its opposition head-on in this super competitive environment. Maybe it was poor timing on AYK's part, or just bad management in the rush to get another car on the market. To be fair, as mentioned above, the Boost was indeed a fine handling and performing car. The reliability of all AYK cars was to be commended, and the



**Below: Special "Race Prep" orange suspension parts and FRP chassis plates differentiated the Boost from previous AYK 4WD cars.**



BY DARRYN JOHNSON
www.darrynsretrorc.com

## COLLECTIBLE QUOTIENT

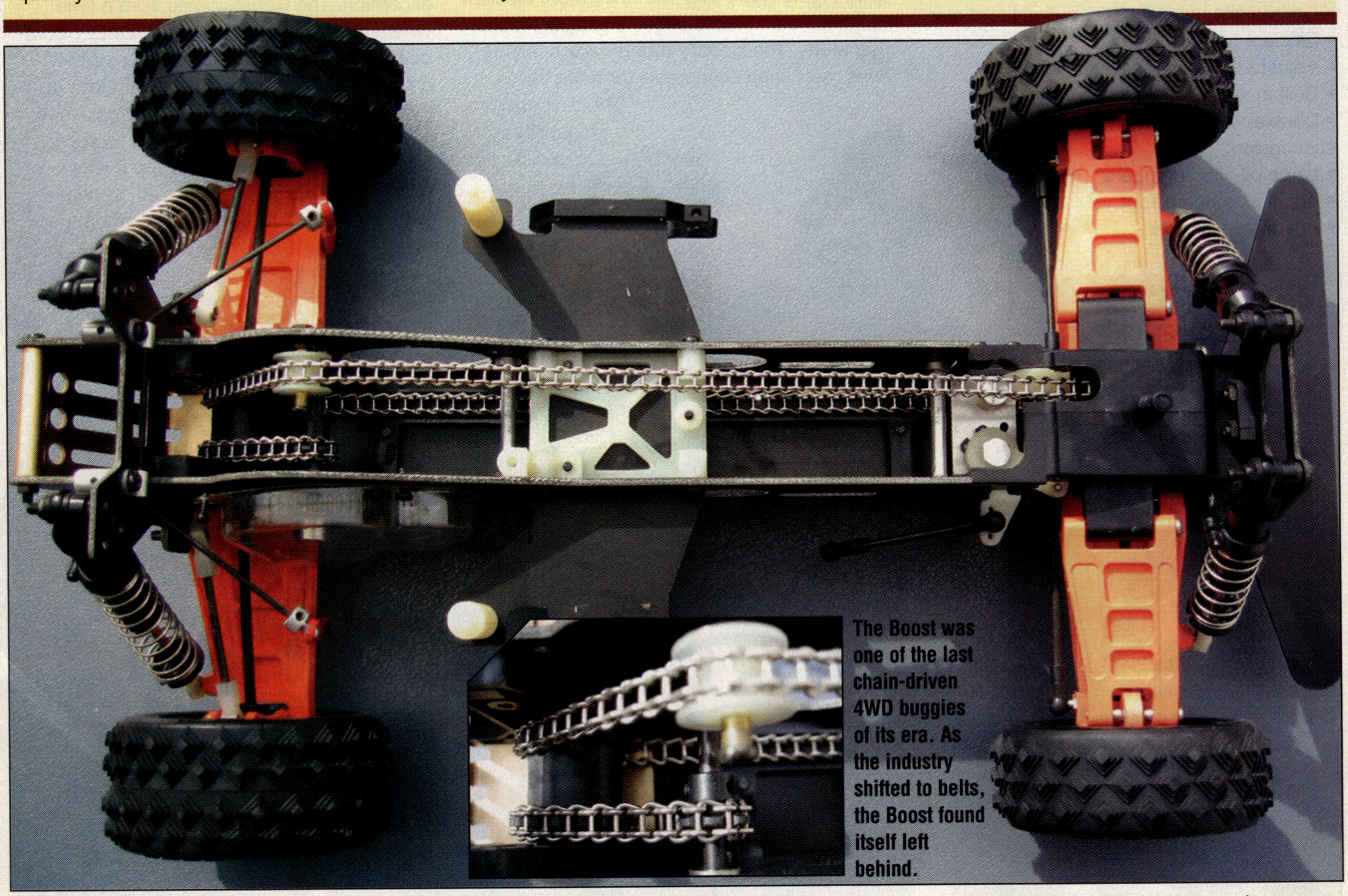
n **WHAT TO LOOK FOR**—The hardest thing to find as far as the AYK Boost goes is actually the complete car itself. It is quite rare indeed to find one on auction; only recently have I seen two come up in the space of two months.

Weak points on the Boost were as follows:

- **Front shock towers**—Look for damage around the bulkhead mounts.
- **Worn drive sprockets**—The open design was indeed free as far as friction was concerned, but a lot of dirt and debris soon made parts wear rapidly if not frequently maintained.
- **Worn diff balls and plates**—Same reason as above!
- **Broken shock bodies and caps**—the plastic shocks were prone to cracking in the event of a heavy impact.

Those were the major points of interest in the weak points of the Boost. As always, the body is going to be incredibly difficult to locate, as are things such as genuine orange suspension components and fiberglass side plates (the Radiant and AYK buggies had alloy side plates).

n **WHAT IT'S WORTH**—This one is easy for once! Just recently an individual on eBay sold two NIB Boost kits for just on the $650 mark. In my opinion this is actually quite a good price. On the private collector market I have seen and heard of these kits going for well over the $1000 mark. As for the cost on a new-built or used example: That same old rule applies—only pay what it is worth to you, not what pressure from your "peers" or a Website might say. I would expect to see perfect new-built examples like mine (shown in the photos) to sell for at least $500. For used examples, I have given you fair warning: Parts are almost nonexistent for this car, so if you find one used, pray that it is all complete.



**The Boost was one of the last chain-driven 4WD buggies of its era. As the industry shifted to belts, the Boost found itself left behind.**

Boost was certainly no exception. The car had the looks, performance and value to keep up—but that is all it could do. AYK's very last car was not one covered in victory and glory. The AYK company name slid slowly and quietly into the history books much like the Boost slid down the time sheets. It is perhaps for this reason that I love the car so much. AYK tried to make a car for the masses that was simple, fast and competitive. They succeeded, but were two years too late. AYK's staff were engineers to the end, as the car has tremendous technical and engineering merit. The design is one that will remain forever in my list of favorite designs. Love it or hate it, the Boost is one for any true racecar enthusiast's shelf.

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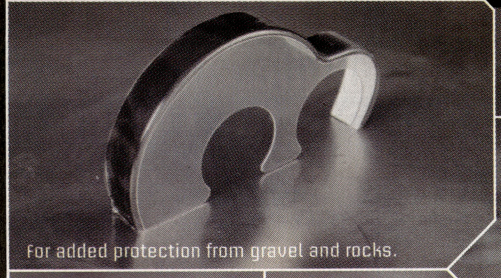

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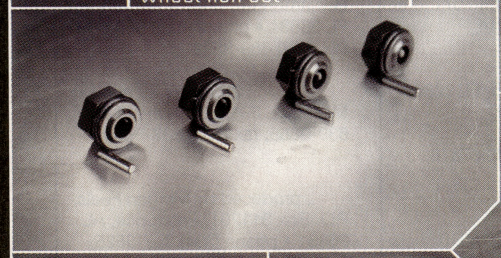

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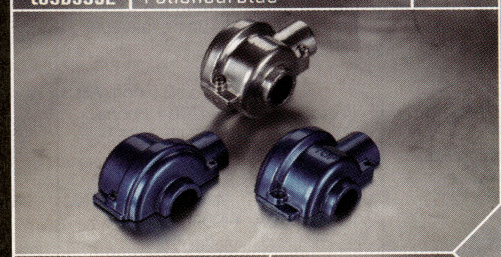

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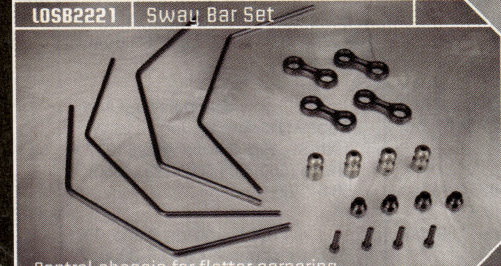

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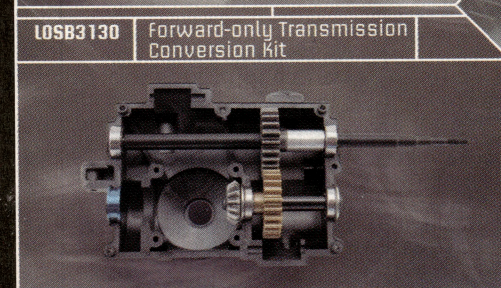

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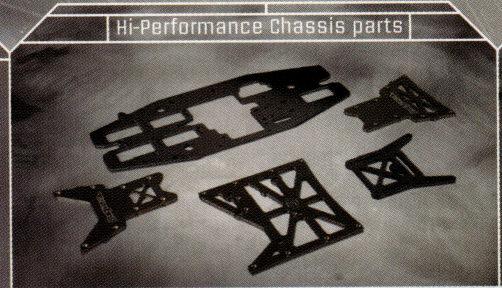

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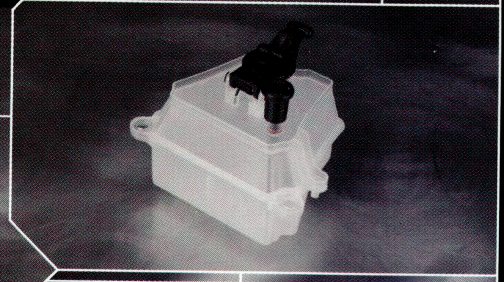

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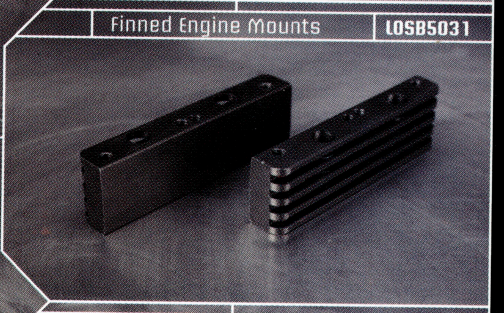

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