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pg. 202

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LAS VEGAS

2006 International Indoor Champs

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Mod TC Rubber **Paul Lemieux** TQ **Mazda6**
19T TC Foam **Bobby Flack** TQ/1st **DNA1**
Stock TC Foam **Travis Schreven** TQ/1st **DNA1**
Stock TC Rubber **Jason Ertrachter** 1st **Mazda6**
Mod 12th **Mike Dumas** TQ/1st **Speed12**
Stock 12th **Jeff Cuffs** 1st **Speed12 B**

Mod TC Foam **Mike Blackstock** 1st **DNA1**
Mod TC Rubber **Atsushi Hara** 1st **Mazda6**
19T TC Rubber **Weylin Rose** TQ/1st **Mazda6**



DNA1

190mm TC Body, Part #1486-00



#1465-00 (190mm); #1465-01 (190mm Light); #1466-00 (200mm)



#1479-00 (190mm); #1479-01 (190mm Light)

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CLEVELAND

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Mod TC **Paul Lemieux** TQ/1st **DNA**[1]
Masters TC **Eli Ezrow** TQ/1st **DNA**[1]
Mod 12th **Jon Orr** TQ **Speed12**
19T 12th **Sean Cochran** 1st **Speed12**

19T TC **Paul Lemieux** TQ/1st **DNA**[1]
Masters **12th Eli Ezrow** TQ/1st **DNA**[1]
Mod 12th **Barry Baker** 1st **Speed12**
19T 12th **Josh Cyrul** 1st **Speed12**





speed12
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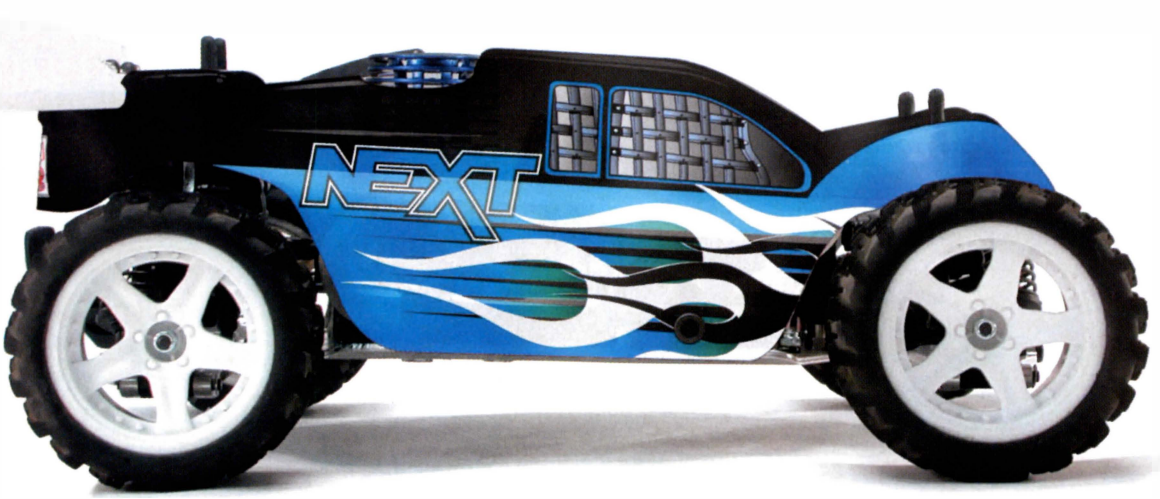
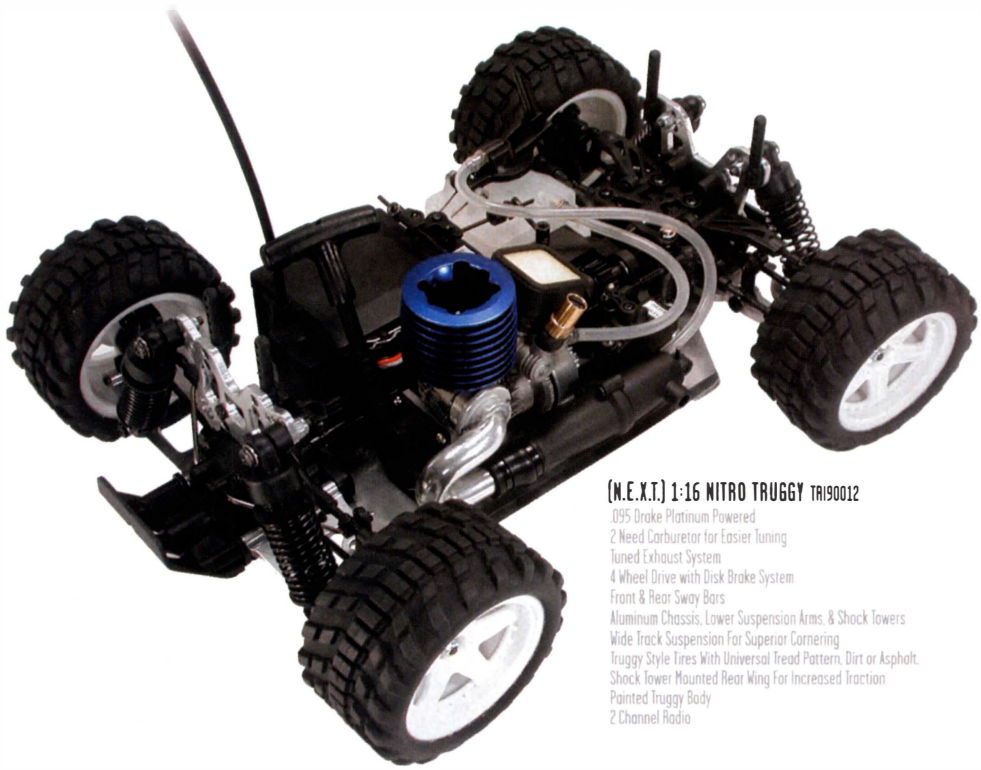


whats next...

COMING SOON



(N.E.X.T.) 1:16 NITRO TRUGGY TRI90012

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Look it's you!

OTHER STUFF IN THIS ISSUE:

March–what better time of year. Not because it's Derek's birthday, (the 26th so make sure you send gifts early) but because it's almost spring. We're getting ready to wrap up the indoor season and get back outside. We're continuing our Filipino trend this month with the professor. Unlike our photographer who just became a citizen (we still pay him illegal wages) she is legal and looks very good in blue boots. Our sack is bigger this month, but it's full of Mad Libs that you guys sent in. It shows how much people love our magazine, since they took the time to type the entire thing out and send it in.

Also for those who enjoy the politics of RC, we just want you to know that other magazines think you only read our magazine because we use "sleazy humor" and have "scantily clad models." Whatever the reason, more of you still enjoy our magazine because we aren't boring and pretending to be better. The only selling point you get is slander tactic on other magazines? Well, at least they have templates and write in the present tense, because THAT sells magazines (hey that was present tense!). Next month we'll be in third person, XTREME said it's better.

ON THE COVER:

HPI's new Wheely King reaching for the sky. 10.6 MPH was never so much fun.

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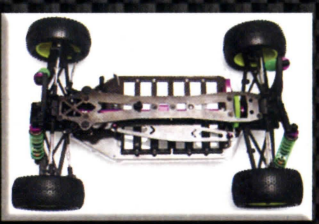
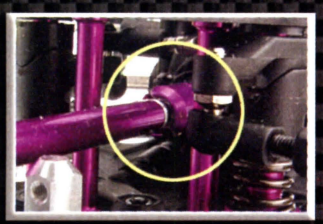
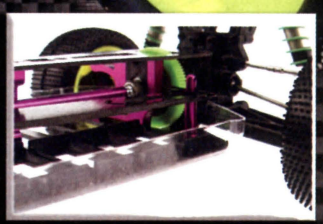


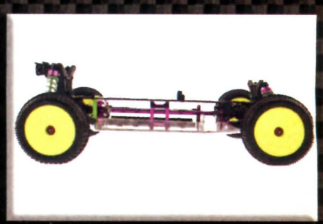
Various Battery and Motor Configurations



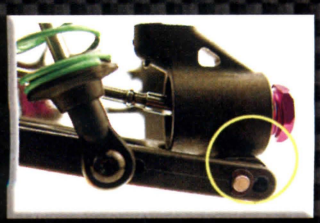
One Way on Center Shaft For Superb Cornering



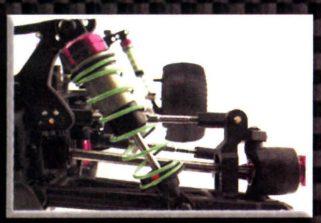
Shaft / Gear Drive Transmission equals Ultimate Efficiency



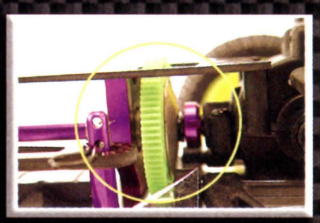
Carbon Fiber Chassis and Hard Suspension Material



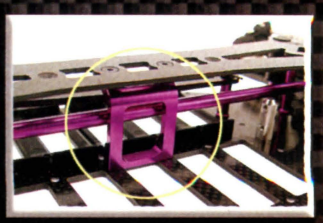
Multi-Length Pivot For Short or Long Arm Suspension



Teflon Coated Shocks With Shaft Wipers and Adjustable Bladders



Six Included Spur Gears With Easily Adjustable Dual Padded Slipper



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We're still the magazine everyone wants to be. It hurts, I know.

Xtreme RC Cars magazine

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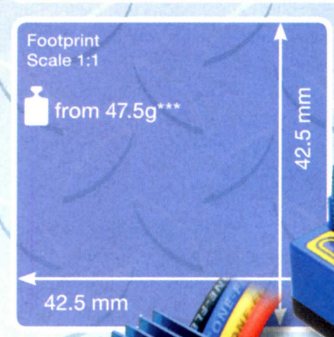

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Order No.	**LRP83010**	**LRP83060**	**LRP8320**	**LRP8325**	**LRP8337**
Size	25.6 x 25.6 mm	25.6 x 25.6 mm	42.5 x 42.5 mm	42.5 x 42.5 mm	42.5 x 42.5 mm
Weight*	19.0g***	19.0g***	47.5 g	51.0 g	51.0 g
Rated Current**	60 A	75A	120 A	180 A	225 A
Rec. motor limit**	over 18 turns	over 15 turns	over 13 turns	over 10 turns	no motor limit
Fail Safe	yes	yes	yes	yes	yes
Set-up procedure	Automatic	Automatic	Automatic	Automatic	Automatic
Suitable receiver	Synth./Crystal	Synth./Crystal	Synth./Crystal	Synth./Crystal	Synth./Crystal
Waterproof	yes	yes	-	-	-

*Transistors rating at 25°C ** at 7.2V ***weight excl. wires

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DON'T MAKE ME BEAT YOU WITH A 6-CELL!!!

RC racing is a small percentage of the overall market, but like any motorsport, racing helps shape the direction of many things. One must understand, however, that what may be "good" for racing may not be good for the overall RC population. I touched on this subject before[1], but after many discussions with manufacturers, and more and more talk about it on the forums, I feel it's important enough to talk about again.

On our website, we have a section for "polls," and one of the things I asked was, "What do you feel is holding back RC from going more mainstream?" The answer was an interesting one. Considering that only about 15% of RC'ers race, even the ones who didn't race felt that a lack of organization was holding us back. Of course, there is no concrete definition of organization, nor is there a real clear answer as to what it includes, but when something like this comes up that makes us look like a less-than-unified industry, I get upset[2].

Several sanctioning bodies for Asia and Europe have switched touring car racing to 4/5-cell in an attempt to "help" racing[3]. The reason for this action varies, according to the person with whom you speak. One person claims that slowing down cars is good. Another says the speeds will be the same but the equipment will survive more. And still others even say it will be cheaper. But nobody can really explain why this is a good idea, or can show some data to prove it.

I return to that word again—organization. If you look up the term, you'll find a few definitions, but the general theme is the same: a group sharing a structure. When a rule comes about that changes the status quo and puts it outside the "organization," one has to consider whether this is a step in the right direction[4]. Changing the number of cells that power our electric touring cars moves that segment away from the mainstream of RC. If you go to Radio Shack, or even a toy store, most of the toy-grade RC cars are powered by 6-cell stick packs. The minor leagues of RC are all based on this industry standard, so changing that out from touring cars will eventually kill the "new" blood from going in that direction—not to mention the fact that racers will now be forced to have multiple packs if they race off-road. And if a new guy shows up at the track for the first time with his 6-cell, he won't be legal.

In speaking with a few people who are in favor of the change, and even a few racers who were "faster" with less voltage, I ask you to look around and think beyond the track. If you were faster with 5-cell, then please run it at the races (it's currently legal), but think long-term about keeping some organization throughout the entire industry. Touring Car has seen a decline in popularity, but it's not because the cars are too fast[5]. I've never heard "can it be slower" when asked the two questions every person asks: "How fast does it go?" and "How much does it cost?" Please don't complicate the answer by saying, "Well, with 4-cell…" or, "With 5-cell it goes…"

United we stand.

Godspeed,



Derek Buono
Executive Editor
derekb@rc411.com



XRC: 6-cell to life, sucka!

1. I often repeat myself. It seems others take longer to soak in my genius.
2. Angry rants are the most fun to read. My current theory is that if you're content, there's something wrong with you.
3. It's very ironic that some companies that think cars are too fast sell 70mph RTRs. If you cared about keeping people in the hobby, *you wouldn't sell* that sort of speed to the beginner.
4. If you want to save racing, look at why people aren't doing it anymore. It usually comes down to the fact that the average person is no longer having fun.
5. Maybe it's because to run touring, you spend more than you would to run 1/8-scale nitro off-road.

TEAM RANTS

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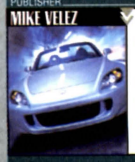

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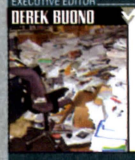
I WISH I COULD ORGANIZE A... Desk.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Nope.

EXECUTIVE EDITOR
DEREK BUONO



WORST THING I'VE BEEN BEATEN WITH... My own sarcasm used against me.
I WISH I COULD ORGANIZE A... My office.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? No, probably never will.

CREATIVE DIRECTOR
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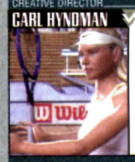


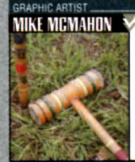
WORST THING I'VE BEEN BEATEN WITH... McMahon beat me with a chick in "Top Spin 2" on Xbox 360.
I WISH I COULD ORGANIZE A... Free Helicopter Snowboarding trip at Mike Wiegele's Helicopter Skiing in BC, Canada.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Nope, but I've killed a twelve pack.

SENIOR GRAPHIC ARTIST
DAVE PALACIOS



WORST THING I'VE BEEN BEATEN WITH... The dirt, asphalt and my skateboard.
I WISH I COULD ORGANIZE A... Parking lot track with James again. OH wait we are... www.rcdriftclub.com!
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Uh, no. I may be Mexican, but I haven't killed any chickens.

GRAPHIC ARTIST
MIKE MCMAHON



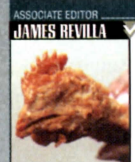
WORST THING I'VE BEEN BEATEN WITH... A Croquet Mallet
I WISH I COULD ORGANIZE A... Better workout schedule, when I say "better" I mean "A" schedule.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Nah...but I have polished off a bottle of Wild Turkey.

EDITOR
MICHAEL WORTEL



WORST THING I'VE BEEN BEATEN WITH... Numerous wooden spoons (Italian moms...)
I WISH I COULD ORGANIZE A... Tele-thon to eliminate comma splices and sentence fragments.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Killed, no. Choked, probably!

ASSOCIATE EDITOR
JAMES REVILLA



WORST THING I'VE BEEN BEATEN WITH... My girlfriend's right hand. Oh she's good.
I WISH I COULD ORGANIZE A... Scantily-clad, smut peddling jello midnight pool party.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Slashed five in a row for my birthday, and I was like 13 back then – so don't mess with me now.

TECHNICAL EDITOR
SHANE ARCHER



WORST THING I'VE BEEN BEATEN WITH... A riding crop. Don't ask!
I WISH I COULD ORGANIZE A... Secret underground shell scriptingsociety.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Not unless a rabid badger counts as a chicken.

EDITOR-AT-LARGE
JEFF EVELEIGH



WORST THING I'VE BEEN BEATEN WITH... A stick.
I WISH I COULD ORGANIZE A... Bikini contest in my bedroom, no bikinis allowed.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Eaten chicken, yes. Killed chicken, no.

EDITOR-AT-LARGE
BRIAN SKINNER



WORST THING I'VE BEEN BEATEN WITH... A shotgun--don't ask!
I WISH I COULD ORGANIZE A... Way to get more money into my bank account.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? No, but I did kill a bottle of tequila once!

STAFF PHOTOGRAPHER
OLIVER BENTLEY



WORST THING I'VE BEEN BEATEN WITH... A bill from Tiffany's and Co.
I WISH I COULD ORGANIZE A... AirZooka Tournament.
EVER KILLED A CHICKEN FOR YOUR BIRTHDAY? Nah, I usually just drink, but that sounds fun too.

Novak VELOCITI MOTORS

Novak's Velociti Series includes some of the fastest competition brushless motors around. With five motors to choose from, there are Velociti motors for top-level competition touring car applications, as well off-road applications. The GTB/Velociti brushless systems include all of the extra performance-enhancing components required for world-class racing making them ready-to-race straight out of the box — nothing extra to buy or install.

ALL VELOCITI MOTORS FEATURE:

- *Incredible speed and torque with no cogging*
- *Factory hand-wound*
- *Every motor dyno-tested under load*
- *Compatible with the GTB speed control*
- *Oversized front bearing for long life and increased load handling*
- *Virtually maintenance-free*
- *Designed and manufactured in the USA by Novak*
- *Meets all ROAR specifications**

**Velociti 3.5R is currently awaiting ROAR approval*

THEY'RE FAST.

WICKED FAST.



5 Novak Velociti Motors Available

All 5 Velociti motors can be purchased individually, or come factory-wired to the GTB Brushless/Brush ESC as a system, which includes all the components required for world-class racing. Nothing extra to buy or install.

GTB/Velociti 3.5R: The Fastest Motor System You Can Put in Your Car

*The Velociti 3.5R features Novak's exclusive **Nickel-plated Sintered Neodymium Rotor** for overall higher performance and faster speeds! All Velociti motors can be upgraded with the #5908 Sintered Rotor, which is available as an accessory item. For detailed information about all Novak brushless systems and products, visit our website at **www.teamnovak.com***



#5908
Nickel-plated Sintered Neodymium Rotor

www.teamnovak.com

NOVAK Electronics, Inc.

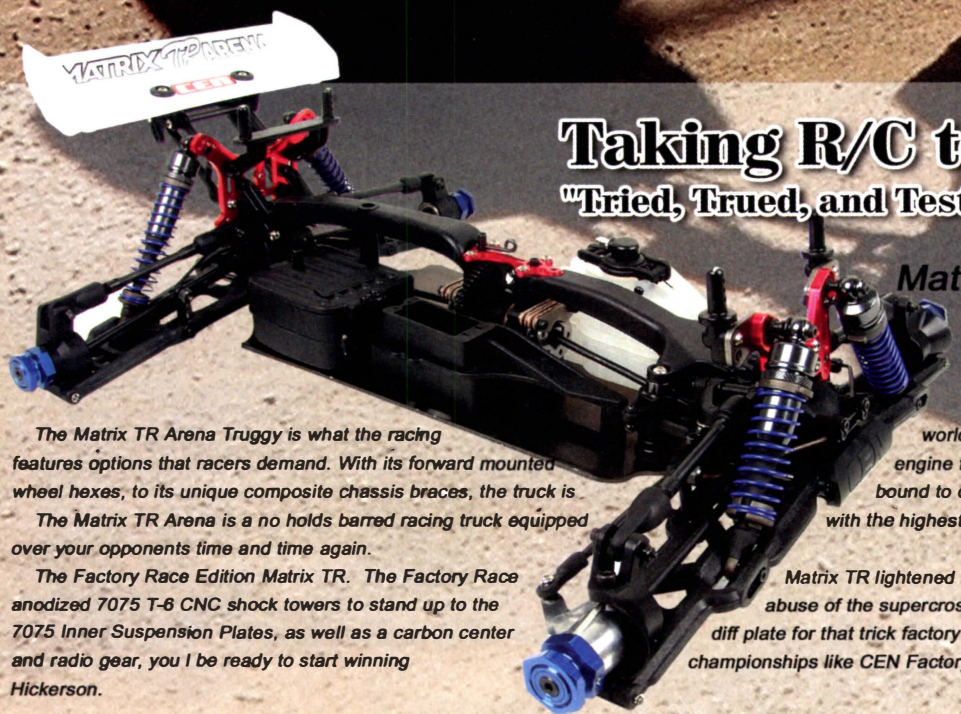
17032 Armstrong Avenue • Irvine, CA 92614
TEL: 949.833.8873 • FAX: 949.833.1631

Design and driven by the USA Champions Andrew Smolnick, Gene Hic
and Jason Ashton , the Matrix TR Arena is unbeatable.

MATRIX TR ARENA

DESIGN TO OUT RACE, OUT LAST, AND OUT HANDLE THE COMPETITION-

- Engine is moved towards the front for increase handling
- Longer Chassis for optimum handling
- 23mm wheel hexs for increased durability
- Increased front kickup for better rough track handling
- Big Bore Shocks - 14mm pistons / 3.5mm shock shafts
- Fully adjustable wheel base 10mm change option
- Lay down steering servo for low CG



Taking R/C to Next Level!

"Tried, Trued, and Tested" "American proven"

Matrix TR Arena FR Edition
Item #: 9563
Street Price: $499

The Matrix TR Arena Truggy is what the racing world has been waiting for! This Factory Tuned truck features options that racers demand. With its forward mounted engine for effective weight transfer, 23mm lightened wheel hexes, to its unique composite chassis braces, the truck is bound to dominate the arena truck races!

The Matrix TR Arena is a no holds barred racing truck equipped with the highest quality materials to give the competitive edge over your opponents time and time again.

The Factory Race Edition Matrix TR. The Factory Race Matrix TR lightened blue anodized 23mm wheel hexes, 5mm red anodized 7075 T-6 CNC shock towers to stand up to the abuse of the supercross style jumps at the tracks, Red anodized 7075 Inner Suspension Plates, as well as a carbon center diff plate for that trick factory look. Just add your favorite truggy engine, pipe, and radio gear, you I be ready to start winning championships like CEN Factory drivers Andy Smolnik, Jason Ashton, and Gene Hickerson.


son,
CEN
www.cenracing.com
Matrix TR Arena RTR
Item #: 9561
Street Price: $499
MATRIX TR
TQ and Win
- Maxxy's Challenge
- ROAR Florida State Series
- 2006 R/C Car Action
Monster Madness
Team CEN - Gene "The Machine" Hickerson
CEN/GTC TEL: (714) 792-1923
Empower Yourself!!
www.cenracing.com
Factory recommended fuel
RACE
PREMIUM R/C CAR FUEL

Driver Poker

In any given month, there are drivers switching teams, motors, batteries, stickers, or monopoly land holdings. This month there are several notable moves in some of the teams' structure. Here are "the river" cards in this month's Texas Hold'em Driver Poker Tournament.

SCORECARD

Rheinard	to	CheckPoint
Lopez	to	Schumacher
Blackstock	to	Corally
Dumas	to	Trinity
Burch	to	Brood

James was 1 hand short of winning a PS3 on New Years.

Kyosho Goes Oval

The Kyosho Mini-Z is a great little RC car. Mini-Zs have always been small, affordable, and realistic. They have a body shell to make any car nut happy, and now they have something that will make any NASCAR nut smile.

The new NASCAR edition Mini-Z from Kyosho comes ready to rip up left-handers, and is packaged with officially licensed bodies. We're expecting more body options from Kyosho over the next few months so you can race with your favorite driver.

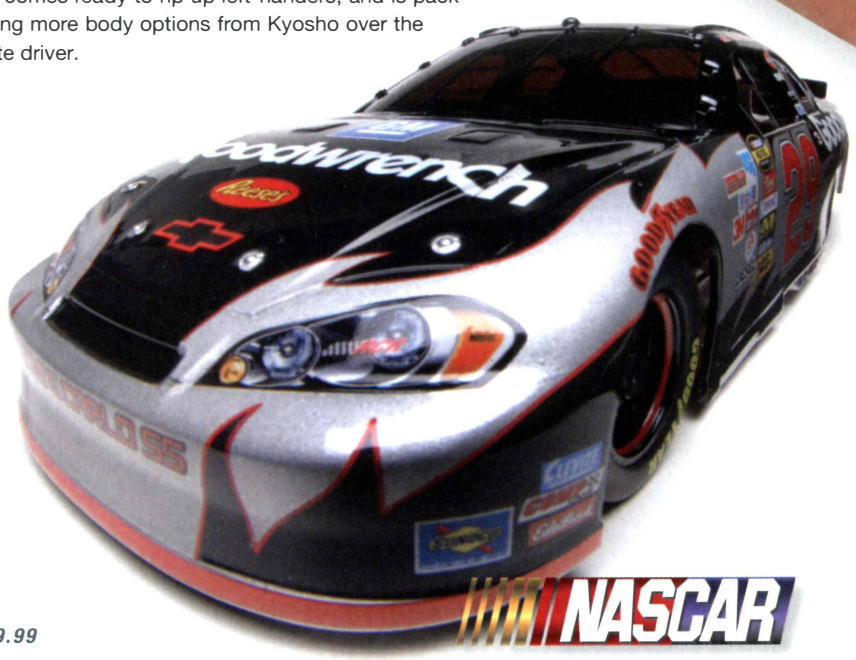
www.kyoshoamerica.com



30792-99B - Carl Edwards '05 Office Depot #99 Ford Taurus - Street Price: $99.99



30793-29B - Kevin Harvick '06 Goodwrench #29 Chevrolet Monte Carlo - Street Price: $99.99



Novak GTB 4-cell ESC

The 4-cell market has been growing as 1/12- and 1/10-scale pan cars regain popularity. Both classes are limited to 4-cells, and if that's all you race, you're paying for the extra 2-cells you will never use. To address this, Novak has released a 4-cell version of the GTB speedo specifically for the lower voltage applications. Five profiles will be more than enough for brushless applications, and one profile is ready for brushed. All the other features you'd expect in a high-end speed are still there, but with less weight.

www.teamnovak.com



O'Donnell adds more strokes?

A sign of things to come, or maybe just expanding their market? Tough one to call at this point, but O'Donnell now offers 4-stroke specific glow plugs to fit all those engines we use in land-based RC. It's up to you to make the connection, or just take it as nothing more than a new glow plug.



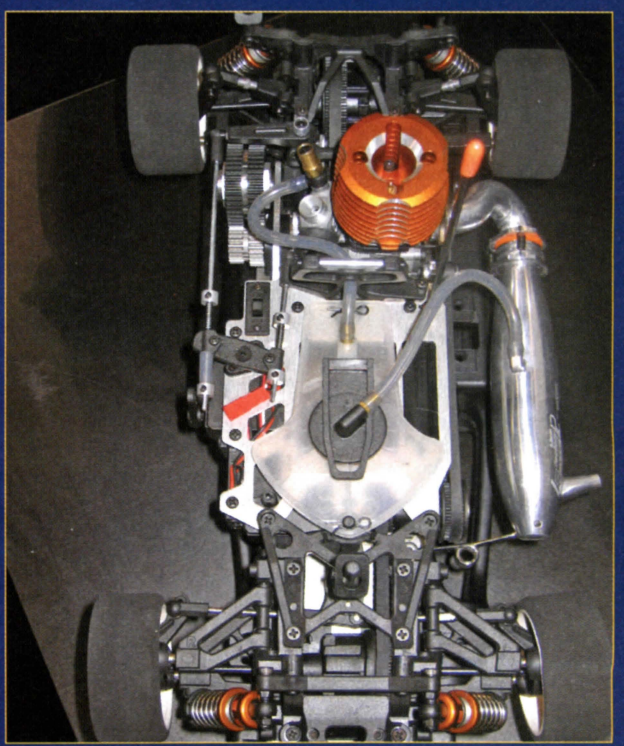
A 4-cell ESC... Derek's insight appears dead on.

Team Magic G4S RTR

The G4S has a pretty good record on the track, and hoping to increase the amount of racers, they are now offering one of the few "race kits" in an RTR package to get more racers on the track.

www.teamtrinity.com





xxx main THRE3



After years of waiting, hours of wasting time playing whatever Canadians play in the cold Arctic North (we love you guys; just making fun of Jeff), we're finally receiving our long-awaited video completing the xxx main trilogy. That's right, the self-proclaimed "king of all RC action videos" has gotten out of bed an hour early for the past few years to string enough content together to fill over 45 minutes of blank DVD space. It's available in two versions. The first is the uncut version, which promises to return to what made the first video or two stand out, and the rated version is the one for those who can't tell their girlfriends they're pretty (that means all the offensive girls have been removed). We just got our copy in the office and we're currently watching it over and over to see if we'd shell out the $23.99 for either version.

www.xxxmain.com



Nomadio React Accessories

LiPo Tx pack



HT Batteries has just released a LiPo transmitter pack that's compatible with the new React radio as well as the Sensor model. Since the transmitter operates under 5V, a voltage regulator is included. The combo is available for $65.00, is lighter than the stock battery pack and should provide a lot more battery life.

www.htbatteries.com

Undercover



Dark Identity has released a series of sticker kits to spruce-up the React transmitter case, allowing the ability to have a different looking radio than what your friends use. Available in multiple designs, you're sure to find one or two to your looking. The decals are clear-coated, so they won't rub-off or be erased with fuel.

www.darkidentity.com

AE 1/8-Scale Starting Lineup

We're getting closer to getting a shot of the highly anticipated 1/8-buggy (and we're guessing, soon after, a truggy). Aside from actually having a picture, we've gotten just about everything else, which at this point includes the starting lineup for the team. Many realize that because AE was never really in the 1/8-scale market, many of their team drivers had racing contracts at other companies. But that may change as AE looks to start off strong. Starting off the lineup will be Ryan Maifield, Ryan Cavalieri, Richard Saxton, JR Mitch, and Kyle Skidmore. They receive international support from other drivers that include Neil Cragg, Craig Drescher, Peter Pinisch, and Jorn Neuman. We're expecting more drivers to announce their switch to the RC8, but until then we're ready to get a picture!

www.rc10.com

ANDY MOORE
TEAM ORION FACTORY DRIVER
2006 IFMAR TOURING CAR
WORLD CHAMPION



Jason Sams / Photography

revolution
V2 MODIFIED MOTORS

advantage
ADVANCED CHARGING SYSTEM

MAX-PLUS
RDS
MATCHED CELLS

ENGINEERED PERFORMANCE RACE PROVEN
TEAM ORION
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www.teamorion.com

Team Orion racing components are designed and manufactured with pride by those who race.
ANDY MOORE WORLDS EDITION MOTOR COMING SOON, PATENT PENDING.

>> NEWS >> GOSSIP >> RUMORS >> NEWGEAR >> SNEAKPEEKS

Power-Up



When it comes to power supplies most don't care what's inside, just that it can power 2 chargers, a comm Lathe, a cell phone charger and maybe start your real car. Competition Electronics always has some of the best high-end electronics you can buy. Their latest power supply cranks out an alternator like 23 amps and throws on some new graphics (even black boxes need style). It's UL approved if you want that peace of mind. You can pick one up for about $115.

www.competitionelectronics.com

"Jammin' James Revilla?" It is his colors, you know.

Jammin' Gets Engines

Some people like to match brands and now if you're a Jammin' hardcore, you can have a .21 or .28 engine with the Jammin' label sitting on top. It's a PICCO based engine tweaked to Jammin's specs and has a bright red anodized head. Both engines should be on par with most race engines out there.

www.ofna.com



GONADS FOR 5B

The HPI Baja 5B is one of the sickiest releases in years. As it slowly gains momentum, the aftermarket assault has too. While some of the bigger names have not set their sites on the big buggy, the smaller companies have attacked it like buzzards on a week old carcass. RAMTech-RC has made aftermarket parts for a long time, and they now working on the 5B project. Their first offerings are these 6061-T6 aluminum upper front links and new rear arms. The rear arms have been designed to eliminate the rubbing of the stock rear arms, while the front add strength. All the parts are proudly made right here in the U.S.A. and are available through Team Gonads. If you want to start modding your 5B, hit up the website; it's got lots of good stuff.





www.teamgonads.com

THE ULTIMATE CHARGER FOR EXPERT ONLY

iNDi 16X908

Climate Control DC Charger

* for additional details, visit www.integy.com



Full featured charger & discharger with graphics display
for Ni-Cd, Ni-MH & lithium packs up to 10,000mAh
Blue backlit 128X64 high resolution LCD display
*controls external battery cooling fans & warmer
sensor monitors battery temperature real-time
Adjustable deltaV from 3mV to 25mV per cell
CC-CV charge method for Li-Ion & Li-Po packs
Built-in motor-run feature with timer
Linear Charge mode, 0.1A to 8.0A
Discharge / Cycle mode, 0.1A to 20.0A
Cycle up to 10 times with timer delays
3 on-demand built-in cooling fans
Very easy to use and works perfect for:
GP4300, IB4200, Sanyo Ni-Cd/Ni-MH,
Glow plug single, 12V battery, transmitter
& receiver packs, lithium batteries ... etc.
optional SS36 AC110-to-DC12V power supply
1-Year Limited Warranty

C22408RED ProGrip
Standard Hex 6061
Socket Set (3)



C22475 Dual Hex Socket Wrench
5.5mm + 8.0mm





C22407BLUE ProGrip
Metric Hex 6061
Socket Set (4)



INDI 16X307-Lithium Charger

- designed for Lithium batteries
- AC Input: 110-120VAC
- DC Input: 11-15VDC
- 0.5A to 6.5A output current
- dual voltage monitoring
- user selectable cutoff voltage (4.10, 4.15, 4.20, 4.25)
- LCD Display shows voltage & current
- charge 1 to 4 cell lithium batteries
- built-in cooling fan
- very easy to use a compact
- true CC-CV linear charge output
- LED lights indicate charge status
- 1-year limited warranty



These are probably the best selling tools around, ergonomic design, color coded handle for fast and easy identification. You can pickup a complete 6pcs set for only $29.95. MUST HAVE tools!

SBEC+Low Battery Warning

- loud beeping buzzer when battery low
- 2 VR knobs for easy setting adjustment
- universal RX plug for easy connection
- light weight and low current consumption



20C Li-Polymer Batteries

C22369	20C Li-Polymer 1500mAh/7.4V 17x35x69mm	$32.99
C22370	20C Li-Polymer 1500mAh/11.1V 25x35x69mm	$48.99
C22371	20C Li-Polymer 1500mAh/14.8V 33x35x68mm	$67.99
C22372	20C Li-Polymer 4400mAh/7.4V 22x42x136mm	$75.99
C22373	20C Li-Polymer 2200mAh/11.1V 29x42x66mm	$56.99
C22418	20C Li-Polymer 2200mAh/14.8V 39x42x66mm	$109.99
C22419	20C Li-Polymer 2500mAh/11.1V 20x35x138mm	$75.99
C22420	20C Li-Polymer 1350mAh/11.1V 23x35x62mm	$59.99
C22426	20C Li-Polymer 900mAh/11.1V 18x34x59mm	$39.99
C22444	20C Li-Polymer 1400mAh/14.8V 31x35x70mm	$79.99
C22445	20C Li-Polymer 1400mAh/7.4V 15x35x70mm	$39.99
C22446	20C Li-Polymer 900mAh/7.4V 12x34x59mm	$29.99
C22448	20C Li-Polymer 2000mAh/11.1V 21x34x108mm	$79.99
C22472	20C Li-Polymer 3600mAh/11.1V 25x38x136mm	$99.99



I want more!

I'm sure every person in this hobby has visited at least one website in their lives, and a few may stalk...I mean frequent some of the pro drivers who have websites about themselves. Honestly, can you ever really get enough Todd Hodge, see enough of Tebo, or even think you could go a day or two without reading about Adam Drake? We can't either, so we thought we'd inform those of you with an internet connection that if you can't satisfy your man-driver urge, you can visit any of the following websites.

www.thedrake.net
www.toddhodge.com
www.jaredtebo.com



POWER UP YOUR RTR!

Reedy "Spec 19 Quad-Mag Motor. Step up the power of your RTR with Reedy's Quad-Magnet "Spec 19" Motor! A great choice for the B4, T4, TC4 RTR, or any Ready-to-Run electric with a speed control rated for a 19-turn or lower wind motor.
#513 Reedy Spec 19 Quad-Mag Motor



#700 Reedy "Rated-X" Sport Pack, GP 3300 cells



Reedy's "Rated-X" Matched 3300 Sport Packs. Using the revolutionary VMX Concept, six matched & zapped 3300mah cells are fully assembled in clear tubes so you can see the matching info right on the label of each cell. Don't settle for "mystery" cells in your sport packs, get Reedy's "X-Rated" packs and see the power you've been missing! Includes a Tamiya connector plug.

Reedy Black Label 2. A 7.2 volt stick pack featuring six 3300 cells assembled with a Tamiya connector plug. The Black Label 2 is the perfect sport pack for juicing up your RTRs.



#691 Reedy Black Label 2 stick pack, 3300 cells

Reedy Ni-MH Receiver Packs for Nitro Cars and Trucks. Reedy receiver packs give you the long-lasting, reliable power needed for nitro racing, and have a great low price that makes them your **BEST** choice!

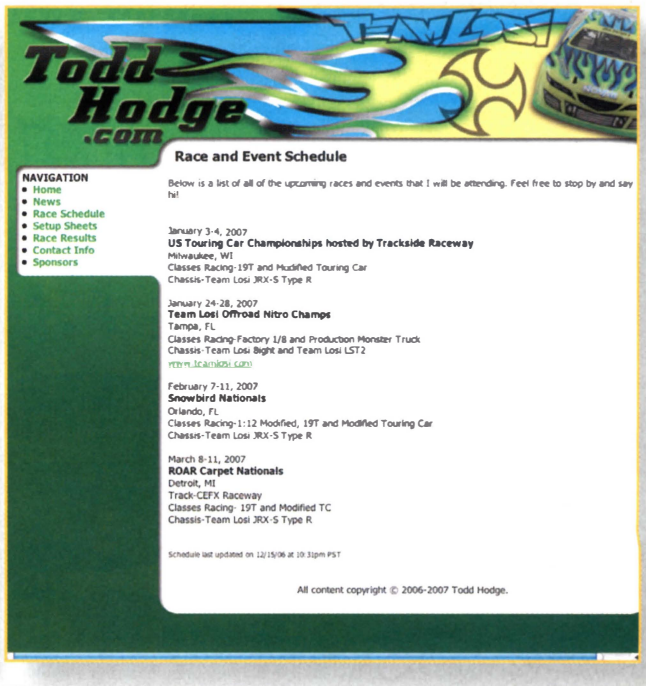


#615 Reedy Ni-MH Receiver Pack, *(Hump style for RC10GT, Monster GT, Etc.)*



#614 Reedy Ni-MH Receiver pack, *(Flat style for Nitro TC3 & most popular onroad nitro cars.)*





Reedy Mini-MOD
Big Power for Micros!

Reedy Mini-MOD Modified Motor.
Seriously turn up the heat in your micro with a Reedy Mini-MOD Modified Motor. Big time features like ball bearings and replaceable brushes are shrunk down to the popular 280-size to fit most 1:18 vehicles, especially the RC18T.
#291 Reedy Mini-MOD 17-Turn Modified Motor
#292 Reedy Mini-MOD 19-Turn Modified Motor





Reedy VMX R-14 High-Voltage 1400 Ni-Mh Battery Pack.
Higher voltage means more power and that's just what you get with Reedy's new VMX R-14 pack. Using the revolutionary VMX Concept making for higher voltage output than stock battery packs the VMX R-14 pack is the ticket to making your micro car rip up the road. Comes completely factory assembled with connector and fits directly into the RC18T, RC18MT and RC18B!
#617 Reedy VMX R-14, 1400 Ni-Mh Battery Pack

www.rc10.com/reedy
REEDY
A Division of Associated Electrics
3585 Cadillac Ave. Costa Mesa, CA 92626

TEAM ASSOCIATED

GT2RS

RACE-SPEC





1:10 Scale Ready-to-Run 2WD Nitro Offroad Truck

Team Associated first introduced the RC10GT Gas Truck in 1993. From there the GT has gone on to win every ROAR National Gas Truck Championship since the creation of the class. That's why they say "you still can't beat a GT!" Even the original GT's unprecedented performance and championship record can't stop the progression of time.

Designed and raced by the winningest team in R/C, Team Associated's GT2RS "Race-Spec" is a high-performance 2WD nitro offroad truck that's Ready-to-Run right out of the box. The GT2RS RTR is a fully assembled gas truck that shares 95% of the same parts as the new GT2 Factory Team kit. The GT2 "Race-Spec" RTR features in addition the powerful Team Associated .15X pullstart engine with SG style crankshaft and the XP2 radio system, all factory installed and ready to run! The GT2RS can also be upgraded as your budget and skills allow with the full line of Factory Team GT2 hop-ups. Get a genuine Team Associated GT2 Race-Spec RTR or the chances are you'll just be chasing one.

Team Associated • 3585 Cadillac Ave., Costa Mesa, CA 92626
www.rc10.com or www.teamassociated.com

February 2007 RC Events Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			EVERY WEDNESDAY 8PM EST 5PM PST www.racetalklive.com	Nuremberg Toy Fair - Feb 1-6 www.toyfair.de 1	2	3
4	5	Snowbird Nationals - Feb 6-11 Legacy Grand Plaza Orlando, FL www.snowbirdnationals.com 6	Zary Lahouti's Birthday HAPPY BIRTHDAY! 7	8	Rumble in the Rockies - Feb 9-11 MHOR R/C Aurora, CO www.mhorrc.com 9	10
Florida Winter Nats - Feb 11-17 Lee Civic Center Fort Myers, Florida www.winternats.com Marcus Velez's Birthday HAPPY BIRTHDAY! 11	12	13	Valentine's Day 14	15	16	South-West Tour Oval Series Opener - Feb 17 Track Name:TBA City, State: Southern California www.southwesttour.com 17
Cupid's Revenge - Feb 18 South Shore Hobby Coram, NY www.southshorehobby.com 18	Presidents Day 19	The Nitro Challenge - Feb 20-25 The Nitro Pit Witmann, Arizona www.thenitropit.com 20	21	22	23	February Freeze Dirt Oval East Coa Championship - Feb 24-25 Bumps & Jumps RC Speedway Etters, I www.bumpsandjumpsrc.com ROAR On-Road State Championships - Feb 24 Speedzone Hobbies Rocky Hill, CT www.speedzonerc.com Outlaw Racing League #4 - Feb 24 Kranzels R/C Raceway Harrisburg, PA www.outlawracingleague.com Bass Pro Series - Feb 24 Bass Pro Store Pearl, MS 39208 www.rcracingxtreme.com
Dave Palacios' Birthday HAPPY BIRTHDAY! 25	26	27	28			

Surprise! Dave didn't plug his website in the calendar!

meet the "truck of the year's" little brother.

all the performance, all the power, half the size.

introducing the new

CRT S

4wd mini truggy



READY-2-RIP MINI TRUGGY – PART # 34972

PRO MINI TRUGGY – PART # 34970 –
COMES PRE-BUILT WITH SOME UPGRADES – NO ENGINE OR ELECTRONICS

USES 2.2 B2, B3 BUGGY WHEELS &TIRES
FRONT, CENTER AND REAR DIFFS
.12 ENGINE – REAR EXHAUST
OIL FILLED SHOCKS
4 WHEEL DRIVE
3MM CHASSIS

CAPTURED HINGE PINS – NO E-CLIPS
DISC BRAKES FRONT & REAR
LAY DOWN STEERING SERVO
ALL STEEL DRIVE LINE
TUNED EXHAUST PIPE



CHAD BRADLEY
SILVER STATE NITRO CHALLENGE CHAMPION 1/8 TRUGGY
R/C PRO NATIONAL CHAMPION 1/8 TRUGGY

JAMMIN PRODUCTS

WWW.JAMMINPRODUCTS.COM

JAMMIN PRODUCTS / A DIVISION OF OFNA Racing

7 VANDERBILT IRVINE, CA 96218 (949) 586-2910

POLL PAGE

100 people surveyed, top 5 answers are on the board. People love to be polled, and now you can be a part of a statistic on our website. Head over to ww.rc411.com and join the forums. Once you join you can be a part of the numbers and become another statistic. Just remember 60% of the time it works every time.

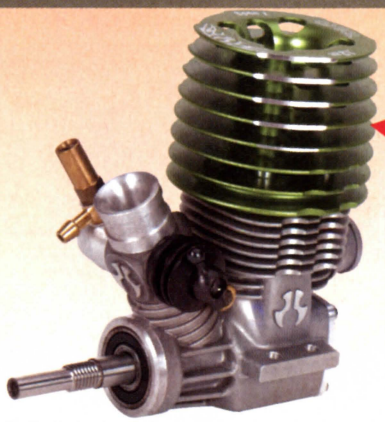
STUPID QUESTION OF THE MONTH

If a plane crashed on the border of Canada and USA, where do you bury the survivors?

100% answered the question and got it wrong. You don't bury survivors! (A total of 12 people answered this question with where they should be buried, but far more actually answered the question correctly with "you don't bury the living!")

68%

consider yourselves intermediate engine tuners.



Random Poll Quote: "Thanks to XRC, I think I've improved from a beginner to an intermediate tuner..."–Ben.C

49% and 51%: will purchase electric or nitro, respectively, as the next kit.



77%: first bought an RTR, and are moving on to a kit with the next purchase.



Random Poll Quote: "I love kits but they are getting harder and harder to find. RC needs to get back into kits in a big way, because one of the best things to me in RC is building it, and I think a lot of newbies are missing out on that." –crazysavage

82% purchase products based on quality, which leaves...

7% who make purchases based on price alone, and

11% who base it on the service provided afterwards. Lesson: Sell good stuff and you can treat people like crap?



93% PURCHASED A KIT, OR BOUGHT PARTS ONLINE. OUT OF THOSE WHO PURCHASED ONLINE, 56% ARE DOING IT FREQUENTLY, AND 39% MAKE PURCHASES JUST ONCE OR TWICE A YEAR.

One to learn from: "When I started in RC, the owner of my LHS was so rude and outrageously priced that I was almost forced to buy online. I didn't want to give my money to that greedy jerk."–Skeeno

84% are not a member of any racing organization.

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MIP Hop Up parts for Losi Mini LST and Kyosho Mini Inferno!



#1562 MIP Hardcoated
Slipper for Mini LST



#1564 MIP Ball Diff Kit for Losi Mini LST (Fr/Rr)
#1565 MIP Ball Diff Kit for Losi Mini LST (center)



#1563 MIP Hard Coated Lightweight
Top Gear for Mini LST



#1568 CVD™ Kit for Losi Mini LST (Center)
#1567 CVD™ Kit for Losi Mini LST (Fr/Rr)







#1658 MIP Alloy Outdrives (2)
for Kyosho Mini Inferno

#1652 MIP Ball Diff Kit for Kyohso Mini (Fr/Rr)
#1653 MIP Center Ball Diff Kit for Kyosho Mini

#1655 CVD™ Kit for Kyosho Mini Inferno Buggy (Fr/Rr)
#1656 CVD™ Kit for Kyosho Mini Inferno ST (Fr/Rr)



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for Kyosho Mini Inferno

A NEW MUST HAVE FOR EVERY TOOLBOX!

MIP Bearing Juicer™

Clutch bearings don't get the maintenance they need. The solution? The MIP Bearing Juicer™. Re-grease 5 x 10mm shielded bearings quick and easy. Clean out old lube when you squeeze in fresh MIP Orange Grease. This process takes only seconds.

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POWERFUL G3.0 ENGINE

- Massive .18 cubic inch displacement
- Large heatsink head for optimal cooling
- Easy to start, easy to tune
- Dual stage foam filter for long life



☑ READY-TO-RUN

It doesn't get any easier than this.
High quality radio system pre-installed.

R·T·R Ready To Run!

2WD

ALUMINUM 12mm HEX HUBS

G3.0 ENGINE

RECOMMENDED FUEL POWER FUEL

RM 10T



2WD NITRO POWERED STADIUM TRUCK

☑ BLISTERING SPEED

The new high output HPI Nitro Star G3.0 engine features a racing standard SG shaft, blistering top speed and raw stump-pulling power!

☑ PRECISE HANDLING

Wide-track suspension and all-new tires front and rear give the Firestorm superb control.

☑ EXTREME DURABILITY

Steel alloy front axles, thick aluminum alloy chassis and hardened steel rear dogbones can take extreme punishment.

☑ REAL VALUE

Pre-assembled with high tech features right out of the box and priced to fit your budget.



POWER FUEL

100% FACTORY APPROVED

HPI Power Fuel is the only fuel that is 100% Factory Approved for HPI Nitro Star engines. Our high quality synthetic/castor oil mixture provides maximum protection to extend engine life and delivers superior performance.

#74348 HPI Power Fuel 20% Nitro (1 gallon)
#74350 HPI Power Fuel 30% Nitro (1 gallon)
#74318 HPI Power Fuel 20% Nitro (1 quart)
#74320 HPI Power Fuel 30% Nitro (1 quart)

The Firestorm 10T is the latest addition to the HPI truck line-up, a completely new 1/10th scale 2WD nitro platform. Our design team checked off all of the right boxes when it came time to design the Firestorm 10T... faster, better handling, stronger, and a price that beats the competition. You want power? Fire up the new G3.0 engine and you'll see that it delivers both punch and top speed with .18 cubic inches of nitro excitement. To harness that power, a tough transmission was designed from the ground up, using all-metal gears for maximum durability. The ultra-rigid aluminum chassis is anodized high tech grey with countersunk hex screws and black nylon suspension arms, looks great. And the list of features goes on and on... threaded shocks, alloy tuned pipe and header, turnbuckles, fiber disc brake, sealed radio box, dual stage air filter, sticky tires, and a fire-breathing flame paint job. And best of all, the Firestorm 10T is pre-built, with radio gear, ready to go!

AVAILABLE NOW!

#10510 - RTR FIRESTORM 10T





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It's all about the racing...

In 1985, Rick Hohwart founded Peak Racing with the sole purpose of providing the highest performance electric motors and batteries for the hardcore R/C racer. Some products have come and gone over the years, and others have been fine-tuned and perfected. But our philosophy remains the same - providing high quality, race proven products to those that expect the very best.

Peak Racing products can be purchased at hobby shops and race tracks worldwide. Or feel free to contact Peak Racing to discuss and purchase specific products based on your individual requirements. Because our staff includes world-class racers, we can dispense the best advice available and supply products manufactured by those that understand the importance of perfection.



Vantage 07

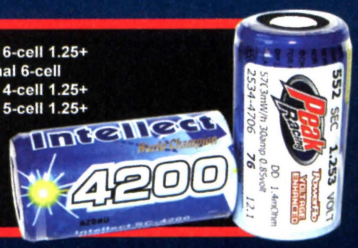
Designed by Oscar Jansen in conjunction with CRF Power, the Vantage 07 pattern wound IFMAR World Championship winning modified motor is the latest version of V2 based Vantage and features an all-new CNC machined endbell with angled 3.8mm brush orientation and a revised can for increased magnetic field strength and lower operating temperatures.

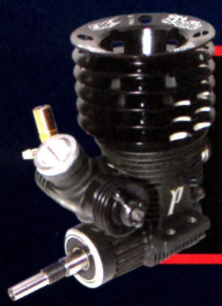
PEK76001 Vantage 07 6x1
PEK76002 Vantage 07 7x1
PEK76003 Vantage 07 8x1
PEK76004 Vantage 07 9x1
PEK76005 Vantage 07 10x1
PEK76006 Vantage 07 10x2
PEK76007 Vantage 07 10x2 Spashett WC Replica
PEK76008 Vantage 07 11x1
PEK76009 Vantage 07 12x1
PEK76010 Vantage 07 13x1

PowerFlo 35 IB4200 WC Cells

Peak Racing's PowerFlo voltage enhanced Intellect (IB) cells, in the hands of factory driver David Spashett, captured the 2006 IFMAR 1/12th Scale World Championship. Continual updates to the PowerFlo voltage enhancement process, and discharge rates during testing increased to 35 amps to more realistically portray actual racing conditions, keep Peak Racing's matched cell program one step ahead of the rest.

PEK43167 IB4200 WC PowerFlo 35 World 6-cell 1.25+
PEK43168 IB4200 WC PowerFlo 35 National 6-cell
PEK43169 IB4200 WC PowerFlo 35 World 4-cell 1.25+
PEK43171 IB4200 WC PowerFlo 35 World 5-cell 1.25+
PEK43172 IB4200 WC PowerFlo 35 National 5-cell 1.25+





CRF Diablo REV .12

Maximum performance has been created with dynamic flux engine technology along with the highest specification for real racing. Developed in Switzerland with patented technology, this is a state-of-the-art engine for serious racing applications. Already established as having the highest HP output available, continual upgrades and option parts availability keeps the CRF Diablo REV at the front of the pack. New .21, .28, and .12 off-road engines are scheduled for release in Spring 2007.

PEK6085CRF Diablo REV .12 On-Road TC
PEK60860 CRF Diablo REV .12 Off-Road Truck
PEK60861 CRF Diablo REV .21 Off-Road Buggy
PEK60862 CRF Diablo REV .12 Off-Road Truggy



Vantage BL

The efficiency of brushless motors results in more power, longer run times, and less maintenance. Peak's Vantage BL comes in several configurations for TC with Off-Road, Stock, and 19-turn equivalents in the works.

PEK75000 Vantage BL 3.5 Sensor
PEK75001 Vantage BL 4.5 Sensor
PEK75002 Vantage BL 5.5 Sensor



Carbon 3200 mAh LiPo Battery

Designed specifically for competition applications, the Carbon Edition LiPo 3200 20C battery mimics the actual run times of today's most popular 4200mAh competition NiMH cells, despite its lower capacity. The Carbon Edition's unique shape allows instal lation in vehicles that accept stick packs. Additionally, molded bumps along the battery's underside lock it into position when used in slotted touring car chassis. Enjoy the future today!

PEK43301 Carbon Edition 3200 LiPo Battery Pack

motorsbatteriesengines | worldchampions

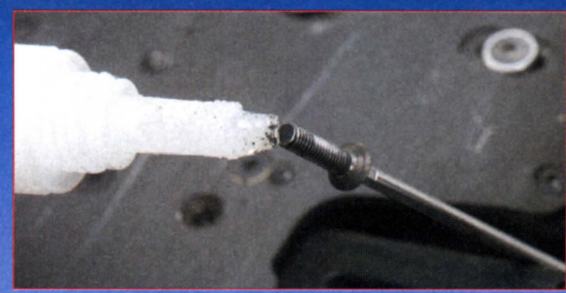
Peak Racing

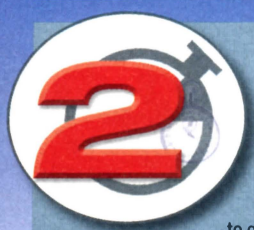
the next chapter will soon be written contact us @ peakmotors.com for more info.



Check Your Screws

It isn't uncommon for your monster truck, buggy, or truggy to have their bulkhead mounting screws loosen, strip, or even fall out from regular use, due to the size, mass, and abuse these machines are put through. It is a wise idea to check these screws often and retighten them when necessary. If they become stripped, you can use a slightly longer screw of the same diameter (check to make sure the longer screw doesn't interfere with any moving parts). Also use a drop of CA glue to help rebuild the threads within the bulkhead. If none of these methods work, you may have to splurge on a new bulkhead to keep the central part of your front and rear drivetrain and suspension in check.





Clean Paint Lines

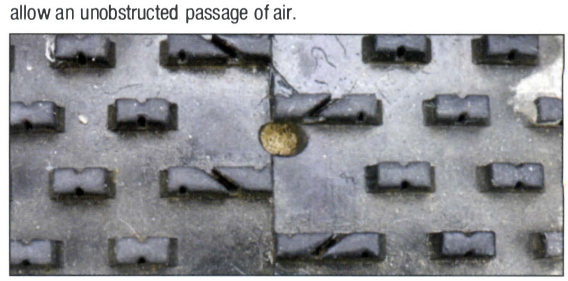
It's everyone's desire to have crisp paint lines on their freshly painted Lexan body, yet so few seem to be able to get them. When painting a multicolored scheme, always use a good quality painter's masking tape, or vinyl with removable adhesive (some vinyl materials will leave sticky residue on your body). Before you hit your paint, go over all of the mask lines with your finger to keep them securely adhered to the body. Your first coat of paint should be extremely light, applying almost no paint at all. This prevents paint bleed and pooling, while sealing the mask edge against the polycarbonate. Once the first light coat is dry, follow it up with one or two slightly heavier coats to complete the coverage, then let them dry. Once you are ready to remove the mask, pull it away from your body along the paint line, and your color separation will be extremely clean and sharp.





PUNCH YOUR TIRES

It is important for air to be able to easily enter and escape your off-road rubber wheel assembly. This prevents a bouncy suspension setup and also allows your foam inserts to do their job. Many manufacturers have holes drilled within their rims to prevent an air seal within your wheel assembly, but you are better off having the hole within the actual rubber tire. Holes within the rubber tire allow dirt and water to escape after use or cleaning, which helps to keep your wheels lighter and better balanced. There are a number of ways to put a hole into your tire, but the most common ones are to use a tire punch or a small grinding stone on your Dremel tool, or even cut a small hole with side cutters or Lexan scissors. You can also try to use a drill bit, but it usually just spirals into the rubber without removing any material. Your tire hole should be about 1/8" in diameter and be clean of flashing, to allow an unobstructed passage of air.



Extra points if you punch your tires with Hulk Hands!



STRONG BOND

Before you attempt to adhere anything to anything in this hobby (e.g., decals to your body or double-sided tape to your chassis), you need to do some preliminary work. First of all, wash your grubby little hands with soap and water to remove any lube that's been building up over the past few days. Second, use denatured alcohol on a clean rag to clean the outside of your body before applying decals, or to clean your chassis and whatever component you are mounting with double-sided tape. The alcohol cleanse will remove any oil and residue that would normally prevent your decals or double-sided tape from adhering. A quick alcohol cleaning will help prevent your decals from peeling off and your steering servo from popping out in the event of a collision.



HYPER 8

PROFESSIONAL NITRO BUGGY

HoBao

1/8 Nitro Powered Competition Buggy

Pro drivers like Jeremy Kortz and World Champion Greg Degani have made the switch to the International Hyper team to drive the new Hyper 8 buggy by HoBao. Loaded with high-end features, this new buggy handles aggressively, has awesome acceleration, and most importantly, has what it takes to place these drivers in the winners' circle. But why should they have all the success? Drive the hyper 8 and let it make you a part of the winning team!



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SPECS & FEATURES

- Carbon fiber radio plate, diff plate and steering plate
- Big bore oil-filled shocks with Teflon pistons
- Bushing retained suspension hinge pins
- Oil-filled and sealed gear differentials
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- Laydown steering servo
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- Aluminum center dogbones
- Low profile air filter
- High performance tuned pipe included
- Steel spur and clutchbell
- Ultra rigid suspension arms
- 5-hole swirl racing wheels and fire tires
- Low profile racing body and sleek wing

All this and more!



Now Available in RTR



Hyper 8 Pro #14348



Hyper 8 manufactured by Hobao, exclusively distributed by OFNA Racing

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Dirt Nitro Challange • 1st 1/8 Buggy - Taylor James
CRCRC Indoor Gas Champs • 1st 1/8 Buggy - Adam Drake
Silver State Nitro Challange • 1st Unlimited Truggy - Chad Bradley

JAMMIN' X1 CR

X1-CR Factory Team Edition
#34959

Now Includes
- 5mm Front and Rear Shock Towers
- Captured Hinge Pins / No E-Clips
- Front Lower CNC B Block
- Fiber Brake Disks
- Big Bore Shocks with Threaded Shock Bodies





2005 ROAR NATIONAL CHAMPION!

2005 RC PRO NATIONAL CHAMPION!

PRO-LINE
Pro-Line is used under the license to OFNA

JAMMIN' X1 CRT

X1-CRT #34963

Features
- Pro-Line Crimefighter MT Tires w/Jammin Dish Wheels
- Large 150cc Fuel Tank —Lower and Closer to the Chassis
- Longer Front and Rear Suspension Arms

Both Pro Kits Feature
- Lower CG Components Provide Faster Response and Greater Stability
- New Kingpin Design w/T-Bolt and Nut Hardware—No More Gluing
- Engine Mounted Lower and Closer to the Center of the Chassis
- New Steering Geometry Reduces Bump Steer
- Front Billet Spindles
- Lightened Front and Rear Billet Shock Towers
- All Aluminum Parts are Hard Anodized
- Big Bore Shocks w/Threaded Shock Bodies
- Laydown Steering Servo
- Front/Center/Rear Universal Joints
- Lightened Front and Rear Billet Chassis Stiffeners
- Carbon Fiber Front Top Plate, Radio Tray, an Center Diff Plate
- 3mm CNC Billet Chassis
- Captured Hinge Pins / No E-Clips
- Front Lower CNC B Block
- Fiber Brake Disks

(Pro kits come without electronics or engine and are unassembled, and unpainted)



Jammin T-Shirts
#96361 Available in black, grey, & blue

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JAMMIN' X1 CRT

READY-TO-RIP

X1-CRT RTR #34962

- Pre-mounted Brick Pin Tires on Jammin Dish Wheels
- Aluminum Radio tray/Top Plate/ Brake Brace
- Molded Front/Rear Chassis Stiffeners
- Unique T-Bolt Kingpin Design
- Big Bore Threaded Shock Bodies
- Shaft-Start System
- Fully Assembled
- High-Torque Steering Servo







BOTH RTR INCLUDE: Force .28 Engine, 2-Channel Radio System w/ rechargable receiver pack, Glow Igniter, Fuel Bottle, Pre-Mounted Tires, and Shaft Start System

JAMMIN' X1 RTR

READY-TO-RIP

X1-RTR #34961

- 2 Car Carrying Bag
- Pre-mounted Ripper Tires on Jammin Dish Wheels
- Aluminum Radio tray/Top Plate/Brake Brace
- Molded Front/Rear Chassis Stiffeners
- Unique T-Bolt Kingpin Design
- Shaft-Start System
- Fully Assembled

Jammin' Pipes & Manifolds

Both pipes available in Polished or Hard Coated

JP-1
Great for low to mid range power

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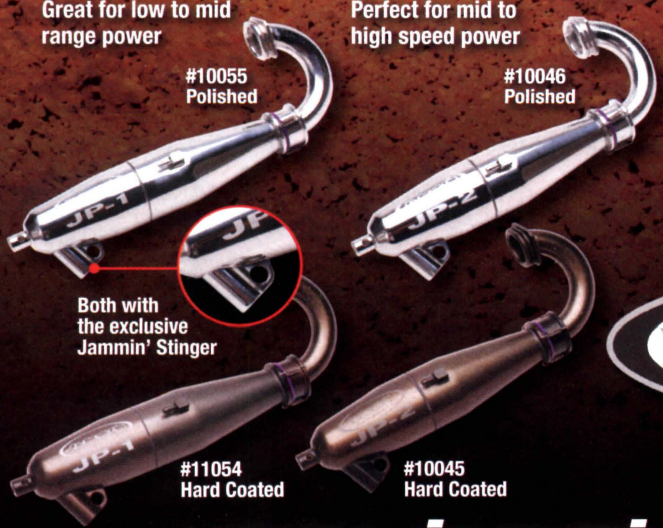
Perfect for mid to high speed power



Jay Halsey

1st IFMAR OFF-Road World Champion

1st ROAR OFF-Road National Champion

1st ROAR Unlimited Monster Truck National Champion



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TOOLS OF THE TRADE

Or: "Other ways to accumulate debt"

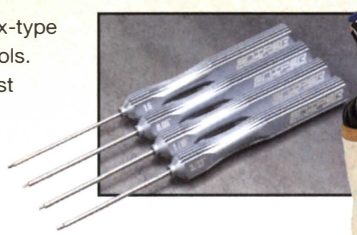
Words: Michael D. Wortel

Tools define our industry. Without them, we wouldn't be able to make jumps in technology to create a better product. More importantly, tools take the "pain in the ass" feature out of working on your ride. In RC, there is a specific tool for almost every step in building, tuning and maintaining your vehicle. Some seem obvious, others may surprise you, but there is a list of essential tools that you need to have. These are the tools of the trade:

THINGS YOU NEED:

Hex Wrenches:

The majority of fasteners in RC use a hex-type head, making hex wrenches essential tools. There are two varieties of wrenches. Most American manufacturers use Standard, while overseas manufacturers produce Metric. Get a set of both, as many nitro RC's mix Standard and Metric.



Nitro Wrench:

In nitro RC, a 4-way driver is on hand at all times. It can be used for wheel hexes and nuts, glow plugs, and many other things. There's commonly a spot to store glow plugs as well. This tool is your friend!



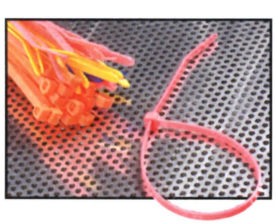
Lexan Scissors:

Inevitably, you're going to have to cut your Lexan body, and Lexan scissors are specifically designed to cut the material. The curve gives you the ability to make circular cuts and prevents the blade from pinching the Lexan. One good set will last almost a lifetime.



Zip-ties:

These are essential in nitro and electric RC. Available in many different sizes (get all of them!), zip-ties are used to secure batteries, bundle wires, in areas throughout the exhaust, and for literally hundreds of "on the spot" quick-fix solutions. I also tend to chew on them when I'm *nervous or drink too much* coffee.





A PROVEN WINNER!



"The Futaba 2.4GHz system has the familiar feel and speed of the HRS, and adds the convenience of not having to wait for a frequency to open up. It's nice to be able to turn on my radio whenever I want, whether it be warming up before a race or setting my linkage, and not have to worry about interfering with other drivers."

Taylor James *— 1st place finisher in the Pro Buggy AND Pro Truggy divisions at the Futaba Nitro Challenge, using the 2.4GHz FASST system!*

TWICE as much data, almost NINE TIMES faster and EIGHT TIMES smoother — we told you we could back up these claims, and here's PROOF! At the Futaba Nitro Challenge in Bossier City, LA, Taylor James used the 2.4GHz FASST system to dominate the competition in Pro Buggy AND Pro Truggy classes. It was the very first race for the FASST system since its introduction, proving that more + faster + smoother = a WINNER! For more information, visit www.futaba-rc.com or call 1-800-682-8948 and mention code number 2374M.

Futaba®

www.futaba-rc.com

Taylor James also uses O.S.® engines and O'Donnell® Racing Fuel.

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Tools not covered: fake mustaches for an impromptu unibrow.

CA:

Also known as Super Glue, CA (Cyano-Acrylate) comes in varying viscosities and is used in many places in RC. The thin stuff is good for gluing tires and sealing graphite, while the thicker kind is useful for fixing broken composite parts. Both are essential for gluing your buddies' tools to the pit table, a timeless RC right of passage!



X-Acto:

The tried and true X-Acto knife can get you out of a pinch with its razor sharp, stiff blade. It's ideal for cutting out decals, shaving off composite material, detailing and painting bodies, removing e-clips, and throwing at Dave when he tries to turn off your office light.



Needle-Nose Pliers:

A large and small set of needle-nose pliers has infinite uses. Popping off ball cups, removing axle pins, getting hard-to-reach fasteners, any time you need to apply a lot of force to a little area, these are valuable. You can make an exception to Man Law #1343 and buy Craftsman.



Car Stand:

Not only does it help you proudly display your ride, but a car stand is essential for wrenching on your RC. Not only does it hold the chassis in place without your car rolling around on the pit table, it lifts the wheels off the ground and prevents the car from suddenly taking off on you if you're working with the power on.



Temp Gun:

A temp gun is essential, especially in Nitro RC. More than anything, it brainlessly lets you know if your engine is out of tune or is simply going to melt. It is also useful for checking ESC and electric motor temperature. Plus, you'll find yourself bored on occassion, and you can temp gun everything around you. My nose is currently 94.1°F.



Soldering Iron:

In electric RC, you'll need a soldering iron for many applications: connectors, motor leads, battery packs—anything related to electricity. It can also be used to apply heat-shrink and light a cigarette, and can also burn the carpet (sorry Mr. P). It's not a bad idea to splurge a little and buy a good soldering station.



Flush Cutters:

Flush cutters are useful in removing axle pins, cutting and stripping wires, building shocks, removing parts from trees, cutting zip-ties and many more things. Grab a large one and a small one; they are essential tools.



Flywheel Tool:

Inevitably in nitro RC, you'll have to take your clutch apart. Instead of grabbing the flywheel with channel locks (refer to Man Law #1343) and grinding it away, get a multi-slot flywheel tool to hold the vertical posts in place so you can remove the crankshaft nut.



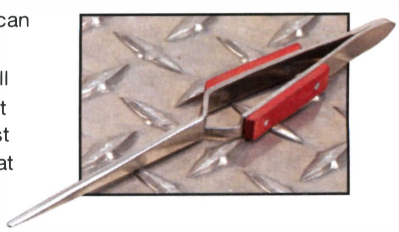
Sharpie:

A standard, black Sharpie is a must. It writes on almost any surface and is relatively permanent. It's great for differentiating front and rear wheels, touching up and detailing bodies, truing foam trees, and if nobody is looking—sniffing in the corner of my office! And if Matt Francis comes into the building, it's also good for signing your truck!



Tweezers:

For small, delicate jobs, tweezers are the perfect solution. They can be helpful while building diffs, placing o-rings, soldering small wires, and applying decals, but you'll mostly use them as a last resort for retrieving a screw that you've carelessly dropped into the only impossible-to-reach-spot on your chassis.



Igniter:

In nitro RC, you need a jump to get your engine started. A glow igniter, with a rechargeable battery, is an essential tool for breathing life into a nitro machine. Buy two and keep track of

What it takes to be a Champion.

What's the difference between a champion and a runner-up?

In most cases, it's how each reacts under pressure: The runner-up fails. The champion prevails.

And with all the championships to their credit, it's obvious that O'Donnell glow plugs *thrive* under pressure. The reason: an exclusive, patented method that makes O'Donnell glow plugs *airtight*. It does more than help them resist pressure; it actually *uses* pressure to make seals stronger and tighter.

Then, it makes sure they stay that way with hard-anodized aluminum seals that won't burn through. *That's* why O'Donnell plugs last longer. And it's *how* O'Donnell plugs eliminate compression loss, boost performance and keep carb settings consistent from starting tone to checkered flag.

Better performance under pressure: the hallmark of a champion — **O'Donnell.**





Premium Glow Plugs

Super Sport Glow Plugs

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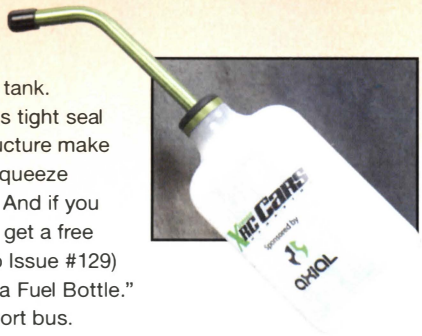
them! Between Derek, James and myself, we have two, and James paid for his. How does that happen? And splurging and buying an aluminum igniter with a charge-meter is a good idea.



Fuel Bottle:

You need a way to get the fuel from its container into the opening of the gas tank. Enter: the fuel bottle. Its tight seal and flexible plastic structure make it easy to siphon and squeeze out fuel into your tank. And if you subscribe to XRC, you get a free one in the mail (refer to Issue #129) for "How to Assemble a Fuel Bottle." No, I didn't take the short bus.



TOOLS YOU DIDN'T KNOW YOU NEED:

Digital Calipers:

RC is a game of millimeters. For measuring things like shock length, bearings, ride height, turnbuckles, shims, and anything else precise, pick up a set of digital calipers. Check issue 135 for even more uses—and don't be a pervert!.



Soldering Jig:

A soldering jig with alligator clips is an extremely helpful tool to aid in soldering. It can hold a connector and wires. Basically it acts as a third or fourth hand and makes soldering jobs much less frustrating, especially if things are still attached to the car.



Any Questions?



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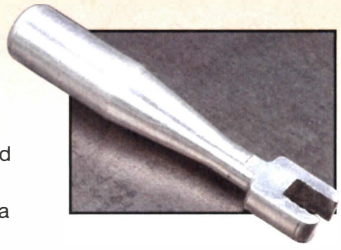
Mechanic's Gloves:



These are a turn marshalling must. Nothing can ruin your day at the track like getting burned by a pipe, spinning tire, or jamming your finger into some impatient racer's buggy. Also, protect your hands when using pull-starts; blisters burn like hell when nitro hits them.

Turnbuckle Wrench:



For making fine-tune adjustments on turnbuckles and camber links, avoid using pliers, as you'll gouge up the link. There are specific-sized wrenches that grip tightly and allow for precise tuning. When a .5° difference can throw off the handling of your car, accuracy counts and you need the right tool.

Reamer:

For body detailing, a reamer is a necessity. It is perfect for making holes for body posts, antenna rods and wing mounts. It is also excellent for starting a hole on a wheel cut-out or windshield on a nitro vehicle. You'll also find uses on the clutch and other locations.



Roto Tool:



The industry standard is the Dremel tool. This high-speed rotary drill has hundreds of bits that cut, sand, polish and grind just about everything. You'll use it in many places. In fact, when you first get one, you'll wander around looking for things to fix, breaking things in the process.

Spare Parts:



You're always losing and breaking things in RC, so it's a good idea to have plenty of spare parts on hand. Have a plastic bin full of Allen screws, e-clips, nuts, and set screws all sizes, standard and

Continued on page 48

Pro-Match racing

Pro-Match Racing has you covered when it comes to high quality RC Car batteries and accessories!

Pro-Match carries a wide variety of RC batteries including 7 cell, 6 cell, 4 cell, stick pack, 18th scale, 5th scale, and receiver packs. These packs are available in either matched or unmatched. You can choose one of our many standard configurations or contact us to order a custom made configuration. We also carry a full line of battery assembly, maintenance, and storage products.

This all adds up to giving you the perfect battery for your specific RC need. Choose Pro-Match Racing for all your RC Car battery needs and see why we say "Nobody *Does it Better!*"

transmitter cells | matched batteries | stick packs | receiver packs | loose cells



assembly products | battery bars | custom built configuration | battery cases

You can purchase Pro-Match products and get more information on-line at www.promatchracing.com or from one of our many dealers.

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REVO 3.3

Reduce the Overall Weight of Revo By Over 14%, and Add Strength and Dependability for Race Day.

(Truck shown with optional steel CV driveshafts and aluminum wheel nuts.)



Pivot Balls: These trick, hard-anodized 7075-T6 aluminum pivot balls are considerably lighter than the stock steel pivot balls. They feature a special Teflon®-coating that reduces friction allowing the suspension arms to pivot as smooth as possible. Part #4933X



Push Rods: These strong 7075-T6 aluminum push rods decrease the total weight of the truck by 31 grams. Rod ends are already installed making it simple to just bolt them on the truck. Various lengths available, see Traxxas.com.



Center Differential Kit: The center differential helps balance the distribution of power to reduce front end lift on acceleration and improve steering responsiveness. The kit includes a forward-only conversion to reduce transmission weight and make it legal for racing where reverse is not allowed. The center diff disables the rear brakes. It is designed to work with the separate rear brake kit for precise front and rear brake bias tuning. It's the ultimate in adjustability and control.

Part #5414 center differential, part #5417 rear brake kit, part #5394X forward only conversion (by itself)



TUBES:™ Traxxas Tubes™ are 30% lighter than the stock steel toe links, plus they're 4-times stiffer and more than double the strength of aftermarket titanium! The secret is in the unique patent-pending hollow tube design that maximizes stiffness and resistance to bending, while at the same time reducing weight. Part #5338R



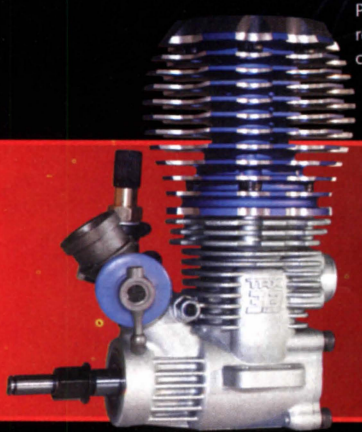
Rocker Posts: Aluminum rocker posts save 16 grams over the stock steel rocker posts without sacrificing strength. They're a great addition to any Revo® that's being trimmed out for the track. Part #5354X



Response™ Tires: Tremendous traction on hard packed "blue groove" tracks. Narrow width reduces rotating mass greatly improving acceleration & responsiveness. Soft compound, combined with the included foam inserts, make for a winning combination. Significant weight saving over stock tires. Part# 5471



Hollow Balls: Revo is equipped with multiple rod ends with steel hollow balls. All combined, the weight can really add up. This set of aluminum hollow balls will reduce that weight by 12 grams and maintain the original factory tightness in the rod ends. Part #5355X





For Pure Race Set-Up and Significant Weight Savings, Remove the EZ-Start® and Install the Aluminum Flywheel and Backplate.

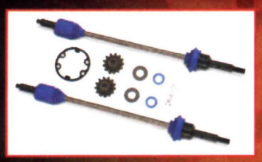
Removing the EZ-Start drive unit and installing our aluminum flywheel and back plate will greatly reduce overall weight. This modification requires the use of an electric bump starter and should only be used on models with unobstructed flywheel access. If your engine was originally equipped with a starter, a different crankshaft is required. More details on www.Traxxas.com.

Find These and Hundreds of Other Quality Genuine Traxxas™ Parts and Accessories at www.Traxxas.com.

Modify Your Performance Attitude



Aluminum Chassis: Titanium-anodized aluminum chassis, machined from the highest grade 7075-T6 aluminum alloy. More than 40% stronger and 10% lighter than the stock Jato chassis. Fully countersunk for a smooth, snag-free finish. Part #5522X



Steel CV Driveshafts: Steel CV driveshafts concentrate the mass for less overall rotational mass than the stock Jato driveshafts. This results in even quicker acceleration. The outside U-joint is lubricated and sealed by a rubber boot to protect it from dirt and grime. The U-joint pins are held captive by the ball bearings so you never have to worry about losing a pin. Unlike conventional metal shafts, the Traxxas metal CV shafts do not require you to limit your suspension travel. Part #5551X



Aluminum Turnbuckles: Enhance your Jato and save weight at the same time! These 7075-T6 aluminum turnbuckles come in a brilliant fire-red anodized finish and included a 5mm aluminum wrench that won't mar the finish. 35% lighter than titanium, and almost 19 grams lighter than stock steel turnbuckles. Part #5539X



Billet Front Wheel Spindles: Blue-anodized spindles have a definite performance look and weigh only 1.73 grams each– 36% less than the stock steel spindles! These wheel spindles are machined from strong 7075-T6 billet aluminum for durability. Part #5537X



Wheelie Bar Wheels/Tires: Red-anodized 6061-T6 aluminum wheelie bar wheels smooth-running ball bearings. Durable, soft compound rubber tires reduce side-to-side movement for stable, consistent wheelies. Rubber tires are available separately for installation on the stock nylon wheels. Part #5186, part #5185 (tires only)



Aluminum Wheel Nuts

JATO 3.3

Modifying Your Jato 3.3 With These Accessories Dramatically Increases the Power-To-Weight Ratio, Improves Handling and Control, and Upgrades the Look for Serious Performance.



Don't Forget Top Fuel! The Only 100% Traxxas Certified Fuel.

33% **For Race-Level Performance!**

TRAXXAS

www.Traxxas.com

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Continued from page 45.

metric. Getting a nice collection will give you way more driving time and less time on your hands and knees looking for a screw.

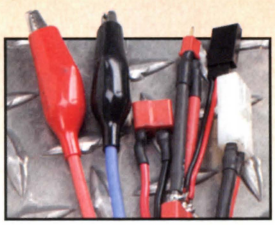
Long-reach Tuning Driver:

For tuning nitro engines, a flathead driver with an extra long shaft is the perfect tool, because it can reach into the carb no matter how high the body sits. Since a good portion of nitro setup time is involved with tuning, making it as easy as possible is a big plus.



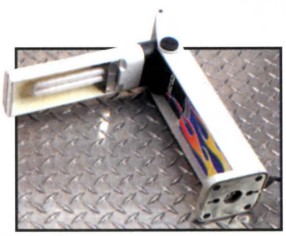
Multi Charger/Adaptor:

Deans Plugs, micro plugs, receiver plugs, zero loss plugs, you need a lot of different plugs in RC. Take the time and make a multi-function charging adaptor so that you don't have to make five different ones and search like crazy for them. This little bundle will be your best friend!



Pit Light:

Most of the time, the pits and your workbench are poorly lit. This doesn't work very well when you're dealing with tiny parts. You want to be able to see everything that you're doing. Getting a fluorescent pit light will help tremendously when working on your car or finding a diff-ball on the carpet.



Pit Mat:

To stay with the pit theme, buying a pit mat, or simply bringing a bath towel to the track, is a necessity. If you drop a part, it won't go rolling around on the table, and it helps to keep your pit area clean. You don't want to be resting your elbows and tools on a dirty pit table. Plus, you really look like you know what you're doing!



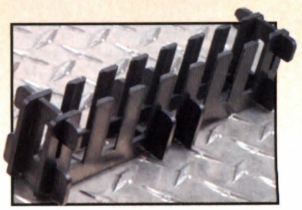
Sunglasses:

This really isn't a tool, but a pair of sunglasses can serve three purposes. The first is obvious. If you're on the drivers' stand during the day, you need a glare-free line of vision and don't want to be blinded by the sun. Second, they protect your eyes from the wind. (Blink at the wrong time, and you're into the wall at the end of a straight.) Finally, they keep dust out of your eyes. (If you see drivers wearing ski goggles, that's what they're for.)



Battery Building Jig:

When you advance to building battery packs, having a soldering jig is a godsend. It holds the cells upright and spaces them correctly, so soldering the battery bars in the right location isn't total guesswork. They're also very inexpensive.



Retaining Spring Hook:

The long spring that holds the manifold onto the back plate of your nitro engine is important, because it needs to create a tight seal, making an efficient exhaust. The spring is long, the tension tight, and you have to stretch it a great distance. Without the use of this retaining spring tool, removing or attaching the spring is easily a nightmare. And you could lose a cornea too!





Conclusion

Since tools are the backbone of our hobby, it's important to know which ones are most useful. If you're just starting out, you need just about everything in the first list—the obvious stuff. But there are always tools that are not so obvious, and that doesn't make them any less useful in RC. With time, you'll learn which tools you use most—warranting some cash and an upgrade to some high quality stuff. Other tools you'll only use occasionally, so you can be more efficient with your cash. And along the way you'll probably improvise and invent a few tools of your own. Innovation is what makes our hobby cool, and we all need the right tools to progress. ✪

Look at "Broke-Back Wort!" See? It's just as funny when I rip on myself!

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- Fully adjustable suspension and drive train for advanced competition

TF-5 Stallion:

- Ideal for rubber tire racing, indoors and out
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- Maximum adjustability to adapt to the widest range of track conditions
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- Front one-way and spool included in kit
- Legendary Kyosho quality

The LATEST

OPTION PARTS:

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TFW107 *Aluminum Center Bearing Holder (TF-5 Stallion)*



TFW051 *Aluminum Spool Shaft Set (TF-5)*



TFW102 *Aluminum Upper Bulkhead Set (TF-5 Stallion)*



TFW108 *Aluminum Spool Shaft Set (TF-5 Stallion)*

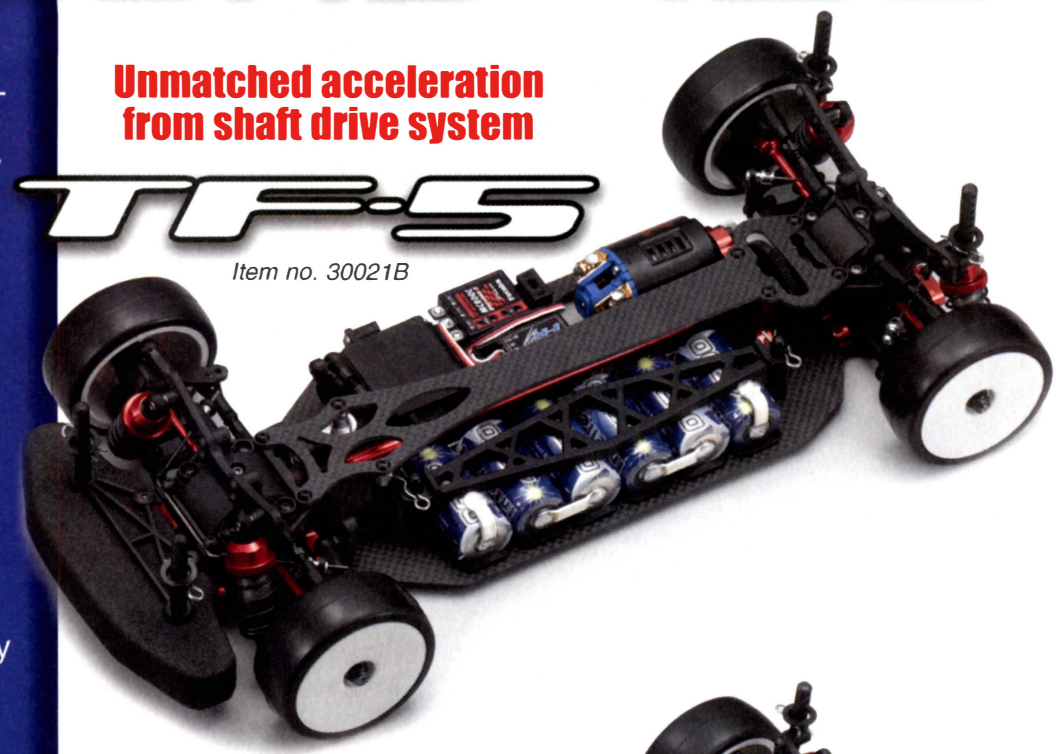


TFW001 *Aluminum Diff Shaft Set (TF-5 and TF-5 Stallion)*

Unmatched acceleration from shaft drive system

TF-5

Item no. 30021B



TF-5 STALLION™

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OFFROAD 4WD

LAZER ZX-5

ELECTRIC POWERED 4WD RACING BUGGY

Item no. 30076B

FEATURES:

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- Midship motor mounting for optimal weight balance
- Threaded aluminum shocks are durable, consistent and easily adjusted to adapt the suspension set-up to track conditions.
- Turnbuckle linkage for easy adjustability
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- Adjustable slipper for motors from mild to wild
- Stick or matched packs can be used in a convenient single six-cell pack configuration... no hassle with saddle packs



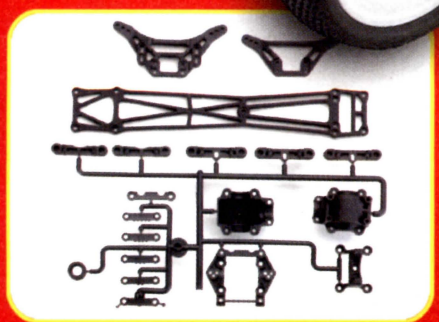
A one-way unit, ball diff and 3 spool types are included to allow you to choose the front axle setup to fit your driving style

Included wheels feature durable 12mm hex and fit standard 4WD off-road racing tires.

Competition-ready, right out of the box

The LATEST
Lazer ZX-5
OPTION PARTS:

For a complete listing of all the available Lazer ZX-5 options, visit ***KYOSHO.COM***



Molded carbon composite chassis and suspension components



LAW31 *Aluminum front suspension holder*



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FORTUNE COOKIE SAYS: *"Everything is funny as long as it's happening to somebody else."*

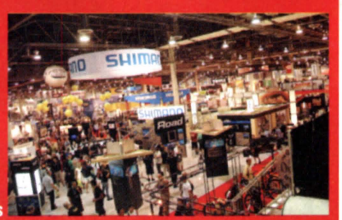
Words: Brian "Skinny" Skinner

What Is It About Trade Shows?

Don't you think our industry trade shows should be fun and joyous events? Like what I see at other trade shows? I go to several trade shows a year in different industries, and it seems as though the RC industry has such a hard time with trade shows. It's always something. "There aren't enough dealers." "There aren't enough consumers." And on and on it goes. This year I had the pleasure of attending the IHobby and Interbike trade shows back-to-back. After seeing these two shows, I found that our trade show has the ingredients to have a happy and healthy event, but it just needs some work to achieve what we're all looking for. Now don't get me wrong, the show we have is pretty good, but it should be a "must-go-to event" that dealers, consumers, and companies look forward to each year. Although, I did find a central issue that currently runs through all shows: it's getting the manufacturers together to grow the consumer base. I had a conversation with the president of the second largest company in the bicycle industry. He amazingly echoed the same sentiment I have said about our industry. He stated that the pie is small for all of the companies in the industry. He went on to say that they all needed to work together to promote bicycles and grow the pie, instead of fighting for the same customers. He thought the industry should work together as a team and expand customer base. I found that intriguing and hope that one day we can all work together. A great place for us to start is with our industry trade show. We can do it in an unbiased way through our trade shows, and it needs to be done. Here are some ideas for our industry that I gleaned from my comparison shopping at the Interbike Show and the IHobby trade show this year.

Just what we want to do at a trade show: go to class!

INTERBIKE SHOW VS IHOBBY SHOW



See how packed the show floor is. One reason is that the show is in Vegas, and that alone is a great reason to go to a trade show, if you ask me! In general, the bike industry has made going to the trade show a must-do event. It's fun and more like a party atmosphere for business transactions. Also, the booth space is usually a better deal for the companies. It seems as though there is a better cost per impression for this industry compared to ours.



Jay from Boca Bearings attends both trade shows and agrees that the bike show is better. We talked about the differences and one thing stuck out to both of us: the current hobby trade show battle between IHobby and RCX might contribute to the less than stellar turnouts. I agree, but when this battle ends, the industry as a whole will benefit with a stronger tradeshow. This happened in the 80's for bicycles and now it's better than ever!



THINGS TO DO AND SEE: The show is more interactive with the public and has a fun atmosphere. One booth had an arm wrestling display to show how strong their product is.

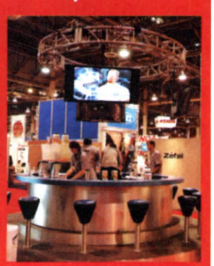




And yes, I got beat, but only right-handed!

BOOTH INTERACTION: Having a clever booth makes it fun and educational. Cytomax drinks had a bar set up to sample their products, plus a video to educate. It's functional and sexy, all in one. Magura did promotions "in booth" every two hours to educate the dealers on their new line of brakes, and yes, Magura makes 1/5 scale brakes for RC!







There's less of a crowd at IHobby, as you can see, but here at the Moser Morley booth, there is creativeness! One possible reason for low turnout is that the RC industry releases new products all the time, and there is no structure. If the RC industry as a whole were to do year-end product releases like most of the other industries, this might help create incentive to have a trade show to which dealers would come. Having the show in an area like Las Vegas would be helpful as well; it's more of a reason to close up shop and take a little "working vacation!"



Interactive displays like this help generate interest in products. To really sink the hook, it would be cool for dealers and consumers to be able to try a hand at it as well.

Star power! Having celebrities come to your booth is a good draw as well. Here at the Parma booth, my "boss editor type guy" is doing a demonstration of his painting skills. This draws a good crowd and is a good idea.



Did you know that there are seminars at the IHobby? Here's an untapped source that no one knows about but should be highlighted more. This can be a major draw for dealers to come to trade shows. It's a chance for them to learn valuable information on how to run their shop better and to learn about new products for the year. It would be nice to have two different types of seminars. There could be "neutral" seminars just for educating dealers on topics such as sales techniques, shop displays, stocking merchandise correctly, and promotions; and specific seminars to educate dealers on their product for the year, or how to better use and sell them. This year's seminars were self-serving and that's alright, but we need unbiased, "neutral" seminars to help draw more dealers–and they need to be promoted! This brings me to another idea. Since the industry honchos are there, why not do some meetings on how to promote the sport side of our hobby—like racing—or how to get the hobby out in front of the masses, like ESPN, or FOX, or...?





One thing is the same for all trade shows, and that's the food! This will never change. Hotdogs are the staple for any good trade show!

BCE RACING PRODUCTS



BCE RACING PRODUCTS is a new kid on the block for RC racing, and they have a sweet line of products for your race car. In this photo we have the new chassis for the HPI "Hell Fire" truggy (Wow, I got to say Hell Fire in print!). This is a sweetly machined aluminum chassis that's heavily machined to keep the weight down, while still offering rigidity for the demands of competition. BCE also offers other neat goodies for your RC, such as aluminum shock towers and chassis for different car brands that are available in black and hard anodized colors. If you need some upgrading for the new race season, check out BCE at: www.rcracingparts.com for more information.



A Norman Rockwell Moment

Congratulations to Jeremy Kortz and girlfriend Lura. You probably know Jeremy Kortz as one of the fastest 1/8-scale drivers in the world, but now you can know him as a proud papa. On 12/4/06 the couple gave birth to baby *Dane Kortz*. According to Grandpa Gary Kortz, early reports were that Kyosho and Pro-Line were already in negotiations with Dane Kortz, but could not be confirmed. Thanks for the information, Grandpa Kortz!

Left to right; Grandpa Gary Kortz, daughter "Little Nikki" Kortz, and proud papa Jeremy Kortz.

The Cover Girl of Promotion

Here's another cool thing I'm seeing more of at major events, and it's called promotion! Airtronics had Ronda Skelton do a little PR work in-between her racing duties, handing out some Airtronics goodies to the drivers and spectators. This is a trend I hope will continue and others will follow. RC is at a crossroads to the next level and we all need to do our part.



RICKY BOBBY RACES A REVO?

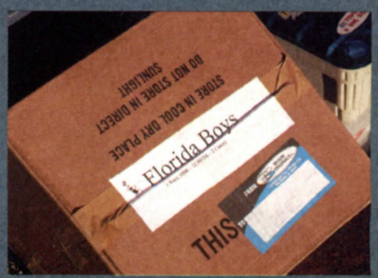
Morris Spears from Momo Designs sent me a photo of his newest creation called "Ricky Bobby" in honor of the movie Talladega Nights: The Ballad Of Ricky Bobby. Since Morris does a lot of work for Talladega Speedway, he thought Ricky's Wonder Bread paint job would be fitting. I have to agree. The Revo looks sweet with Ricky Bobby's paint job, and I look forward to racing against Morris at the upcoming Alabama Indoor Classic 5.0. Maybe I'll be Jean Girard the evil Frenchman, there to dethrone Morris and his Ricky Bobby Wonder Bread Revo!





BYRON FUEL IS PRETTY COOL

Not only does Byron Fuel work well, but the company has a good sense of humor to boot! I noticed that at the last few events, the team fuel for the drivers would show up with funny labels on them that put a smile on your face when you picked up your stash of fuel. Later I found out that it was marketing girl Bobbie (not to be confused with Ricky Bobby!) who was sending cool and funny labels to the drivers so they would know this was their fuel. As you can see, this fuel was for the Florida boys. It definitely makes finding your fuel easier at events, and I'm sure the racers get a kick out of it. It's nice to see attention to detail like this, and I thought y'all would like to see a little behind-the-scenes humor that Bobbie dishes out with a smile!



After our articles with Ronda, everybody else wanted to do articles with her.

GOT A QUESTION OR IDEA?

If you need the skinny right now about what's going on in RC, or have a burning question you need answered, just log onto Xtreme's website at: www.rc411.com and look for "Ask Skinny." I'll be happy to answer your question on line, and it may even wind up in the magazine. Of course, this will help keep my cell phone bill down and help you get an answer to your thoughts.

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FACTORY ASSEMBLED 2WD
1/10 SCALE ELECTRIC RTR

With electronic ESC



- Full ball bearings
- Racing ball differential
- Fully threaded aluminum shocks
- Completely countersunk, molded chassis
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- Factory painted and trimmed body
- Adjustable servo saver assembly
- Race Inspired suspension
- Low profile transmission
- Adjustable slipper clutch
- 48P Spur gears accept aftermarket pinion gears

#145612

$129.99*

INCLUDES
- Solid state electronics ESC (20T) fwd. & rev.
- Pistol grip radio

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Check out XTM's full line of R/C Cars and essential accessories.
www.teamxtm.com







Get more information on line at: teamxtm.com. Purchase XTM products at your local hobby shop. To find a hobby dealer near you, log on to: globalhobby.com. Dealer inquiries invited. If you have a bona fide hobby shop, contact Global via email: service@globalhobby.net; or simply write to: Global Hobby Distributors, 18480 Bandilier Circle, Fountain Valley, CA 92708. Contents ©2006 Global Hobby Distributors.
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MAMMOTH ST

FACTORY ASSEMBLED 4WD
1/8 SCALE NITRO RTR

- XTM 24.7 engine with tuned pipe system
- 2-Speed transmission for awesome speed
- Low center of gravity for awesome handling
- Double chassis bracing front and rear
- New upper arm design for more precise handling
- Fully threaded, oil filled, aluminum shocks with 3.5mm shafts
- Gearboxes allow easy differential removal
- Steel differentials
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#145619

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- Pistol grip radio

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FACTORY ASSEMBLED 4WD
1/8 SCALE NITRO RTR

- XTM 24.7 engine with tuned pipe system
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- Full set of rubber-sealed ball bearings in the drive line
- Factory painted body
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- Lay down steering servo for lower CG
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- Cup style differentials
- Aluminum header and tuned pipe
- Heavy duty front and rear bracing
- Hex head screws
- Sealed receiver & battery box



#145625

INCLUDES
- XTM 24.7 Engine
- Pistol grip radio

$299.99* **40mph**

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*Prices may vary, subject to dealer participation. Limited time offer. Prices and specifications and availability subject to change without notice.

XTM Racing®

WWW.TEAMXTM.COM

In The Dirt, our monthly department dedicated to nothing but off-road racing: electric and nitro. Look for In The Dirt every month for the latest on new parts, kits, racer tips, off-road news, and off-road how-to's. *Got something you want to see In The Dirt? Email me at MikeW@rc411.com.*

Words: Michael Wortel

"Avid Joey Christensen followers"...sounds like a cult!

Change of Venue:
The Dirt Nitro Challenge

If you're an avid Joey Christensen follower, you'll know that his track, "The Dirt," in Hemet, California, is no longer host to "The Dirt Nitro Challenge." But don't go running for the razors yet; it has just moved a few hundred miles East.



Dubbed "The Dirt 2007 Nitro Challenge," the race has moved to "The Nitro Pit" in Wittman, Arizona, a suburb of Phoenix. The race is slated to run from February 20-25th. Although the location is different, this promises to remain a world-class event, featuring some of the best drivers in RC.

If you're planning on entering the race, hurry up! The flyer can be found on The Nitro Pit's website.

www.thenitropit.com



PIMPIN' Pro-Line

New Duds



How factory are you? That's a serious question! If you want to adorn yourself and look like your favorite Pro-Line driver, check out this latest t-shirt design. With Pro-Line's insignia proudly displayed across the chest and directly below the neck, your track buddies will quickly know where your tire and body alliance lies. Take a page out of the book of some of the world's fastest drivers and sport your Pro-Line colors once and for all.

Part #: 9962-02(-05)
Street Price: $21-$23
Sizes: Medium-XXL

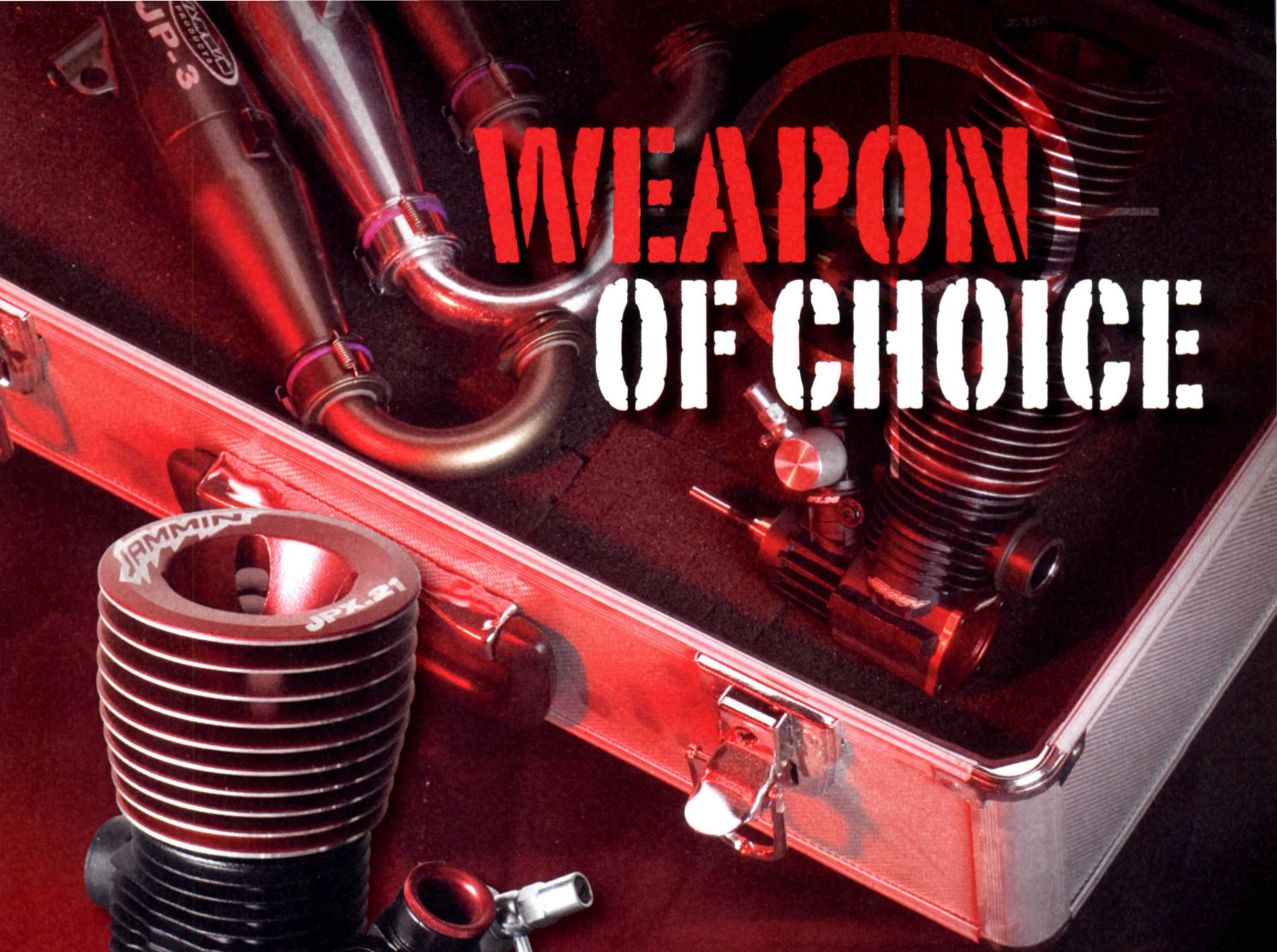
Desert Rat

Monster trucks are cool to bash with, but when you're ready to step it up on the racetrack, you need a body that is intended for "go," and not simply for "show." Pro-Line's new racing MT body, the Desert Rat, is more sleek and low profile than stock bodies. It is also constructed using .060" Lexan for lightweight racing while still retaining durablity. The pick-up truck body coupled with realistic features such as side mirrors makes an average MT look like a true Baja machine. The Desert Rat will accommodate the REVO 3.3, MGT, LST-2, TNX, Genesis and Warhead.

Part #: 3235-00
Street Price: $33



WEAPON OF CHOICE



#51250 (.21)
#51251 (.28)

NEW JPX .21 AND JPX .28 RACE ENGINES ARE HERE!

- Developed by Jay Halsey
- Engineered for the rigors of off-road racing
- Class leading materials
- Unique crank timing
- Designed and tuned for both excellent top-end power and low end grunt
- Turbo Plug type head included
- .21 is a perfect choice for buggies
- .28 is made for big block performance, but still easy to drive
- Turbo Glow plug included
- Excellent fuel mileage
- Made in Italy

NEW JP-3 TRIPLE CHAMBER EXHAUST

After tireless months of testing the, Jammin' JP-3 in-line Hard Coated pipe is ready to take on the world.

- 3-Chamber Design
- Designed for Full Range performance
- Made of thick, hard coated aluminum
- Jammin' Signature CNC outlet for durability
- Smooth Flow manifold, flexible pipe mount, and mounting spring included



#10054 (JP-1 HC)
#10055 (JP-1 POL)
#10045 (JP-2 HC)
#10046 (JP-2 POL)

#10051 (JP-3 HC)

- JP-1 Excellent for Low to Mid Range
- JP-2 Excellent for Mid to Top Range
- JP-3 Low to Top Power
- JP-1 and JP-2 both available hard anodized or polished, ROAR and IMFAR approved

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How Fast is "Silly Fast" ?

- ***Ready to Run***
- 40+ mph speeds
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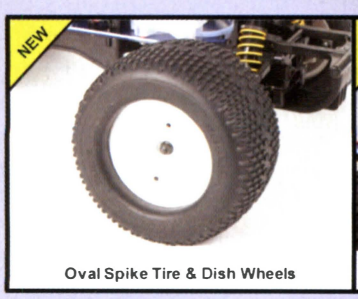
- New narrower truck body design
- New narrower main chassis
- Improved weight distribution
- 100 grams lighter than original TNX
- Fully adjustable pillow-ball suspension
- Ultra tough steel spur gear
- 2-speed transmission
- New steel dog-bones
- 150cc fuel tank
- 4WD

TNX 5.2R





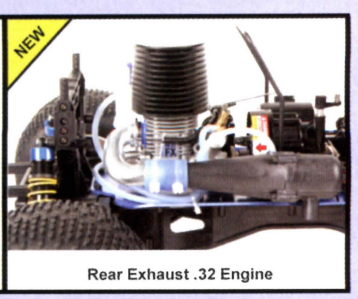
Oval Spike Tire & Dish Wheels



Large Capacity Oil Dampers with Threaded Shock Body



Two Channel Radio with Failsafe System & External Starter



Rear Exhaust .32 Engine

For more information, please visit us at

www.tamiyausa.com

2 Orion, Aliso Viejo, CA 92656-4200 (800) 826-4922

TAMIYA

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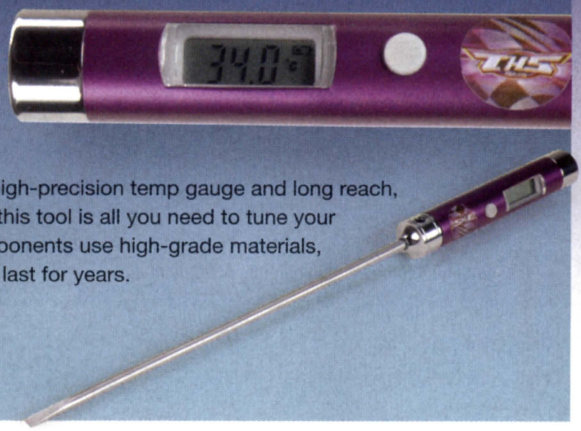
THS Racing TempDriver

No, your eyes aren't playing tricks on you. THS Racing has developed a multi-function, two-in-one nitro tool that you'll wonder how you lived without. Combining a high-precision temp gauge and long reach, flat head tuning driver, this tool is all you need to tune your nitro engine. Both components use high-grade materials, so your investment will last for years.



Part #: THSRP120
Street Price: $69.95
Available Now!
www.thsracing.com

OFNA HIGH-FORCE Wings

1/8-scale buggy and truggy is currently the focal point of our industry, and OFNA, a long-time nitro player, has released a series of wings designed for the burgeoning classes. The name of the game is increased down force, which will result in keeping the rear end planted on the track. The wings are available in four colors and made of thick yet flexible plastic, ensuring durability.



Part #16015(-8)
Street Price: $15.95
Available Now!
www.ofna.com

2007 Southern California Saturday Series

Even though the 2006 season has just recently come to a close, we're already looking ahead to '07. This year's Saturday series once again promises to bring the best drivers out of the most competitive RC region in the Nation. You'll see guys like Drake, Kortz, Smolnik—the list goes on. You're also bound to see some of the fastest RC editors grudging it out amongst themselves as well.

In the past, the series was held at three well-known venues, but "The Dirt" in Hemet, California isn't on the docket for this year. Instead, the series will be held solely at Pro-Line's facility and "Thunder Alley," both located in the Southern California desert. By the time you read this, the official race flyer and format will be available on Pro-Line's website. (www.pro-lineracing.com)

Here's what we can tell you:
Race #1: April 28, 2007 @ Pro-Line
Race #2: June 9, 2007 @ Thunder Alley
Race #3: July 28, 2007 @ Pro-Line
Race #4: August 11, 2007 @ Thunder Alley
Race #5: September 1, 2007 @ Pro-Line
Race #6: September 29, 2007 @ Thunder Alley



X



X STOCK PRO, EP1166
Meets All ROAR/ARCOR specs
27 turns, 22 awg wire.
40 lamination "X™" Armature.
24 degree locked timing.
Drill balanced.
Reduced surface bushings.
More rpm than Monster.

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Fastest stock motor in the world where rules are not an option!

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WARHEAD EVO™

1/8 SCALE READY-TO-RUN 4WD NITRO MONSTER TRUCK WITH REVERSE





No competitor could match the original Warhead's ability to excel at racing AND tackle off-road action. Still, DuraTrax continued looking for more innovations — leading to the evolution of greater performance and strength. Here's just a hint of what's in the heart of this beast!

For more information and the location of a dealer near you, visit www.duratrax.com or call 1-800-682-8948 and mention code number 2373D.

www.warheadmt.com



Included for quick shaft starting (also starter box compatible)



ADJUSTABLE SLIPPER CLUTCH
Offers more cooling and traction control and solid protection for your gears.



3-SHOE RACING CLUTCH
Inspired by 1/8 scale racing. A dedicated spring for each shoe ensures fast, positive engagement.

★ THREE SHOE RACING CLUTCH
★ IMPROVED ADJUSTABLE SLIPPER CLUTCH
★ RACE-LEGAL 165CC FUEL TANK

• 7075 ALUMINUM SIDE PLATES
• 8 RAPID-TUNE™ ALUMINUM OIL SHOCKS
• POSI-SHIFT™ 2-SPEED REVERSING TRANSMISSION

★ = New features to the Warhead Evo • = Features continued from the original Warhead

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WARHEAD EVO

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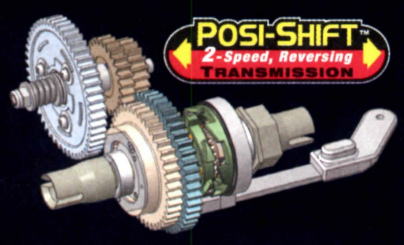
4.4 cc G-27CS RACING ENGINE



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with high-torque SX-200 ball bearing, metal gear steering servo



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- ALUMINUM RACING TUNED PIPE
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MONSTER PIT, our monthly department dedicated to nothing but monster trucks: electric and nitro. Look for Monster Pit every month for the latest on new monster parts, kits, racer tips, off-road news, and off-road how-to's. ***Got something you want to see in Monster Pit? Let me know at JamesR@rc411.com.***

Words: James Revilla

We're Finally Done!

This month I decided to give everyone a sneak peek at next month's super crawler battle extravaganza. After months and months of designing, machining, waiting, lagging, forgetting, remembering, and doing other important stuff around the office (like sleeping), both chassis finally came to life.

There were more than a few hurdles to overcome, so give us a break if it took so long! First of all, we had to find the necessary machinery to make all of our custom parts. Then there was the issue of my truck being redesigned about 20 or so times, since every time I'd show Dave, he'd "help" by telling me that something I drew up wouldn't work. Finally, well remember, we do have day jobs bringing *Xtreme RC Cars* to you every month, so free time is usually at a minimum.

We'll probably be tackling the rocks by the time you read this. I won't go into any more details yet—we'll save that for the feature. In the meantime, here are a few pictures for you to drool over. Oh, and if you look closely, you'll also see our crawler chassis' too.









Tricia didn't mind our trucks crawling all over her. She does a good pirate too.

Servo Tech

Micro Servo Education

HiTEC 101
Education Series 2 of 3



Welcome back to Servo Tech 101. Today's lesson is on Micro Servos. With the current popularity of 1/18th scale Sedans, Trucks and Buggies, it's clear the need for strong, reliable and precise Micro Servos is at an all time high. Hitec invites you to dissect our Micro Servo line and review the following facts about Micro Servo technology.

Want to learn more? Go to **www.hitecrcd.com/education** for the complete Servo Tech Education Series.

BETTER!

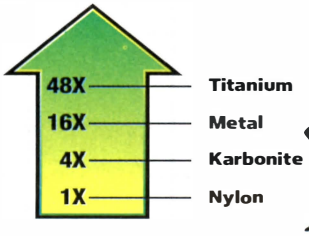
GEARS - NYLON, KARBONITE, METAL



Last time we shared information on the relative strength of Hitec's different gear materials. Let's review that information. Check out the chart below to help explain the strength factors of the different gear materials. Hitec Micro Servos use either nylon, Karbonite or metal gears. Need precision and smoothness? Try the HS-56HB and HS-65HB Karbonite gear servos. Want strength? Use the HS-65MG or the larger HS-81MG metal gear servos.

Gear Strength

Servo Gear Material
Relative Strength Index



SWEET!

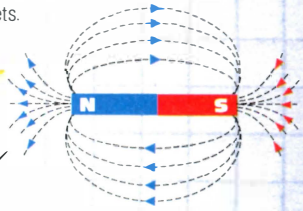
NEODYMIUM MOTOR MAGNETS



Ever wonder how Hitec packs so much torque into those tiny little servo cases? Hitec's HS-56HB and HS-65 series servos use three pole motors featuring incredibly strong Neodymium rare earth magnets. Neodymium magnets are also known as "supermagnets" so it's worth a little extra cost for the increased performance gained from using Neodymium magnets.

Neodymium Magnets

Stronger Magnetic Forces
Equals Higher Torque



the Best



HS-55

A great replacement for the stock servo that comes with the Mini-T.

Losi Mini-T



HS-56HB

Karbonite gears, high speed and torque make this servo a great choice for 4WD trucks like the 18T and hopped up Mini T's.

Associated 18-T



HS-65HB/HS-65MG

Designed specifically for the mini cars and trucks; this servo is as good as it gets! Use the metal gear version on larger 1:16th vehicles or highly modified 1:18th trucks.

Kyosho Mini Inferno ST



HS-81MG

← AWESOME!

A mainstay for the mini cars and trucks since their introduction. Although slightly larger, they are well known for their durability and massive torque.

HPI Micro RS4 Sedan



MODEL	TORQUE*	SPEED*	GEAR TYPE	SIZE LXWXH	WEIGHT
HS-55	18oz	.14	Nylon	0.9"x0.5"x0.9"	0.28 oz.
HS-56HB	17oz	.10	Karbonite	0.9"x0.5"x0.9"	0.39 oz.
HS-65HB	26oz	.13	Karbonite	0.92"x0.45"x0.94"	0.39 oz.
HS-65MG	26oz	.13	Metal Gear	0.92"x0.45"x0.94"	0.44 oz.
HS-81MG	42oz	.09	Metal Gear	1.2"x0.5"x1.2"	0.67 oz.

*Torque and Speed Specs at 6V

Visit **www.hitecrcd.com/education** for more detailed servo info.

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Hinge Pins

Precision ground and polished 6AL 4V American Titanium. Exact fit in both metric and standard sizes.

3005	RC10 B4/T4
3006	RC10 B4/T4 Inner Front-2
3007	RC10 B4/T4 Inner Rear-2
3012	RC10T2/GT
3031	RC10 TC3
3032	RC10 TC3 2-Inner Front/Rear
3033	Nitro TC3
3034	Nitro TC3 2-Lower inner Front/Rear
3035	Nitro TC3 2-Upper Inner Front
3036	Nitro TC3 2-Upper Inner Rear
3037	RC10 TC4
3056	XXX-4
3057	XXX-BK2
3066	XXXT MF2
3067	XXX-T
3068	XXX-NT
3072	XXX-S
3073	JRX-S



Turn Buckles

CNC machined from 6AL 4V American Titanium. 3mm left and right hand threads. Guaranteed for replacement if broken or bent.

2005	RC10 B4
2012	RC10 T2 / T3 / GT
2014	RC10 T4
2031	RC10 TC3
2033	Nitro TC3
2037	RC10 TC4
2056	XXX-4
2057	XXX-BK2
2067	MF2 / XXX-T
2068	XXX-NT
2072	XXX-S
2702	Traxxas Nitro Rustler
2703	Traxxas Nitro Stampede
2722	Traxxas Rustler
2723	Traxxas Stampede
2073	JRX-S

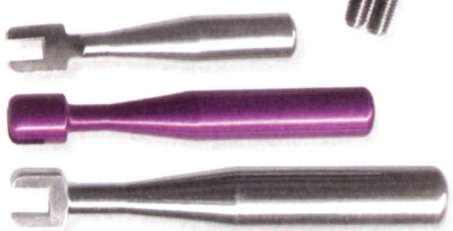


Turn Buckle/ Hinge Pin Kits



All the Titanium goodies plus a free aluminum billet wrench.

4005	RC10 B4
4012	RC10 T2/GT
4014	RC10 T4
4031	RC10 TC3
4033	Nitro TC3
4037	RC10 TC4
4056	XXX-4
4057	XXX-BK2
4066	XXXT MF2
4067	XXX-T
4068	XXX-NT
4072	XXX-S
4073	JRX-S



Wrenches

9901	Punisher Wrench
9902	Punisher Pro Wrench (the purple one)
9903	Sport Sedan Wrench (the little one with the flat head)

LUNSFORD



Check out our completely revised web site:

www.lunsfordracing.com

2500 Three Lakes Rd. Suite A, Albany, OR 97322

Foam on the Inside



The other day I was mounting up some monster truck tires, and after about three minutes I got annoyed with having to trim the standard block of foam insert. If I had waited until today, I would have simply gotten Pro-Line's new molded inserts for standard and 40 Series tires. Designed to handle hour-long main events, these inserts are reusable and a lot easier to use.

MT Molded Foams
Part: #6123-01 (40 Series); #6198-01 (Standard Series)
MSRP: $9/pr.
www.prolineracing.com

Hurricane Comin' Through



If you're looking for trick, lightweight aluminum wheels for your truck, check out SPI Racing. Made of 6061 material and coming in at about 98g each, SPI's "Hurricane" wheels (shown here) are made to tear up the track. These wheels will bolt up to most 14mm hex-equipped rides. SPI Racing also does custom wheels, if you want that one-of-a-kind look!

Hurricane Wheel
MSRP: $95/set of 4
www.spiracingwheels.com

Custom GT-1

So you got HPI's fresh new Wheely King, but your neighbor has one too and they look the same. What to do? Easy. Thanks to HPI, you can now get the Mini GT-1 in clear, non-painted form, so you can spray on your own scheme. The body comes with die-cut vinyl decals, overspray film, pre-cut vinyl window masks, and even dimple marks for body post drill locations so you get it fitting right the first time.



Mini GT-1
Part: #7122
MSRP: $25
www.hpiracing.com

WACK IT

Crawler alert: check out Pro-Line's new Bushwacker body for Traxxas T/E-Maxx and HPI Savage line of vehicles. Designed to emulate one of the more popular body styles in the rock-crawling community, the Bushwacker can also be the center of your scale project. Pro-Line bags the shell complete with detailed decal sheet and overspray film, and is made from .060 Lexan.



Bushwacker
Part: #3231-00
MSRP: $32
www.prolineracing.com

JEFF CUFFS WINS STOCK TOURING @

The US Indoor Championship in Cleveland, OH



Cuffs' uses Intellect World Champion Batteries

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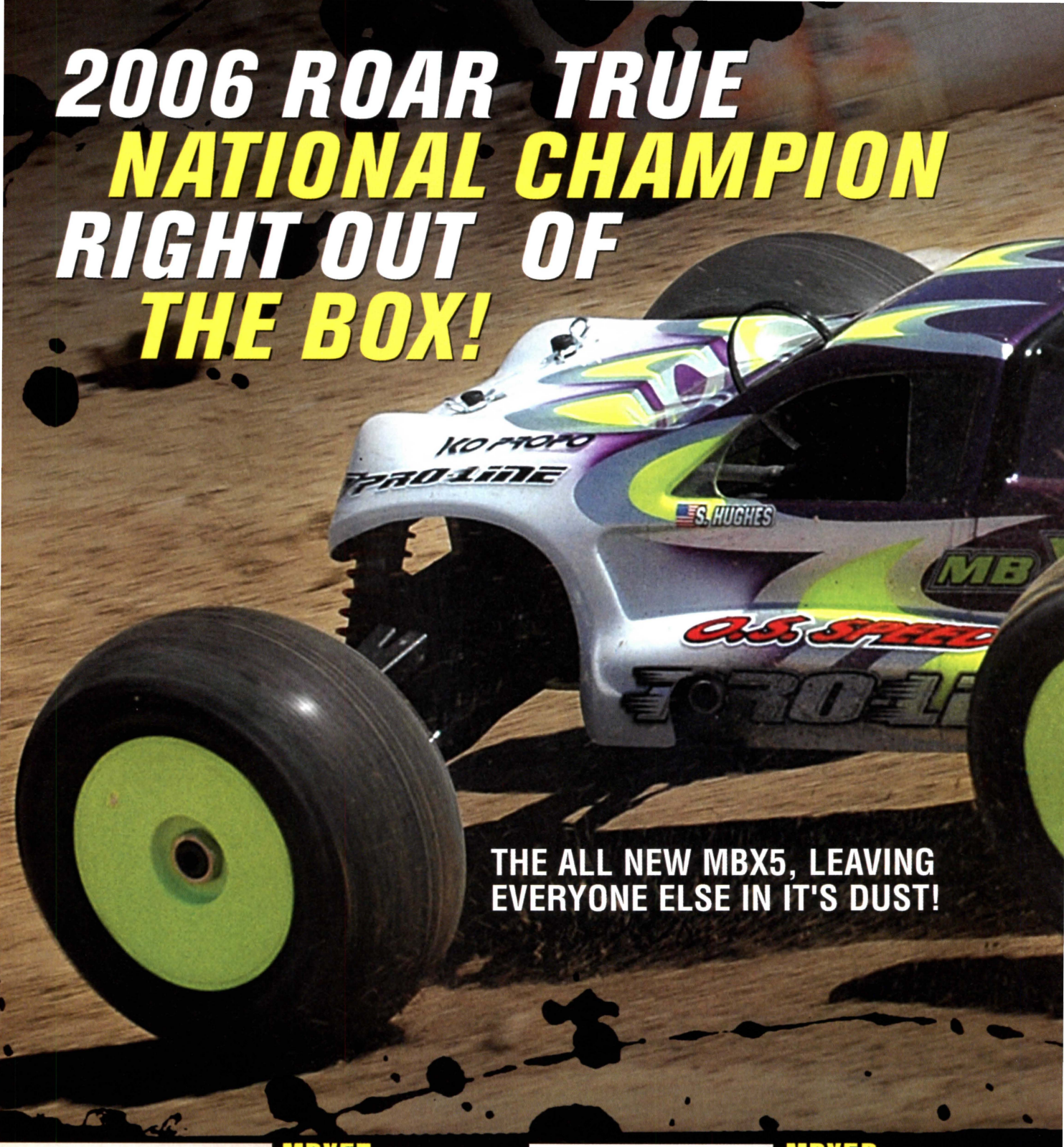
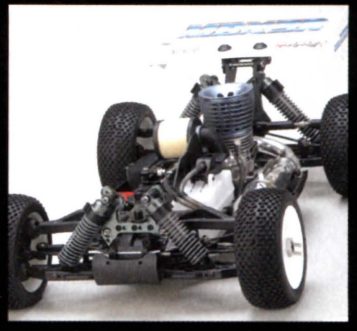


THE ALL NEW MBX5, LEAVING EVERYONE ELSE IN IT'S DUST!



MBX5T

- 3 Diff. Shaft Drive 4WD
- Long Suspension Arm
- Universal Joint (Front/Center/Rear)
- Long H.D. Damper (Front/Rear)
- A70-75 (T6) 3mm Main Chassis
- Tension Rod (Front/Rear)
- 2pcs. Center Diff. Mount
- 3pcs. Al. Clutch Shoe
- Nylon Wing
- 150c.c. Fuel Tank (Filter-equipped)
- Ball-Raced



MBX5R

3 Diff. Shaft Drive 4WD
- Universal Joint (Front/Center/Rear)
- H.D. Damper w/3.5mm Damper Shaft
- A70-75(T6) 3mm Main Chassis
- A70-75(T6) 3mm F/R Damper Stay
- Receiver & Receiver Battery Box
- 3PC Al. Clutch Shoe
- Carbon Radio Plate
- Carbon Center Diff. Mount Plate
- Carbon Steering Brace
- 2PC Center Diff. Mount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- Displacement .....3.49 ccm
- Rotation max .....43.000 rpm
- Stroke .....16.79 mm
- Bore .....16.27 mm
- Ports.....5
- Sleeve .....ABC
- Crankshaft Diameter ....14 mm
- Glow Plug Type.....Conical
- Exhaust .....Rear
- Carb. Diameter.....7.5 mm var.
- Carb. Material .....Aluminium
- Adjustment.....Single
- Weight .....363 g
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Lake Forest, CA 92630, U.S.A. Phone: 949-707-5607
Fax: 949-707-5614 website www.mugenracing.com

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Domination like this takes True Desire
True Commitment...and... Truespeed.



Congratulations Paul!

King of the Hill!

Congratulations to Paul Lemiux and Truespeed Motors for their excellent results at the recent IIC in las vegas NV. Paul took the TQ honors in both the Modified foam TC class and the Modified Rubber TC class. After a perfect qualifying effort he than drove his Truespeed motors to the Overall win in the combined classes claiming the 2006 IIC King of the Hill award and the $700.00 in cash that came with it!









2005 US Indoor Championships,
Cleveland Ohio MOD SEDAN, TQ, 1st Place
2006 NOVAK US Touring Championship,
Milwaukee, WI MOD SEDAN, TQ, 1st Place
2006 SNOWBIRD Nationals,
Orlando, FL MOD SEDAN, TQ, 1st Place
2006 IFMAR ISTC World Championship
Collegno, Italy 1st A Final #2, 3rd Overall

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www.customwo

RUMOR MILL

You've heard us talk over the past year about the **gradual acceptance** of 2.4GHz radio systems in touring car racing. These systems have worked wonders outdoors in nitro racing, especially off-road, but thanks to a few initial problems they've remained **somewhat taboo** in the world of electric (and even nitro) touring. The end of 2006 saw the release of Futaba's new 2.4GHz system, which introduced something new to the spread spectrum RC market: competition. We've loved our Spektrum systems since the day we got them, but just like in any marketplace, you know that something is **really taking off** when there are a few major companies in the arena, and 2.4GHz is no exception. Already, a number of *big names* are running Futaba's system, including Paul Lemieux, who has proven once and for all that **these things work**.

With the new year having just gotten underway as we go to press, the RC version of **"silly season"** is bearing down on us. Many professional drivers' contracts expire at the end of the year, so we expect to see a bit of shuffling in the months ahead. We already know that Mike Dumas, one of America's premiere on-road drivers, will be running Trinity motors and products in 2007. Meanwhile, Tamiya retained its star driver, Marc Rheinard, for 2007, while *many-time champion* David Spashett has decided to semi-officially retire from racing, choosing, instead, to spend time with his family. He'll continue to support Tamiya's on-road team in a consulting role.

Finally, **three big kits** to watch for this year: the TC5, the Mi3, and the new RDX. **Start saving!**

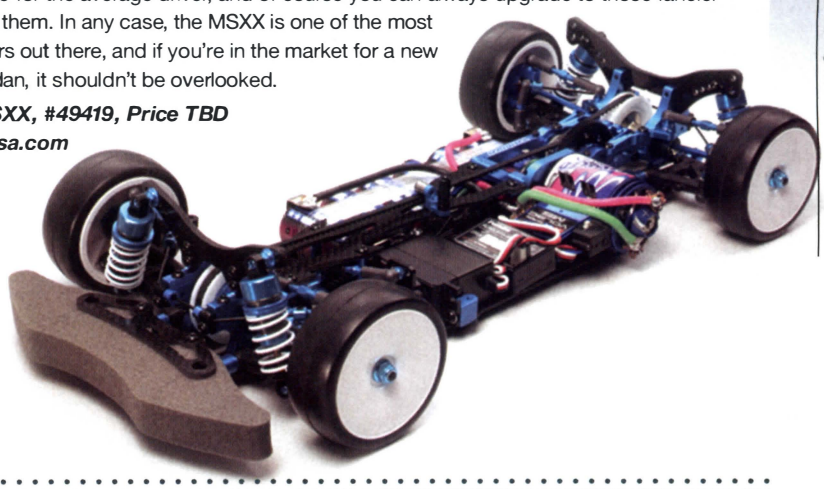
Want to cut to the chase and see what's new in the on-road scene? Just flip to these pages each month and you'll get all the latest news, gossip, and products on the market. From the latest body to the newest speed secret, you'll find it here. ***If you've got a tip, secret or new part you'd like to see here, just email ShaneA@rc411.com.***

Words: Shane Archer

TAMIYA MSXX

Remember the awesomely shiny Tamiya 415MSX Marc Rheinard Edition from a few months ago? Well, the bad news is that it was a limited edition and now it's sold out. However, the car was so popular that Tamiya decided to produce a more permanent version—the new MSXX. For the most part, the new car is a carbon copy of the Rheinard Edition, but with dual ball bearing differentials instead of the earlier car's one-way, and with steel screws and axles throughout the car instead of titanium. Also, the MSXX does not include the Protoform Mazda 6 body that the earlier MRE did. These small changes should help keep the cost a bit more reasonable for the average driver, and of course you can always upgrade to those fancier bits if you need them. In any case, the MSXX is one of the most capable racecars out there, and if you're in the market for a new competitive sedan, it shouldn't be overlooked.

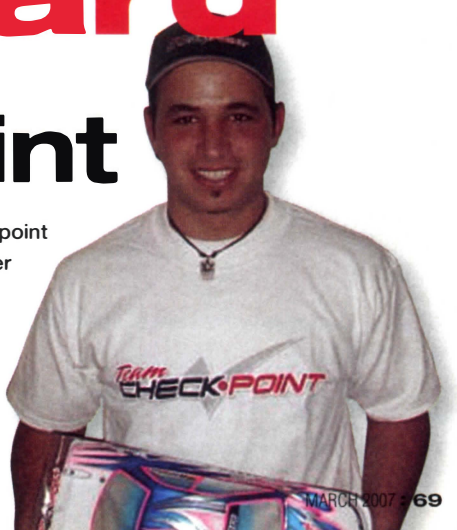
Tamiya 415MSXX, #49419, Price TBD
www.tamiyausa.com



James will wait one generation for the "MSXXX."

Rheinard Chooses Checkpoint

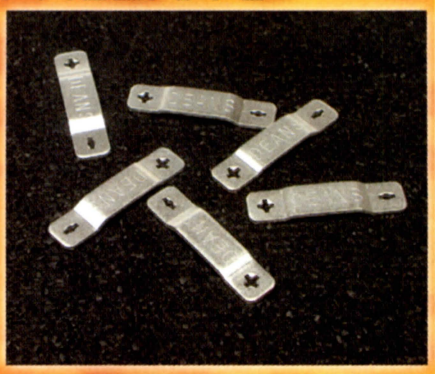
Relative motor newcomer Team Checkpoint made international RC headlines this past December by signing World Champion driver Marc Rheinard to an exclusive electric motor deal. Marc will run Checkpoint motors in his Tamiya sedans at races all around the world in 2007, and according to reports, both parties couldn't be happier.



EASYWIRING 101

All Deans products are designed and manufactured to exacting tolerances, to give you unmatched quality and performance. From the legendary Ultra Plug, to the innovative Speed Jig, and now the ProBar 3, each product was created with one goal in mind... TO BE THE BEST!

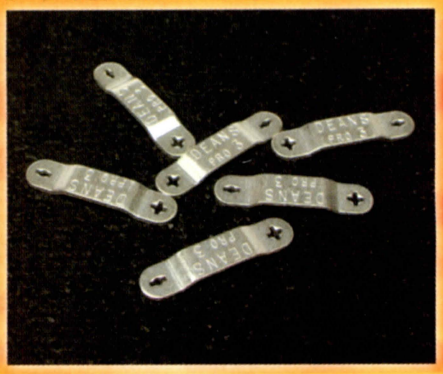
PROBAR 2™



Plated to military specs., the ProBar 2.0 is designed for RC1700, RC2000, RC2400 and similar cells.

#1600 .....6pcs
#1601 .....25pcs
#1602 .....100pcs

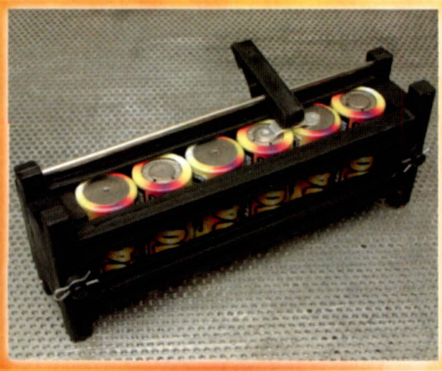
PROBAR 3™



Plated to military specifications. The ProBar 3.0 is designed for RC3000H cells.

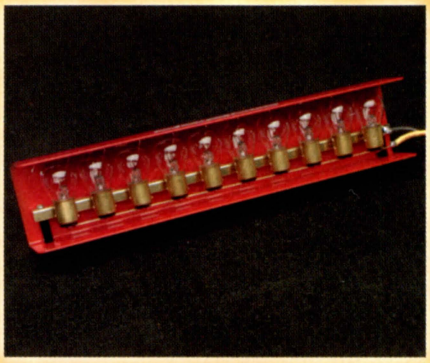
#1610 .....6pcs
#1611 .....25pcs
#1612 .....100pcs

SPEED JIG™



"Ten Must Have Tools" - R/C Car Action
"Rating: A+" -Xtreme R/C Cars
"The best building jig on the market" - R/C Car
#2040

DISCHARGER



Car stand and discharger in one

#2030 .....kit
#2031 .....assembled

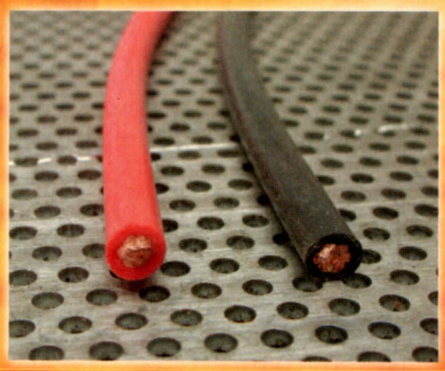
RACING SOLDER



Silver alloy and ProFlux™ a Deans exclusive - the highest quality electronic solder available

#2020 .....1oz

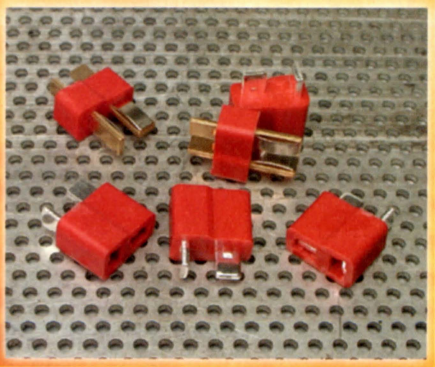
WET NOODLE™



The most flexible 12 gauge wire available... 1660 strands of pure copper!

#1410 .....2ft ea. red/blk
#1430 .....25ft Red
#1431 .....25ft Blk
#1432 .....25ft Blue

ULTRA PLUG™



Less resistance than the same length of 12 gauge wire... MAKES HARDWIRING OBSOLETE!

#1300 .....1pair
#1301 .....4 pack female



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Parma Wears a Mohawk

For the past few years, one of the most popular carpet touring bodies on the market has been Parma's Alpha. It's a tough act to follow, but Parma's up to the task, and has just released their next new touring body, the Mohawk. This 190mm shell is designed primarily for carpet racing, and is making its racing debut at the 2007 Novak US Touring Champs and 2007 Snowbird Nationals. The Mohawk is available in both normal and "lightweight" versions, giving drivers one more tuning option. Expect to hear more about this new shell in the very near future!

Parma 1/10-Scale 190mm Mohawk Sedan Body, #10074/10074L, $25
www.parmapse.com

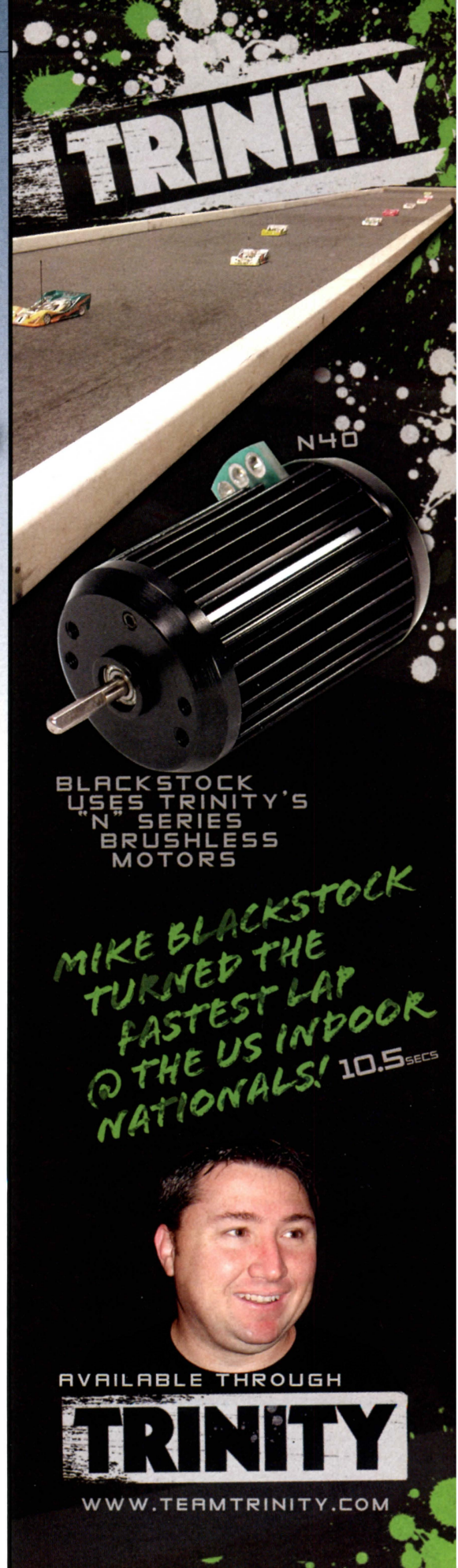


HOT BODIES CYCLONE MOORE-SPEED

Want to get more speed out of your touring car? How about Moore speed? Hot Bodies hopes you do, with the release of their new Moore-Speed edition of the World Champion Cyclone touring car. This is actually an upgraded version (is that even possible?) of the completely sold out Atsushi Hara Cyclone Limited Edition from last year. It features a replica of the hardware that Andrew Moore used for the 2006 ISTC IFMAR World Championship win, along with some new goodies that were produced just for the kit. Among other things, the suspension pivot hardware is now entirely made of nitride-coated titanium, both the front and rear shock towers have been updated and cut from 3.5mm-thick woven graphite, and even the shocks have special Moore-edition low-friction O-rings. The kit also includes both a one-way differential and a locked front axle, giving you the choice of either drive system. The kit should be available by the time you read this.

Hot Bodies Cyclone Moore-Speed Edition, #66450, $470
www.hotbodiesonline.net





HOTBODIES

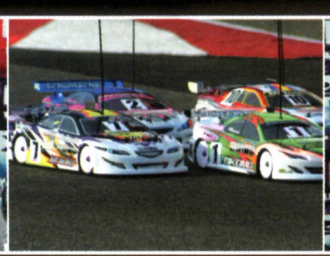
CYCLONE

2006 IFMAR WORLD













For champions by champions!

As you can see, the Cyclone is jam packed with the latest technology and innovative features. Atsushi Hara and Surikarn Chaidajsuriya had direct input into the design of this car, making it a one of a kind race inspired vehicle that is sure to lower worldwide lap times as well as your own!



HB55400 Cyclone

CYCLONE

The ultimate sport race car!

The 1/10th scale touring car, Cyclone S is the ultimate sport race car - with all the world class features and the proven fast chassis design of Hot Bodies' high end Cyclone competition touring car - at a fraction of the price.



HB66403 Cyclone S

CYCLONE

CHAMPION

HB By: hpi·racing







Infusing the design of the top model racing cars of today with full-size race car criteria, the Cyclone has climbed to the heights of success with its recent win at the 2006 IFMAR ISTC World Championships. Many congratulations to Andy Moore for his first World Champion title!

Andy Moore and his Hot Bodies Cyclone. Kings of the world.

Woven graphite. Graphite-impregnated nylon. CNC-machined, anodized aluminium. Titanium. The Hot Bodies Cyclone. 2006 World Champion. More than the sum of its parts.

Dampers inspired by real road-race cars. Innovative steering technology. Supremely efficient drivetrain. Impressively ingenious component mounting. The Hot Bodies Cyclone. 2006 World Champion. *Engineered to win.*

Fastest qualifier, fastest lap, and fastest car at the 2006 IFMAR ISTC World Championships. ***The Cyclone is simply FAST.***

HB hpi-racing

Check out our new web site:
WWW.HOTBODIESONLINE.NET

Hot Bodies USA
70 Icon Street, Foothill Ranch, CA 92610 USA Tel: 949.753.1099 Fax: 949.753.1098

MIP 5X10 BEARING JUICER

GET ON THE JUICE...
YOU'LL STILL BE IN THE HALL OF FAME

Words: Michael Wortel

In all of nitro RC, it is hard to imagine that any part of your car takes more abuse than the clutch bearings. They are subject to extreme heat and sudden torque. These factors often synergize and work together to ruin your bearings, and it doesn't take long. Clutch bearings are usually beefy and better made to withstand the abuse than normal bearings, but for even greater protection, clutch bearings need the right lube and the correct way to apply it. MIP now has an apparatus and grease combo that allows you to "juice" your bearings for ultimate protection.



FEATURES

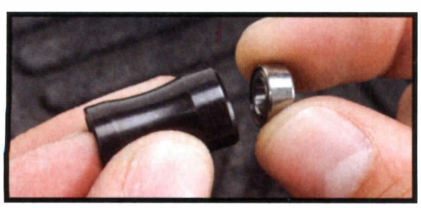
- Machined alloy construction
- Tapered bearing sleeve
- Plunger with helpful markings
- Perfect fit for 5x10mm bearings
- High viscosity MIP orange grease

Getting it done

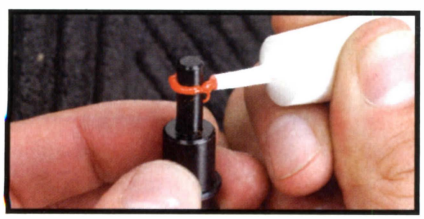
1. Use motor spray to clean out the bearing, getting rid of debris and old lubrication. Spin the bearing in your fingers to emit the remaining cleaner.



2. Insert the bearing through the bottom (non-tapered) end of the sleeve, and use the plunger to push the bearing flush against the inside end of the sleeve.



3. Apply a thick bead of grease around the plunger, just under the groove mark. Be liberal with the grease if you plan to grease only one side of the bearing, and use less if you are going to apply grease to both sides.



4. Insert the plunger into the sleeve, and push the shaft through the bearing. Apply pressure in a circular motion until the plunger bottoms out in the sleeve, then add a little extra pressure once it has bottomed out. Retract the plunger, and the bearing will remain on the shaft for removal.



Performance

The process of "juicing" the bearing was simple and effective. MIP claims that the plunger/sleeve injects the bearing's internals with a liberal amount of grease, but not so much that it creates unwanted drag. The grease itself is a lot thicker than the oil that we normally use on motor comms and other bearings throughout the car. But, where thick oil would produce unwanted friction in other areas, using heavy-duty lube on the clutch bearings is necessary, because they are subject to so much heat and resulting abuse.

Conclusion

It's difficult to measure the effectiveness of MIP's new product, because it is meant to increase durability, not speed and performance. But from the tacky feel of the grease (even under heat) it appears that the lube won't break down under the high temperatures created at the clutch. This means that the bearing's delicate infrastructure should maintain its integrity run after run. Clutch bearings aren't meant to last forever. In fact, Adam Drake replaces his bearings every two weeks! But for those of us who aren't celebrity drivers, using MIP's Juicer should give your precious bearings a longer life on the track. MIP is known as one of the original aftermarket companies in our industry. And producing useful products–such as the Juicer–ensures that almost everyone has something MIP in their toolbox. ✪

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

CELEBRITY EQUIVALENT RATING



Cameron Diaz

HITS

- Increases durability
- Precise construction
- Large serving of lube included

MISSES

- Only accommodates 5x10mm bearings

CONNECT

MANUFACTURER: Moore's Ideal Products (MIP)
DISTRIBUTOR: Moore's Ideal Products (MIP)
WEB: www.miponline.com
PHONE: 626.339.9006
PART NUMBER: 1660
STREET PRICE: $14.99

ROAR's next agenda: Random screening for "the juice."

Introducing Tekin's new ESC line-up!

TEKIN

New Designs Smaller Case Super Fast!



TT1151

R1 ACTUAL CASE SIZE



TT1150

R1 Pro: Ultra Powerful Brushless/Brushed Racing ESC

POWER INPUT	4-14 Cells / 5S Lipo
MOTOR LIMIT	No Motor Limit
TUNABILITY	On-Board and PC Programming
RESISTANCE	0.00005 Ohms

R1: Powerful Brushless/Brushed Racing ESC

POWER INPUT	4-9 Cells / 3S Lipo
MOTOR LIMIT	5T 36mm Can (brushless)
TUNABILITY	On-Board and PC Programming
RESISTANCE	0.0001 Ohms

EACH OF OUR NEW SPEEDOS FEATURE LIPO COMPATIBILITY AND ON-BOARD TEMPERATURE INDICATOR!



TT1092

FX ACTUAL CASE SIZE



TT1090

TT1091

FX Pro: Ultimate Brushed ESC for Stock, 19t + Mod

POWER INPUT	4-9 Cells / 3S Lipo
MOTOR LIMIT	No Motor Limit
TUNABILITY	On-Board and PC Programming
RESISTANCE	0.00013 Ohms

FX-R Pro coming soon!

FX, FX-R: Fwd/Brk + Fwd/Brk/Rev Brushed ESC's

POWER INPUT	4-9 Cells / 3S Lipo
MOTOR LIMIT	FX: 10T / FX-R: 12T
TUNABILITY	On-Board and PC Programming
RESISTANCE	FX 0.0003 / FX-R 0.0006 Ohms

THE FX AND B1 SERIES ALSO FEATURE OUR NEW PUSH/ANTI-DRAG TUNING OPTION FOR THE ULTIMATE STOCK MOTOR SET UP!

18th Scale



TT1080

TT1081

B1 ACTUAL CASE SIZE



TT1100

TT1202

TT1201

TT1200

B1, B1-R: Mini Fwd/Brk + Fwd/Brk/Rev Brushed ESC's

POWER INPUT	9 Cells / 3S Lipo (mini cells)
MOTOR LIMIT	No Motor Limit 320 size
TUNABILITY	On-Board and PC Programming
RESISTANCE	B1 0.0016 / B1-R 0.0032 Ohms

Mini Rage: Mini Fwd/Brk/Rev Brushless system

POWER INPUT	12 Cells / 4S Lipo (mini cells)
MOTOR LIMIT	No Motor Limit 20mm Can
TUNABILITY	On-Board and PC Programming
RESISTANCE	0.002 Ohms



Tekin's giving you the best care for your batteries!
Tekin Battery Nurse: VCS (Voltage Controlled Storage) for high performance battery packs!

TEKIN

*Tekin "HotWire" Required for PC Programming

Prototypes shown: actual products may vary.

visit us on-line: www.teamtekin.com



It's not red, it's orange.



Back in January, I was about to revive an old Terra Crusher... not anymore!

Tamiya TNX 5.2R

Words: James Revilla ■ **Photos:** Oliver Bentley

Big-Block Monster

"MONSTER monster TRUCKS trucks!" I'm sure at one point in your life you've heard that PA echo on TV during a commercial for some monster truck event. When I was a kid, the sound of the words "monster trucks" made me pretend I was behind the wheel of Bigfoot or maybe even the Carolina Crusher. Luckily for me, my job allows me to drive a lot of monster trucks (albeit in a smaller scale), and this time I take the wheel of Tamiya's new TNX 5.2R. The 5.2R is Tamiya's follow-up to their highly popular TNX racing truck, which in turn was a race-bred version of Tamiya's original Terra Crusher. With each generation, Tamiya started positioning this platform from basher to track terror, and with more power, less weight, and a new pillowball suspension setup, the 5.2R is the most competitive version of them all.

Tamiya TNX 5.2R



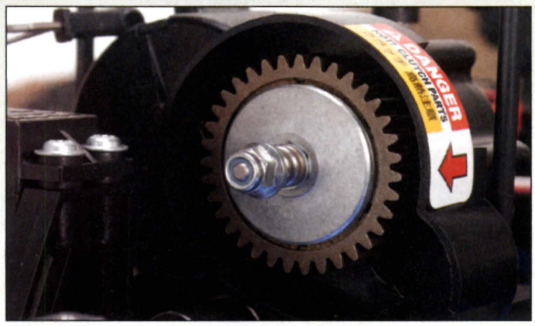
• 1/8-SCALE MONSTER TRUCK • 1/8-SCALE MONSTER TRUCK • 1/8-SCALE MONSTER TRUCK • 1/8-SCALE MONST

VEHICLE FEATURES

Building on the success of the original TNX monster truck, Tamiya addressed key areas of the TNX to create the 5.2R version we see here. Along with putting the original truck on a diet, they also made sure that the new truck had more power and more adjustability, while keeping what made the original TNX a track and backyard favorite.

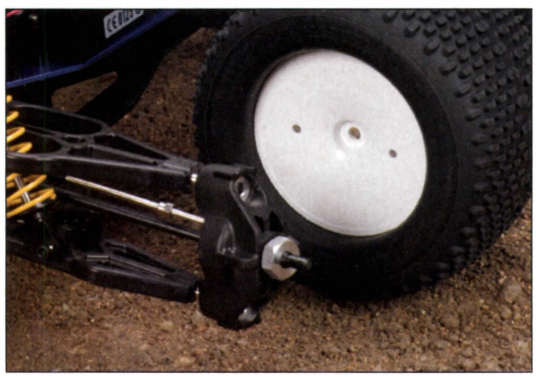
DOUBLE SPEED

In the center of the 2.5mm chassis, you'll find the sealed 2-speed transmission. From the engine, the heavy-duty metal spur gear features a built-in slipper clutch to protect itself from the engine's power. The 2-speed is adjustable, and from the tranny, power gets sent to all four wheels via tough steel dogbones and outdrive cups.

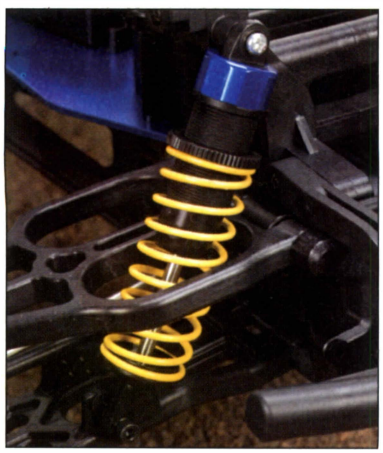


NOT FOR SLEEPING

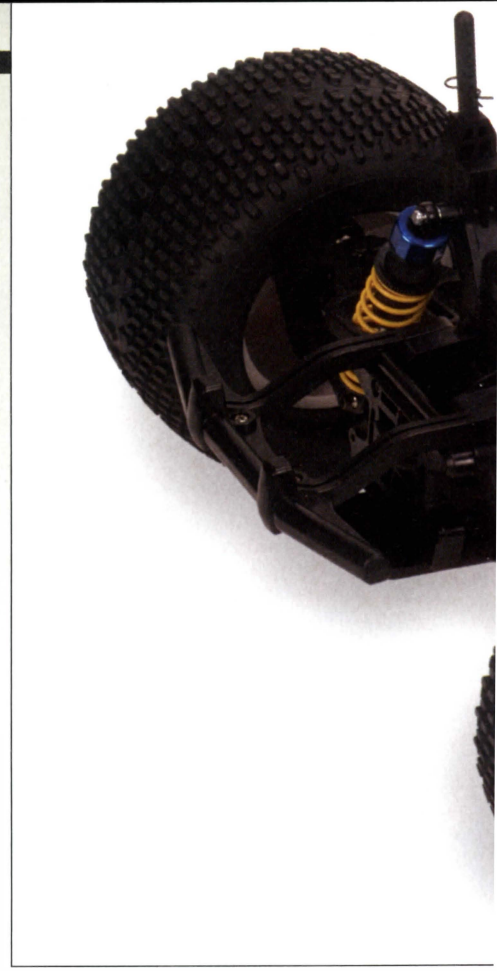
Like the competition, the suspension features thick upper and lower molded arms, and each wheel hub pivots on their new pillowball suspension design. Thinking with racing in mind, the pillowballs are easily accessed without removing the wheels, due to the special access holes that are molded into the wheels themselves.



AFTER SHOCK



Similar in design to Tamiya's world famous TRF dampers, the four shocks on the TNX 5.2R look like longer, thicker versions. The molded bodies are threaded for quick preload adjustment, and an aluminum-anodized cap helps keep oil inside the high-capacity shells. Like the previous TNX, you have the option to add another set of shocks for maximum damping.



INSTRUCTIONS AND SETUP

The TNX 5.2R comes pre-assembled from the factory, and includes a bright orange and white pre-cut and pre-painted body, ready for you to add some minor finishing decals (such as lights). No real setup is required other than installing batteries and firing up the engine. A full assembly manual is included for reference, as is a separate step-by-step booklet that thoroughly walks the user through the steps required when getting started with your own TNX 5.2R.



Note to self: Snow is cold.

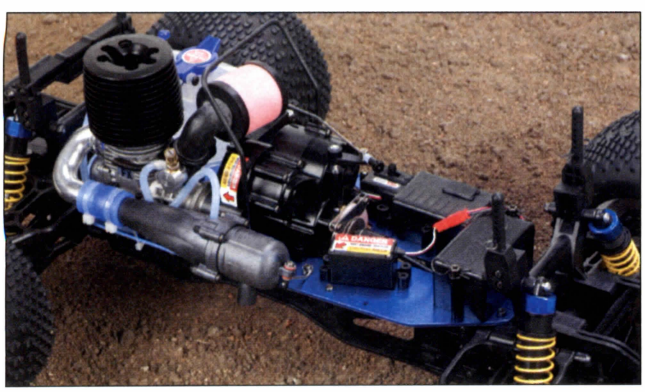


"...Small jumps, big jumps– the TNX 5.2R DIDN'T EVEN FLINCH."

Note to self #2: When driving in cold weather, Chuck Taylor's don't help.

THIN IS IN

By eliminating the on-board electric starting system on the original TNX, the Tamiya crew was able to not only bolt in a more powerful engine, but they got to narrow the chassis plate itself, moving all key components closer to the centerline. In place of a bulky electric starting system, Tamiya installed their Handy-Start roto-system, which saves on space. This, plus other design changes, helped to lighten the overall weight of the TNX 5.2R by a claimed 100 grams under the original TNX.



WINDMILL



Gone is the FS-18SR .18-sized electric-started engine, found in the TNX. For the TNX 5.2R, Tamiya bumps up grunt with a new .32 powerhouse, which is brought to life by Tamiya's Handy-Start system. This eliminates the old electric-start bulk, allowing Tamiya engineers to move the engine weight closer to the centerline of the chassis.

TESTING

I tested the TNX 5.2R on three distinctly different environments: A) unprepared asphalt out behind the office, B) Revelation Raceway in Montclair, and C) A rock and stone-filled ravine in snowy (yes, snowy) Mount Baldy. Ambient temperatures varied from cool yet sunny California afternoons, to snow-falling, "I can't feel my fingers anymore," winter weather in the mountains.

Acceleration and Speed • Just by reading the box, I knew that the TNX 5.2R would have some horsepower, but I didn't expect this much. The jump from an .18 to a .32 is crystal clear, as I managed to flip the truck over onto its lid simply by pulling the trigger too fast on high-traction asphalt. Even on the track the acceleration was tremendous, and top speeds were more than enough to hang with other monsters.
Rating: 9/9

Braking • Although equipped with a single brake disc, the TNX 5.2R could lock them up at will. On loose dirt, the kit tires made braking distances longer than they should have, because the TNX would skid to a stop. With the right set of track tires, I'm sure I could have had better braking. To soften the skid, I actually turned the brake linkage out a little, so that the TNX would do a softer but more consistent rolling stop. I did notice that brake response had a small lag; a higher-speed throttle servo might be the easy solution for this. Anyhow, braking feel remained consistent throughout testing, with no evidence of fade.
Rating: 7

Low-Speed Handling • At low speeds, there was a considerable amount of understeer similar to the original TNX. Again, I'd pass this off as a tire issue, as I have driven monster trucks with smaller turning radiuses that had no understeer. On dirt it wasn't that much of a problem, as I could just tap the brake mid-turn to get the rear end to swing around just enough to make the truck turn around in less space. At low to mid speeds on rougher portions of the track, the four large shocks handled surface irregularities without a hitch.
Rating: 7.5

High-Speed Handling • At high speeds this truck was a blast to drive. The engine had enough torque to lift up the inside wheel, but it didn't affect the monster truck's ability to maneuver, even at wide open throttle. On the back straightway, making steering corrections with the trigger pegged didn't upset the TNX's composure. It was easy to gauge where the truck would be headed, and the understeer present at lower speeds helped keep the TNX 5.2R stable at higher numbers.
Rating: 8.5

Rough-Track Handling • The big-bore shocks and pillowball suspension setup showed what it could do here. On rougher sections of the track, the TNX 5.2R would soak up bumps and dips with little commotion. On the dry riverbed where the surface was nowhere near smooth (do you call a bunch of rocks smooth?), the TNX would attack and make its way over the surface with muscle. Sometimes the rear end would pop up but not so much that the truck would be a handful to control. A monster truck should be able to handle the rough stuff, and the TNX 5.2R didn't disappoint.
Rating: 8

OUR TEST GEAR



Receiver Pack: OFNA 1200 Ni-MH pack, 10212, $25



Handy-Start Battery: Venom 3300, 1530, $20



Fuel: Byron 20%, 3130034, $15

RTR GEAR



Radio: Tamiya Adspec GP AM



Receiver: Tamiya TRU-03 w/built-in failsafe



Servo(s): Tamiya TP-S3010 / T: Tamiya TSU01



Engine: Tamiya FX FR-32 5.2cc



Pipe: Tamiya TM-7 composite

CONNECT

TAMIYA	**ph:** 800.TAMIYA.A **web:** www.tamiyausa.com
OFNA	**ph:** 949.586.2910 **web:** www.ofna.com
BYRON ORIGINALS	**ph:** 800.594.9421 **web:** www.byronfuels.com
VENOM RACING	**ph:** 800.762.0620 **web:** www.venum-racing.com









2006 + 2007 IFMAR WORLD CHAMPIONS

championship r/c racing fuels sidewinder

MARK PAVIDIS

2006 - 2007 IFMAR OFF ROAD WORLD CHAMPION

"THIS RACE WAS WON ON RUN TIME. WHEN EVERYONE ELSE WAS PITTING I WAS ABLE TO STAY ON THE TRACK AND PUT DISTANCE BETWEEN ME AND FIELD. SIDEWINDER "WCB" HAS THE MOST POWER AND RUN TIME OF ANY OTHER FUEL I'VE TESTED."

30% WORLD CHAMPIONSHIP BLEND:

POWERED THE ONLY 2 AMERICANS TO VICTORY IN IFMAR OFF ROAD WORLD CHAMPIONSHIP HISTORY.
GREG DEGANI 2002 - 2003
MARK PAVIDIS 2006 - 2007

SIDEWINDER

A DIVISION OF MORGAN FUELS. THE LARGEST FUEL MANUFACTURER IN THE WORLD FOR 30 YEARS.

Jumping • With a capable suspension and an engine with enough power, the TNX 5.2R makes you want to jump. At the track, there were various-sized jumps for me to fly over, and I eagerly tossed the truck over all of them to see how it would fare. [BIG QUOTE]Small jumps, big jumps–the TNX 5.2R didn't even flinch.[END BIG QUOTE] The capability of the truck showed itself over the larger jumps, where even if I overshot the landing, the TNX 5.2R would touch back down to the surface and continue on its way. Certain jumps had steep approaches, and in these cases it took some throttle management in mid-air to keep the truck level, but it wasn't anything too complicated.
Rating: 9

Wrenching

Maintenance • Even if the chassis is narrower than before, working on the 5.2R is relatively easy. The engine and/or transmission can be removed from the chassis with four screws each. Electronics are also easily accessible. The only thing that might take more effort is the bulkheads; you'll be wrenching for a bit because they're way in there, but you shouldn't have to access them often, as they are sealed gear units. The right-rear suspension area gets a little grimy after running, due to the position of the exhaust path, and the bulkhead skid plates have many nooks and holes for dirt to get caught in. Other than that, there's nothing that requires special attention.
Rating: 8

Wear and Tear • The previous TNX had molded-plastic slider-shafts connecting the diffs to the axles, but for the 5.2R they went with standard steel dogbones. This kept rotating mass down, and although a set of universals would have been perfect, I had no unusual wear or tear, even with the more powerful engine. At the end of testing I hit a jump at the wrong angle (lucky for me) and the TNX did a cartwheel tumble for about 30 feet. At the last rotation, the left rear wheel started pivoting in an "uh oh" kind of way. Upon closer inspection, I found the culprit—the ball end for the toe rod had snapped. This is an easy fix, but the ball end itself looked a little thin to begin with.
Rating: 8

Tuning • Unlike the first generation TNX, the 5.2R has a few more adjustments that any racer will appreciate. The biggest change is the switch from fixed hub carriers to a full pillowball setup on each corner. Camber angle and slight track changes can be made with the twist of a wrench; the TNX 5.2R's new dish wheels even have access holes for making quick camber adjustments without having to remove them. Although the 5.2R comes with only four shocks (as opposed to the original TNX's eight), they are new, high capacity, oil-filled units with threaded bodies for adjustable preload. The adjustable center slipper clutch and 2-speed unit are basically carried over from the previous model.
Rating: 8

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

8	INSTRUCTIONS
9	PARTS QUALITY/FIT
8	DURABILITY
8	TUNABILITY
8.5	OVERALL PERFORMANCE
8.5	VALUE

HITS

- Nimble handling for its size
- Everyone loves more horsepower
- Handy-Start is pretty handy

MISSES

- Still comes with a basic AM radio
- Ball ends might need more meat

Conclusion

Before the TNX 5.2R was released, I was already looking forward to testing it since I heard and read a lot of what the original truck had accomplished. After testing the TNX 5.2R in some extreme conditions (it was literally snowing in the mountains), I'm happy to say that the sequel has topped the model it replaces. The biggest plus is the more powerful engine and lighter overall weight, which together made the TNX a fun and enjoyable drive.

...yeah, that makes sense.



M18 PRO

1/18 LUXURY HIGH-COMPETITION 4WD RACING CAR

70+ km/h

4WD

HIGH PERFORMANCE MICRO SIZE



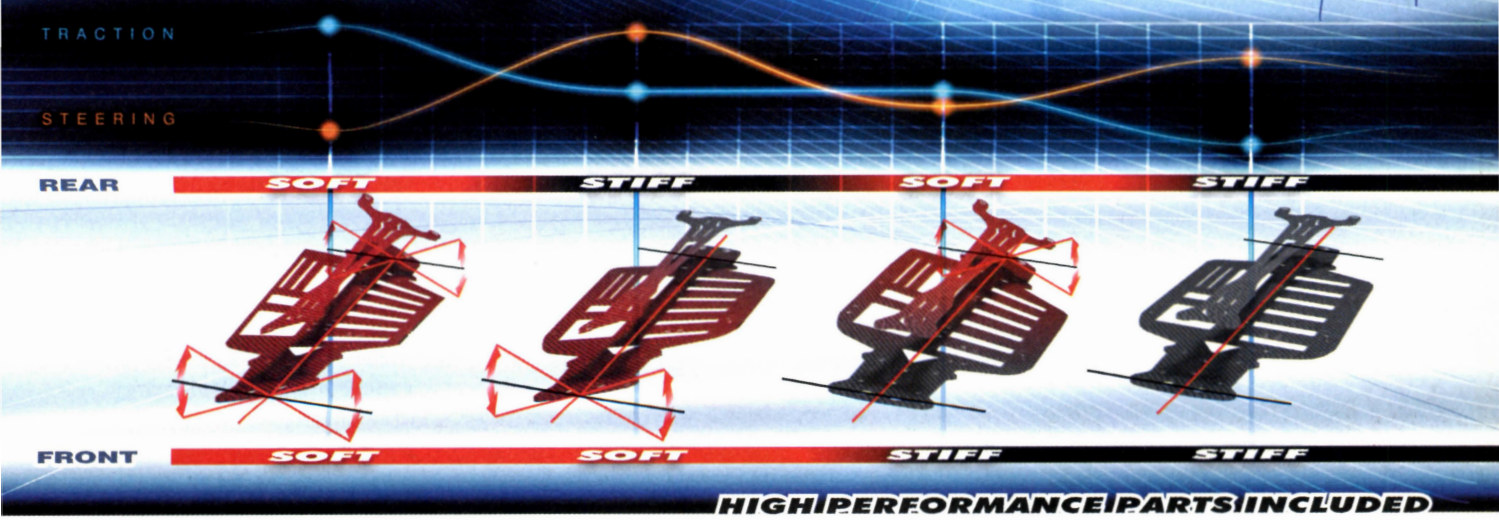
XRAY Multi-Flex Technology™



XRAY PATENT

*XRAY's self-developed **Multi-Flex Technology™ (MFT™)** now revolutionizes the micro platform in the new M18 PRO. With the **MFT™** top deck you can set up and adjust the **M18 PRO** for all different racing conditions. No matter if you drive on asphalt or carpet, using rubber or foam tires, you can quickly, easily, and independently adjust **MFT™** points on the top deck – front or rear – to give you different flex characteristics. Tailoring a micro car to the track has never been this easy!*

Dipl. Eng. Juraj Hudy, Chief Designer, XRAY



HIGH PERFORMANCE PARTS INCLUDED

MICRO TOURING CAR-TYPE WHEEL MOUNTING SYSTEM

One of the most significant improvements on the M18 PRO is the new wheel mounting system. The new M18 PRO features micro versions of standard touring car hex wheel hubs, which mount directly to the efficient universal drive shafts. New-style wheels fit onto the hex wheel hub and are secured with machined lightweight nuts.

This system not only improves the performance of the car and allows for solid wheel mounting, it also makes wheel changes very quick and easy.



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RCAMERICA
XRAY USA 167 Turtle Creek Blvd. Suite C, Dallas, Texas 75207
Phone: 1-800-519-7221, Phone: 214-744-2400, Fax: 214-744-2401
E-mail: xray@rcamerica.com
www.rcamerica.com

MADE IN EUROPE SLOVAKIA

XRAY www.teamxray.com

Tamiya TNX 5.2R



• 1/8-SCALE MONSTER TRUCK • 1/8-SCALE MOSNSTER TRUCK • 1/8-SCALE MOSNSTER TRUCK • 1/8-SCALE MON

Dave has the OG TNX. He's making me race the 5.2R.

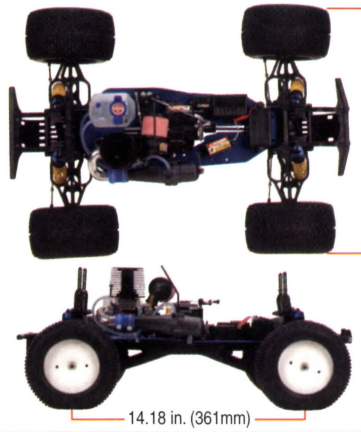
CONNECT:

MANUFACTURER: Tamiya USA
PHONE: 800.TAMIYA.A
WEB: www.tamiyausa.com

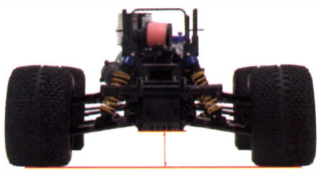
VEHICLE INFO

VEHICLE:	Tamiya TNX 5.2R
SCALE:	1/8
TYPE:	4wd nitro monster truck
PART #:	43530
STREET PRICE:	$470
PRICE AS TESTED:	$510 (including all items used for testing)
SETUP TIME:	1 hour
EXPERIENCE LEVEL:	Novice to intermediate

DIMENSIONS



RUNNING WEIGHT: 10 lbs., 1 oz. (4565g)



TECHNICAL INFO

CHASSIS

LAYOUT:	Single-deck
THICKNESS:	2.5mm
MATERIAL:	Aluminum
FUEL TANK CAPACITY:	150cc

SUSPENSION

TYPE:	4-wheel independent
TURNBUCKLES:	Fixed-upper arm, adjustable toe, pillowball adjustment
STEERING:	Dual bellcrank
SWAYBARS:	None

SHOCKS

BODIES:	Threaded plastic
DAMPING:	40 wt. oil
PISTONS:	1-hole
SPRINGS:	Tamiya yellow

DRIVE TRAIN

TYPE:	4WD shaft
DIFFERENTIAL:	Gear/Gear (2)
DIFF FLUID:	Grease
AXLE TYPE	Dogbones
TRANSMISSION:	Internal 2-speed
SPUR GEAR MATERIAL:	Steel
CLUTCH:	2-shoe aluminum
BEARINGS:	Metal-shielded

GEARING

	1st	2nd
PINION/SPUR:	17/35	
GEAR RATIOS:		
PRIMARY:	2.05:1	
INTERNAL:	2.0:1	1.375:1
FINAL:	4.1:1	2.81:1

BODY, TIRES, WHEELS

BODY:	Tamiya TNX 5.2R pre-painted
TIRES (F/R):	Tamiya RC GP monster truck tires
DIAMETER/ WIDTH:	5.75" x 3.5" (146mm x 89mm)
HEX SIZE:	14mm
WHEELS:	Tamiya RC GP dish wheels

ITEMS NEEDED

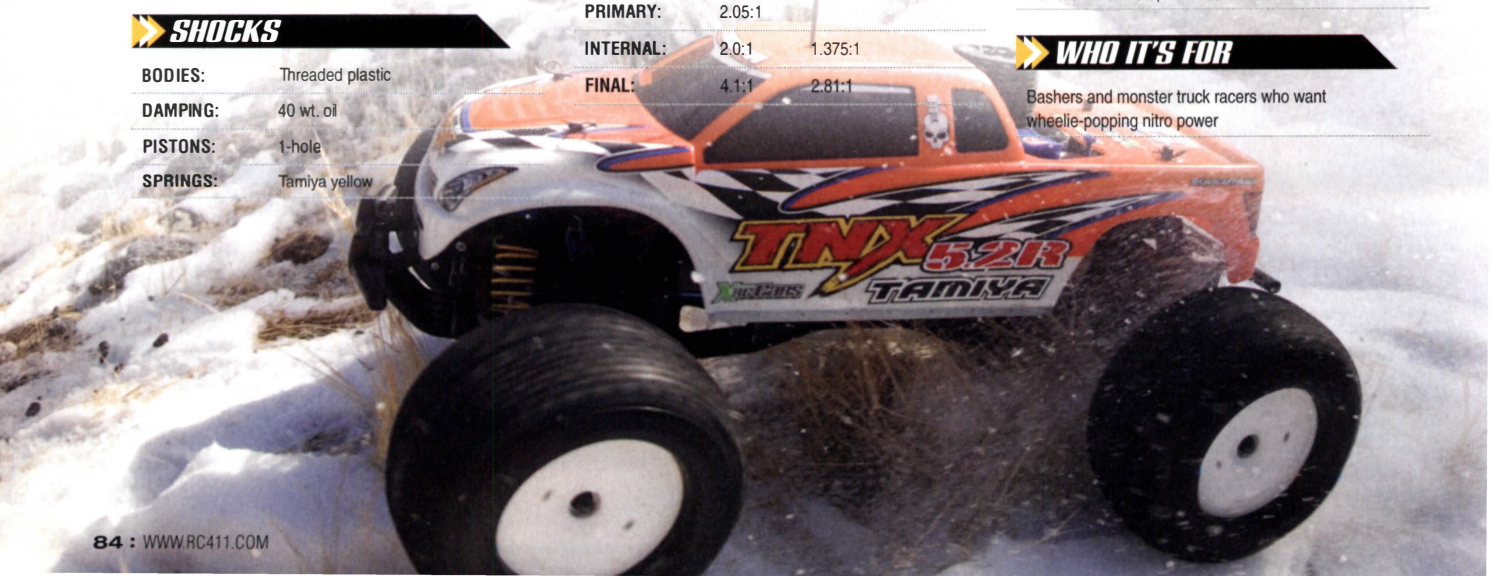
Radio batteries, receiver battery, 6-cell stick pack (for Handy-Start), battery charger, fuel.

MAIN COMPETITION

Associated MGT, HPI Savage-X, Traxxas T-Maxx 3.3, XTM Mammoth

WHO IT'S FOR

Bashers and monster truck racers who want wheelie-popping nitro power



POWERPLANT INFO

The Tamiya FX FR-32 engine did not disappoint as the powerplant of choice for the new TNX 5.2R. After a 6-tank break-in, I reset the needles to the manual-specified setting and tuned from there. With every 1/8-turn of the needle, the FX would instantly gain more low-end power. I'm talking about ground-tearing, wheelie-popping power. Although the running temperature seemed a little high, at this setting the FX felt the most balanced in terms of low-end torque and high-end horsepower. Surprisingly, once I had the engine tuned for racing, it still looked like it was running rich—a thin plume of smoke would shoot out the muffler, almost as *if I was still breaking it in*. However, idle stayed consistent, and there were no flat spots in the trigger, as even mid-range throttling was responsive, giving the engine a wide powerband and making it one of the better big-blocks I've ever used.





X-DYNO DATA

POWER PLANT DYNO PERFORMANCE



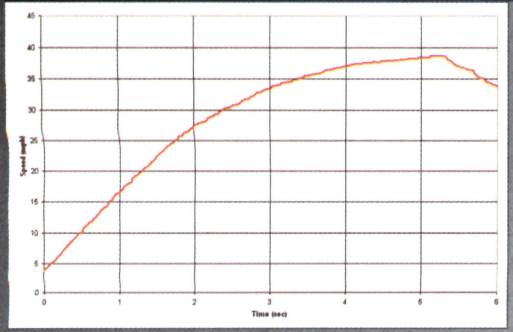
ENGINE DATA

ENGINE:	Tamiya FX FR-32 5.2cc
BORE x STROKE:	0.76 in. x 0.69 in. (19.5mm x 17.5mm)
DISPLACEMENT:	.32 in.³ (5.2cc)
FUEL:	Byron Race 20%
PIPE:	Tamiya TM-7
PLUG:	Tamiya stock
PEAK HP*:	1.23 @ 23,000 rpm
PEAK TQ*:	66.07 oz-in @ 17,400 rpm
PEAK RPM*:	33,200
CORRECTION FACTOR:	1.038

*Results as tested.

ACCELERATION CURVE

ACCELERATION AND TOP SPEED



ACCELERATION

ACCELERATION (0-60FT):	3.78 sec. @ 27.1 mph*
TOP SPEED:	3.78 mph @ 224 ft.
AVERAGE RUNTIME:	9 minutes

*Limited by available traction

NEEDLE SETTINGS

HIGH:	5 turns out from closed
LOW:	1/2 turn out
MID:	N/A
OPERATING TEMP.:	280° F

PERFORMANCE INFO

TEST CONDITIONS

WEATHER:	Sunny
TEMPERATURE/HUMIDITY:	75° F / 26%
BAROMETRIC PRESSURE:	29.97 in.
ALTITUDE:	900 ft.
TRACK TYPE:	Packed dirt

HANDLING

TURNING RADIUS:	4 ft., 2 in.
ON POWER:	Understeer
OFF POWER:	Slight oversteer

BRAKING

CONTROL:	Responsive
FADE:	None
OVERALL BRAKING:	Very good

That guy...

GT2 Factory Team



Factory Team GT2 shown equipped with items that are NOT included in kit: LRP Z.12R engine, servos, receiver and battery. GT2 Interceptor body comes clear. Assembly required.

Team Associated's new Posi-Lock quick-change for the fastest tire changes

New more efficient dual-disc slipper clutch and large ball bearing clutchbell

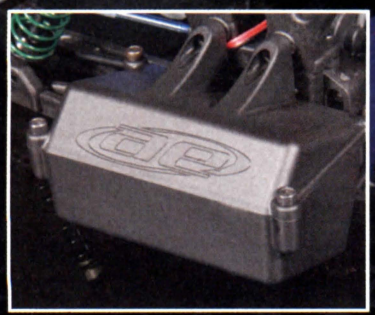
Team Associated first introduced the RC10GT Gas Truck in 1993 and it has gone on to win every ROAR National Gas Truck Championship since the creation of the class. That's why they say "you still can't beat a GT!" Even the original GT's unprecedented performance and win record can't stop the progression of time. Now the Area 51 designers have done it again by bringing you the Factory Team GT2. Completely redesigned from the ground up, the GT2 is the result of everything that the engineers and drivers at Team Associated have learned over the last thirteen years from racing the original GT. The new Factory Team GT2 has many new features making for a higher level of performance, better durability, and easier maintenance.

The Factory Team GT2 is the first truck to feature Team Associated's new Posi-Lock quick-change wheel system. The Posi-Lock quick-change has a five-lug self-aligning design that the wheel locks onto allowing for the fastest possible tire changes. More punch and durability are the results of the all new 4.09:1 ratio transmission. The newly designed

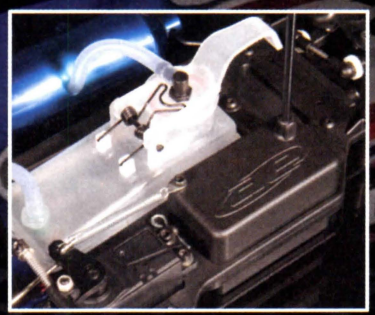


1:10 Scale 2WD Nitro Offroad Truck

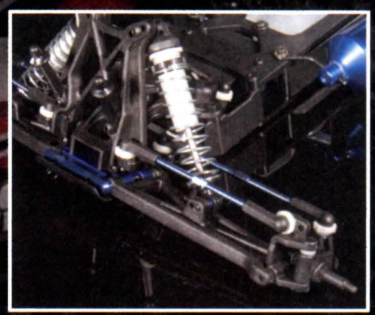
TEAM ASSOCIATED



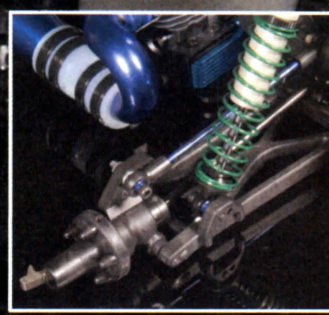
The GT2 has a sealed battery box keeping the receiver battery safe and secure



The modular radio tray is easily removed for quick clean up



Ball bearing dual bell-crank steering system with adjustable servo saver



All new suspension geometry and rebuildable CVA drive shafts

dual-disc slipper clutch is more efficient at keeping the power on and saves the drive-train during hard landings. The GT2's large diameter clutchbell fits SG type crankshafts and uses larger, more reliable ball bearings. A free-floating disc brake insures smooth, fade-free brakes through long mains.

The GT2's hard anodized 6061 aluminum chassis plate with molded front kick-up and modular radio tray layout provides the optimum front to rear chassis stiffness allowing the race proven suspension to keep the GT2 hooked up. The GT2's radio tray features a sealed receiver box and a new fuel tank that has a large lever for quick and easy fuel stops. The sealed battery box keeps the receiver battery safe and secure.

The all new suspension components make the GT2 the best handling and most durable gas truck ever. The front and rear suspension mounts interlock to the chassis to keep the suspension geometry consistent and durable. Molded front and rear shock towers, a ball bearing dual bell-crank steering system with adjustable servo saver and rebuildable CVA drive shafts round out the package.

The new Factory Team GT2 has been a longtime in the making and now it is here. If you have been ready to take the next step up to the ultimate gas race truck Team Associated has some very good news for you. The Factory Team GT2 is here! Check one out at your local hobby shop or online at www.rc10.com today!

Team Associated • 3585 Cadillac Ave., Costa Mesa, CA 92626
www.rc10.com or www.teamassociated.com

ROBITRONIC iCUBE ESC with PC INTERFACE

No it doesn't play mp3's



Words: James Revilla

In today's high-performance segment of RC racing, there are many competition-level ESCs to choose from, and any one of them usually features programmability, low resistance, and a small footprint. The Robitronic iCUBE fits this description, but it adds something very interesting and unique to the competition.

What? "Sophia" doesn't start with a letter "K?"

FEATURES

- External one-button setup and programming
- 4 profiles +1 PC profile
- Adjustable current limiter, drag brake/auto-roll, max. brake, and brake frequency
- Fully replaceable wires (inc. radio leads)
- Auto-off with transmitter
- 14-minute data logger

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT



HITS

- Performs like a pro ESC should
- Very compact package
- Automatic data loggin is useful

MISSES

- No reverse-polarity protection
- $75 for a cable?
- No guide to using Trace software

CONNECT

MANUFACTURER: Robitronic (dist. by Axial Racing)
WEB: www.axialracing.com
PHONE: 949.600.8645
PART NUMBER: RS1146T
STREET PRICE: *$185-$250 (ESC); $75 (PC-interface)*

Upon removing the iCUBE from the packaging, you'll notice its small size (27x25x13.5mm), comparable to others in its class. The wired external on/off switch also houses the socket for their optional PC interface, which is required if you want to tap into the unique data logging feature. All wires are replaceable, including the radio wires, so you can shorten or lengthen it if needed for your own custom application.

Testing

I ran the iCUBE in my XRay T2 '007, simulating laps around our parking lot behind the XRC offices. I made sure to run the same line in order to check out the PC-Interface later. As for the iCUBE's performance, it pretty much did as advertised. Response was good, and brake feel was consistent. Changing settings was easy, due to the external switch, which required no extra tools—just your finger. After a run, the heatsink was warm, but not burning hot. Having the ability to turn the car off with just the radio was a novelty (just hold full brake for about seven seconds, and the ESC will shut down automatically).

Back in the office I borrowed Oliver's PC laptop, loaded up the PC-Interface software and had it up and running within seconds. I plugged one end of the interface cable into the port on the iCUBE's external switch, and the other end into a free USB port on the laptop. Firing up "Trace" (the name for the data logging software), I imported about 15 laps of data in about 12 seconds, and the next thing I knew, I was staring at a graphical representation of the entire run. I could easily see throttle position, motor current, battery voltage, and other statistics. Also, Trace automatically analyzed my data to plot out each individual lap. Although not as accurate as an actual lap counting system, it was useful information nevertheless. There isn't any stand-alone ESC currently in the market that can do what the iCUBE can do. With this info (and some calculating, which I had to learn on my own since the Trace program didn't come with any instructions), anyone using the iCUBE's data logging feature can get a better gauge of overall improvement, driving consistency, and performance of motor and batteries.

Conclusion

When looking at the ESC side of things, the iCUBE doesn't disappoint. It's a solid, high-performance speed controller that not only stays toe-to-toe with its competition, but also takes a step beyond, due to its data logging features. It's too bad that the PC-Interface is a little pricey for what amounts to a 5' USB cable and an interface adapter (the software is basically free, since you can download it from the Robitronic website). The data logging is a definite plus on the scale, and although there was no guide to utilize all of the data to its full potential, any RC racer can still get some good use out of the program. All in all, Robitronic's iCUBE ESC is one for all racers to consider. ✪

POWER PERFORMANCE DURABILITY

The Axial 12rr Spec 1s ENGINE

#:AX0060 .12RR Spec 1 Engine (Green)



ROAR LEGAL

SPECIFICATIONS

- Size : .12cubic inch
- Maximum RPM: 44,000
- Bore: 13.76mm
- Stroke: 14mm
- Construction: Bi-metal Sleeve
- Heat-sink Head: Anodized Machined Aluminum
- Carburetor: 5.4mm Aluminum Slide Carburetor
- Carburetor Adjustments: 2 Needle
- Case: Silver Aluminum, Rear Exhaust
- Connecting Rod: Dual Bushing
- Sleeve: 3 port
- Recommended Glow Plug: Hot-6 Turbo Plug

The Axial .12RR Spec 1 race engine has been extensively developed to provide the best performance possible for 1/10th touring car racing. Designed in the USA, the .12RR has been extensively tested at several major races throughout the country. The power curve has been optimized to compete against the high performance Italian made engines currently on the market. Made of the highest quality materials available the .12RR is designed for performance and durability, the special bi-metal sleeve and piston are perfectly matched so that when properly tuned and maintained you can run several gallons of fuel before ever needing to consider rebuilding your engine.

SPEC ONE
RR ENGINE

axial

www.axialracing.com

21092 Bake Parkway, #114 ⁂ Lake Forest, CA 92630 ⁂ P:949.600.8642 ⁂ F:949.600.8645

HPI Racing WHEELY KING

Words: Brian "Skinny" Skinner ■ **Photos:** Oliver Bentley

It Wheelie is the Wheely King!

It seems that the engineers over at HPI have gotten hooked on Monster Jams because the new HPI Wheely King is as close to the real thing as you can get with an RTR monster truck. That—or the engineers at HPI wanted a new millennium version of the Tamiya Wild Willy gone Grave Digger style! Any way you look at it, the Wheely King is a kid's dream come true for a first RTR. For us "more mature" people, the Wheely King is a fun RC to unwind with after a hard day at the office. Even better, this 1/12-scale truck screams to be modified. Looking at the Wheely King, you can see the trickness and you just want to make it even better. For instance, it would make a great project 2.2 rock crawler. For a full-packaged RTR monster truck that's fewer than two hundred dollars, the attention to detail and its realism is truly remarkable. All the way from the trick-molded tube-style Twin Vertical Plate (TVP) chassis, to the monster truck multilink suspension, the Wheely King is a scaled monster truck that anyone can appreciate. So put your helmet on and strap in as we do a wheelie around the block and test drive the Wheely King.

Spelling is subjective.


hpi-racing
hpi-racing

HPI Racing WHEELY KING

• 1/12-SCALE 2WD MONSTER TRUCK • 1/12-SCALE 2WD MONSTER TRUCK • 1/12-SCALE 2WD MONSTER TRUCK •

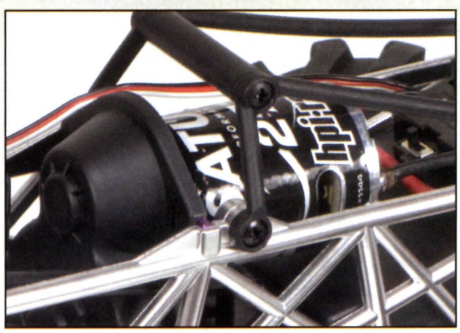
VEHICLE FEATURES

When you first look at the Wheely King, there's no doubt that HPI set out to make a very realistic and scaled version of a monster truck—like the ones you see at Monster Jam. The Wheely King's design and looks are almost a direct copy of the real thing. Top this off with HPI's convenient RTR package kit, which includes proportional radio, 1500mAh Ni-Cd battery with wall charger, and a reversing electronic speed controller (ESC), and you're ready for action in no time.



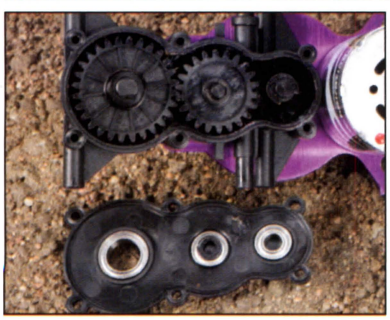
There's only one way to spell "Wort."

POWER DELIVERY



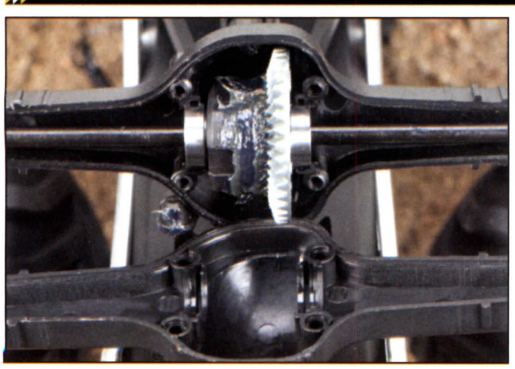
HPI installed a 27-turn Saturn 540 motor to power the King, and it definantly has power. It's not fast, but it has gobs of torque and it's quick. Combine the torque of the 540 motor and the weight distribution, and you have the Wheely King. Just blip the throttle and the front end pops up and wheelies forever. The motor compartment design is typical of a high-end RC, and HPI designed the King to be compatible with hobby grade components. This means you can throw a 19-turn or brushless motor in for more speed and power. Since the Wheely King is designed with the hobbyist in mind, you can also play with gear ratios and make the King faster or have even more torque.

GRANNY TRANNY



The transmission is straightforward and robust in design. It's a three-gear configuration with wide pitch gears to handle the high torque load that it's geared for. The transmission rolls on metal-shielded, sealed bearings for drag-free operation and insures longer run times. HPI knows that we consumers will want to hop up this cool little truck, so they added a front-wheel drive connection to the tranny to let us further trick out the Wheely King. Can you say 2.2 rock crawler? I was thinking the same thing!

DIFFERENTIALS



The Wheely King is rear-wheel drive with a straight axle–planetary gear differential that spins on sealed bearings. The ring and pinion gears are aluminum and can be upgraded to steel ones in the future if you plan on more adventurous endeavors. The front end has a hollow differential case for looks, but can be easily modified to make the Wheely King four-wheel drive.

BUILDING AND INSTRUCTIONS

As we have come to expect from HPI, the instructions are top notch. The nice thing is, the Wheely King is RTR and is already built and ready to rumble. Doing maintenance on this RTR is a snap, and the design of the Wheely King makes it easy to work on. If you do get in a bind, the instructions are there to help. As for setup, the Wheely King is King! This RTR is ready to roost right out of the box, and only minor things like installing batteries and setting trim are needed.



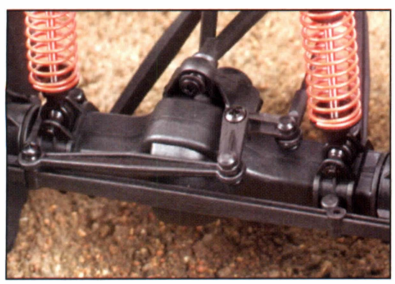


"The Wheely King has gobs of TRAVEL AND ARTICULATION..."

Derek often spells his name "Dereky."

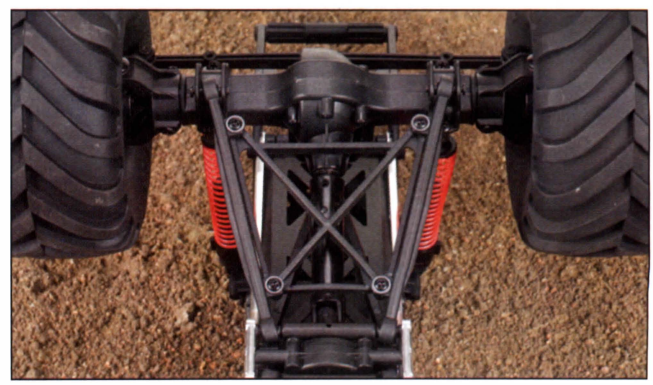
TURN HERE

At first glance there seems to be a lot of monkey motion going on for the steering, but it's actually very clean—considering how much real estate there is to cover because of the huge travel and articulation of the suspension. The steering starts at the servo in the upper chassis, and travels through a long tie rod to a large cantilever arm, and then down another long tie rod to a smaller bell crank. From there it's a short hop to the drag link on the front differential. With all of that going on you would think there would be play in the steering, but it's nice and tight, plus the ratio of the linkage gives the Wheely King plenty of power to turn its big wheels. Again, HPI designed the Wheely King to be modified, so the rear end also has the capability to get a steering set up just like the front. The King can be easily transformed into a four-wheel steering truck, just like the big boys!



I WANT LINKS

To handle the duties of suspension, HPI went all out and added true-to-scale monster truck suspension. The Wheely King sports four-bar links with oil-filled, coil-over shocks all around, just like you would see on legends like the Grave Digger and El Toro Loco. This means the Wheely King has gobs of travel and articulation—to the tune of three and a half inches of straight travel and five inches of articulation. That's huge for a 1/12-scale RTR truck!



TESTING

Testing the Wheely King was a simple matter of heading out to my backyard to have some fun in the grass, soft dirt, and a little hardened Buster poo just to keep it all in perspective. Of course, the Xtreme crew had to hit Revelation Speedway to do some photos and we were met with nicely packed, sandy conditions, with some mud puddles from the recent rains. Yes, it rains in Southern California!

Acceleration and Speed • With the HPI Saturn 27-T 540 motor and the Jolt-R (reversing electronic speed controller–ESC), you get a great range of speed control. From a snail's crawl all the way to top speed, the Wheely King is at your command. Acceleration is quick and it's the main reason why the Wheely King will wheelie so easily. It has tons of torque and will crawl and climb through and over anything, which is part of the fun of this little beast. Top speed is lacking, but it was not really intended to go fast. With a simple gear change, the Wheely King should kick up the speed factor to something more entertaining. Straight out of the box, it tops out on speed quickly, and is a little faster than you can trot. No, the Wheely King was intended to do wheelies and to crawl around on stuff, and it does that well for a two-wheel drive truck. The nice thing is that the Wheely King was designed with modifying in mind. With a few changes you can make this little monster however you want it to be. As it is out of the box, the Wheely King hits the target and serves its purpose well.
Rating: 7/5

ALTO! • With the Jolt-R, braking is not a problem. The ESC does a nice job of electronic braking. Since it is rear-wheel drive, you do need to be mindful of braking. If you slam on the brake, it automatically does a one-eighty—which to me is kind of cool and fun. The Jolt-R also has a delay built in to keep it from going into reverse immediately, which saves the tranny. This was thoughtful and a good idea for the first time driver who is going to use this bundle of joy.
Rating: 8

Low-Speed Handling • This is pretty much what the Wheely King is supposed to do and it does it well. It has a small-ish wheelbase so it turns and crawls around a lot of things. At low speed the Wheely King handled well in grass, soft dirt, and on packed dirt. On asphalt the Wheely King worked the best, but I noticed that it took a lot of room to turn while going slowly. The large tires need as much throw as possible to do sharp turns at low speed. After some investigating, I found that the steering knuckles bottomed out against the diff housing and limited the turning. A little fabrication would be needed to correct this, but for the Wheely King's purpose, I find the performance at low speed as it should be.
Rating: 8

High-Speed Handling • At speed, the Wheely King usually has the front end in the air doing a wheelie, so turning is non-existent. Who cares? It's doing a wheelie, and that's why it's called the Wheely King! At speed (all 12 mph of it!), and when you can tear yourself away from doing wheelies, the Wheely King turns pretty well for a scale monster truck that has a high CG. The large chevron-lugged tires provide good traction to turn, but with the high grip of the tires on pavement and its high CG, look out! The Wheely King will topple over very quickly if you're not careful. On dirt, it turns well as long as it's tacky or loamy, but again, be careful of quick turns as it will tip over. On hard-packed dirt or sandy, hard-packed stuff, it wants to push. This is fine as it is a monster truck and meant for slower speeds. The Wheely King suspension is a little bouncy at speed, and combined with the large tires, it can really get bouncy. Actually, this all adds to the realism of the Wheely King. After all, have you seen what a real monster truck looks like at speed? It's bouncy, too!
Rating: 8

RTR GEAR



Radio: HPI TF-1 27MHz transmitter

ESC: Jolt-R electronic speed controller (ESC)

Servo: HPI SF-1 servo

Motor: HPI Saturn 27-T 540 motor

Battery: HPI Racing Ni-Cd battery pack (7.2V 1500mAh)

Charger: HPI overnight charger for 7.2v Ni-Cd battery (AC120v)

Rough-Track Handling • The Wheely King is meant to have fun with. At speed the little guy is hilariously out of control and a laugh a second, which adds to the fun. Of course, if you wanted to get serious, you could modify it to handle like a desert truck, but that would take away from the RTR fun of it all. At speed it bounces around and actually looks like the real thing as it goes over the rough stuff. Now if you were to ask me, I see the Wheely King as a slow speed truck that's perfect for a future rock crawler, and here is where the Wheely King shines. I removed the rear sway bar-type attachment on the bottom four-bar-link system and the truck came alive. The Wheely King at low speed was an articulating master that climbed and negotiated its way over many rocks and



Skinny can be spelled "Skinnie."

MANTIS

1/8 .28 POWERED 4WD STADIUM TRUCK



ULTIMATE POWER. ULTIMATE SPEED.

Features

• 4WD Shaft-Drive • **Powerful Axial .28 Spec 1s Pull Start Engine** • Adjustable Suspension System • Fully Sealed Bearings • 3mm Aluminum Chassis • Aluminum Shocks with 3.5mm shock shaft and 14mm piston • Aluminum Shock Towers • **Polished Tuned Exhaust Pipe** • Sealed Receiver Box • Sealed Center Gear Box • Two Stage Air Filter • Exclusive Ultra Low Diff design for lower center of gravity • 4 Bevel Gear Diffs • Unique Braking System with Dual Brake Disk • Rubber dampened hinge pin pivot points • Thick composite chassis braces front & rear • High-tech Radio System with hi-torque steering servo • Laydown Steering Servo • **Axial Terra-izer Tires** • Lightweight Axial Dish Wheels • Floating front and rear differentials • **Universal Joints all around** • Axial Fuel filter with fuel tube holder • **Axial Mantis low profile race body** • Fuel bottle • Glow plug igniter • Cross wrench • **5 cell receiver pack with charger**



No. R39071 Mantis 1/8 OFFROAD TRUGGY RTR

The Mantis comes ready to run, with factory driver set-up, multi-color printed body, and includes an AM radio system with a high torque steering servo and a mini-receiver. The tires are pre-glued on lightweight dish wheels. The kit includes all Allen wrenches, a multi socket wrench, glow-plug igniter, a 5 cell receiver pack, extra clutch bells, and a 500cc fuel bottle, the only thing left to buy is batteries and fuel!

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ROBITRONIC
POWER FOR WINNERS

obstacles in my backyard (not naming anything mind you!), and was only limited by its two-wheel drive. Outside of its intended purpose (doing wheelies and bashing), the Wheely King should be a hit for the rock crawler crowd. This thing screams to be made into a 2.2 crawler, but I digress. The Wheely King is an RTR that is geared for fun and bashing and it fits the bill perfectly with smiles per hour!

Rating: 9

Jumping • Just like its full scale brethren, the Wheely King jumps with gusto. Of course, it looks just like the real thing when it does. It will fly into the air and then plop down and bounce its way to a stop, or if you go crazy like the Grave Digger driver does, you will sky towards the heavens and then bounce to a spectacular flip as you land, just like the big boys do. The Wheely King acts just like the real thing when jumping and it's pretty darn fun and real. If you want to pretend you're at a monster jam jumping over the big school bus, then the Wheely King is for you!

Rating: 10

Wheelies • We don't normally include a wheelie rating in our tests (why is that, Derek? Everybody always asks, "Does it wheelie?" and "How fast is it?!"). Since the HPI is called "Wheely King," I guess I should rate it, right? True to its calling, the Wheely King is the wheely master. This puppy will wheelie all day long and will wheelie as long as there is room for it. It does best on pavement and on a fresh battery pack; it will pull the front end up with ease and do a wheelie. In the dirt it wheelies, but unless it's hard packed or tacky, you might need to help it a little. On the loose stuff I found that the rear-wheel drive would spin out and not let the King do its stuff. However, I did find that by rolling back and then punching it, this helped to overcome the wheel spin and it popped wheelies as I mastered this. Overall, it's a blast to wheelie with the Wheely King, and I can't wait for them to make a 1/8-scale version called "Papa Wheely." Sorry, I couldn't resist!

Rating: 10

Wrenching

Maintenance • I really had no problems with the Wheely King so it seems that maintenance will be minimal. When it does come time to work on it, I will not be afraid. The Wheely King is designed smartly, and working on it will be easy. Everything is out in the open and accessible. Each component on the truck has only a few screws to get a part off, or to work on. The whole truck has a minimalist approach to design.

Rating: 8

Wear and Tear • There's not much to go wrong on the King. All the "high-wear" parts are covered. The truck has sealed bearings throughout, the gears are robust, and the drive shafts are steel. What more do you need? All I can say is HPI's design team did an excellent job on the design of this truck, and wear and tear should be minimal in the long run.

Rating: 9

Tuning • There's not a whole lot of tuning needed for this truck. It's a simplistic design and really needs no tuning. Now if you want to talk about upgrade tuning, then the sky's the limit. Like I said earlier, the Wheely King is made to be modified and tuned, and there is no end to what can be done to this truck; batteries, motors, suspension, and gearing all fall into the realm of tuning this little guy. You can turn it into a beast of a monster truck, desert truck, or my future project—a rock crawler. HPI was smart and made the Wheely King a neat gateway for the new basher, or for the seasoned hobbyist to get into tuning and turning the Wheely King into an imaginative creation.

Rating: 9

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

10	INSTRUCTIONS
10	PARTS QUALITY/FIT
9	DURABILITY
9	TUNABILITY
8	OVERALL PERFORMANCE
9	VALUE

HITS

- Scale looks, scale drive
- Killer design
- A pleasure to work on
- The possibility for modifying this truck is endless
- HPI already has hop-up parts available, and can be seen on their website

MISSES

- Could be faster
- Wheel base is a little narrow
- Tire side walls could be a little more flexible

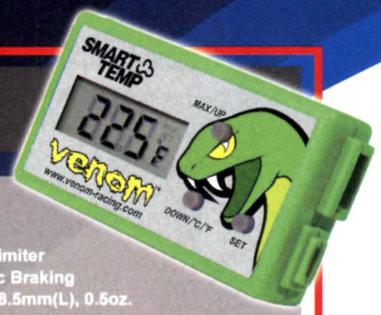
Conclusion

The moment I saw the Wheely King I thought it was a pretty cool truck. I immediately thought back to my Tamiya Wild Willy and remembered how much fun I had with it. To me, this is HPI's modern day version of a true classic. Truthfully, since I'm currently crazy about rock crawlers, I think this will be a great project 2.2 (1/12 scale) rock crawler, and I can't wait to start morphing it into one—as I'm sure many of you are thinking as you read this. The Wheely King is sweetly designed, from its neat tubular chassis, to the four-link suspension, and even the cool battery pack holder. I'm sure a wide rang of people will enjoy this truck. For the new person to the hobby or the children who love RC cars, or even the person who wants something to mess around with, this is a great first RC to get. It's fun, simple and durable, and is of the sprit that got a lot of us hardcore RC people into the hobby in the first place. With a price tag of fewer than two hundred dollars, it's hard to pass up the Wheely King, especially if you like monster trucks.

Look a picture that isn't a wheelie!

INDUSTRY LEADING R/C ELECTRONICS & PRE PAINTED BODIES BY venom™ RACING

SMART TEMP



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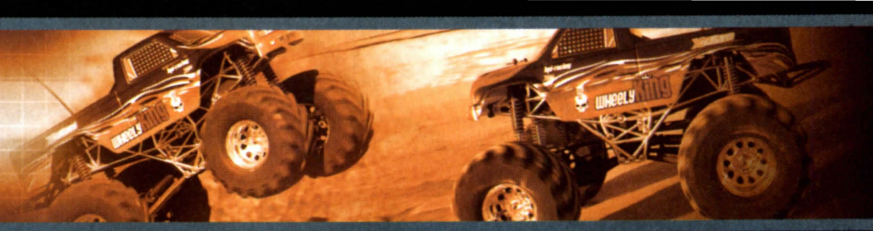
HPI Racing WHEELY KING



• 1/12-SCALE 2WD MONSTER TRUCK • 1/12-SCALE 2WD MONSTER TRUCK • 1/12-SCALE 2WD MONSTER TRUCK •

To crown the king, we're doing a Wild Willy 2 vs. Wheely King shootout!

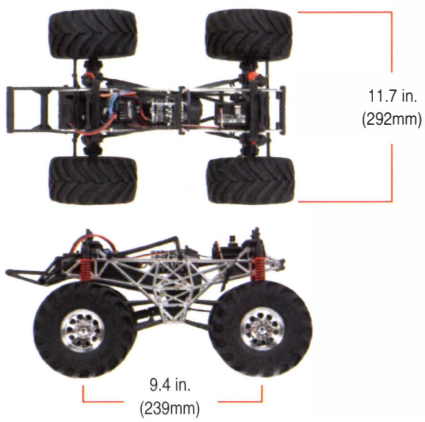
CONNECT:

MANUFACTURER: HPI Racing
PHONE: 949.753.1099
WEB: www.hpiracing.com

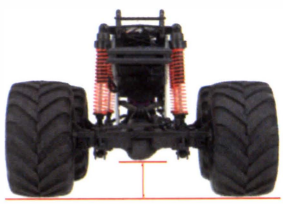
VEHICLE INFO

VEHICLE:	Wheely King
SCALE:	1/12
TYPE:	Electric monster truck
PART #:	10820
STREET PRICE:	$199
PRICE AS TESTED:	$204 (including all items used for testing)
SETUP TIME:	25 minutes
EXPERIENCE LEVEL:	Beginner and above

DIMENSIONS



RUNNING WEIGHT: 4 lbs., 5 oz. (2,041g)



TECHNICAL INFO

CHASSIS

LAYOUT:	Tube-style Twin Verticle Plate (TVP)
THICKNESS:	3mm
MATERIAL:	Plastic (brushed chrome coated)

SUSPENSION

TYPE:	Four-link solid axle
STEERING:	Bell-crank
SWAYBARS:	Rear molded plastic insert (removable)

SHOCKS

BODIES:	Plastic
DAMPING:	HPI 25 wt. oil
PISTONS:	2-hole
SPRINGS:	HPI florescent orange

DRIVE TRAIN

TYPE:	2WD Shaft (4WD capable)
DIFFERENTIAL:	Gear
AXLE TYPE	Dog bone-straight axle
SPUR GEAR MATERIAL:	Plastic
SLIPPER CLUTCH:	None
BEARINGS:	Metal-shielded

BODY, TIRES, WHEELS

BODY:	Pre-painted truck body
TIRES (F/R):	HPI Mud Crusher
DIAMETER/ WIDTH:	135mm/70mm (5.31 in./2.76 in.)
HEX SIZE:	12mm
WHEELS:	Classic King Wheel - plastic/chrome

GEARING

PINION/SPUR:	21/90
GEAR RATIOS:	
PRIMARY:	4.29:1
INTERNAL:	2.92:1
FINAL:	23.39:1

ITEMS NEEDED

Eight AA batteries for radio and a willing trigger finger

MAIN COMPETITION

Tamiya Wild Willy, Traxxas Stampede

WHO IT'S FOR

Anybody that loves bashing or wants a cool monster truck like what they saw at the last Monster Jam, but can't afford the real thing

PERFORMANCE INFO

TEST CONDITIONS

WEATHER:	Sunny
TEMPERATURE/HUMIDITY:	79° F / 24%
BAROMETRIC PRESSURE:	29.97 in.
ALTITUDE:	900 ft.
TRACK TYPE:	All sorts of stuff

HANDLING

TURNING RADIUS:	4 ft., .7 in.
ON POWER:	Wheelie
OFF POWER:	Neutral

BRAKING

CONTROL:	Satisfactory
FADE:	None
OVERALL BRAKING:	Satisfactory

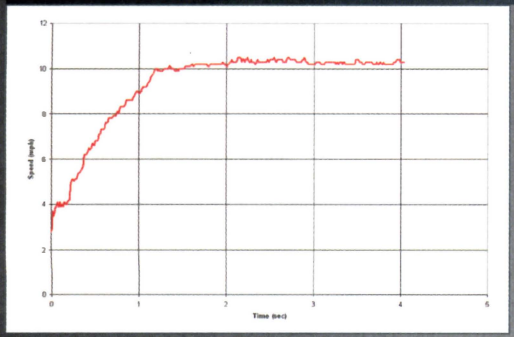
POWERPLANT INFO

We decided to leave the dyno information out on silver can motors like this. Not because they won't provide hours of enjoyment, and decent power, but because the information is not as telling as more powerful motors. When you are looking at what this motor is supposed to do, it does the job perfect. It provides enough power to pull a wheelie, doesn't require much maintenance, and is easy to use. The speed it delivers isn't an accurate description of the ability of the motor, but in this case it's main goal is to pull those front wheels off the ground. If it didn't the trucks name would be "10 mph King" and to be honest, that isn't as cool as Wheely King.



ACCELERATION CURVE

ACCELERATION AND TOP SPEED



ACCELERATION

ACCELERATION (0-60FT):	5.97 sec. @ 9.9 mph
TOP SPEED:	10.6 mph @ 72 ft.
AVERAGE RUNTIME:	15 minutes

MOTOR DATA

MOTOR:	HPI Saturn 540
WIND:	27-turn single

*Results as tested.

MOTOR SETTINGS

TIMING:	Fixed
BRUSHES:	Internal
SPRINGS:	Internal

All you need to know about this motor is that it will last a long time.



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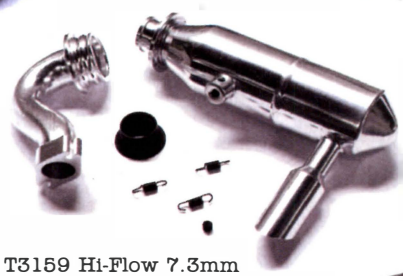
For T-Maxx, Revo, Savage, LST & vehicles hungry for power

T3650 High Torque EVO
Tune Pipe for T-Maxx





T7084 High Torque EVO
Tune Pipe for Savage



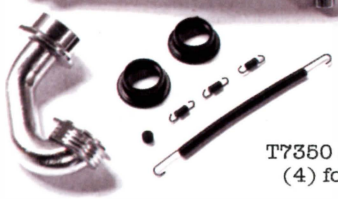
T7346 High Power Tune Pipe Set for LST

T3159 Hi-Flow 7.3mm
Tune Pipe Set for Revo





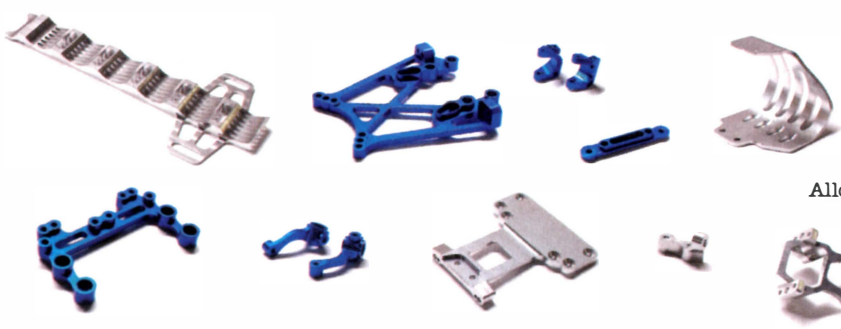
T7083 High Power
Tune Pipe Set for Savage



T7350 23mm EXT Wheel Adapter
(4) for HPI Hellfire & Losi LST2



6061 BILLET PARTS FOR B4 & T4

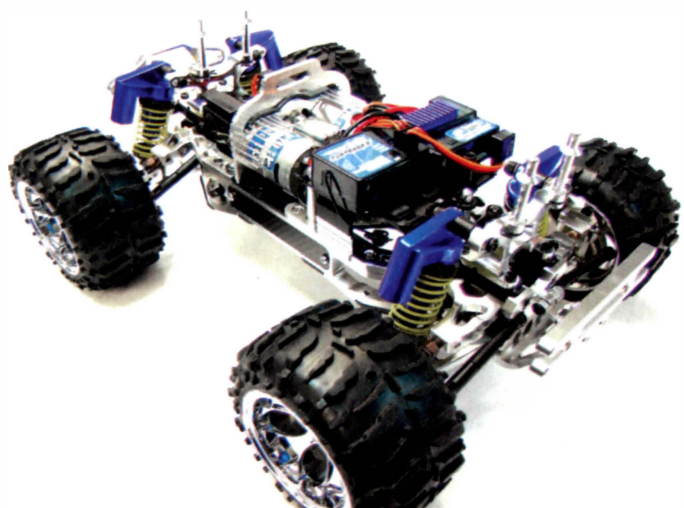


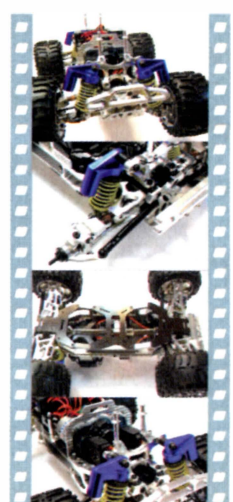
In-line Alloy Steering Block for B4/T4	$19.99
Alloy Modified Castor Block for B4/T4	$19.99
Alloy Front Pin Mount for B4/T4	$9.99
Alloy Servo Mount for B4/T4	$12.99
Heatsink Battery Hold-down for B4	$29.99
Alloy Front Shock Tower for B4	$29.99
Alloy Rear Shock Tower for B4	$29.99
Alloy Rear Chassis Brace for B4/T4	$29.99
Alloy Rear Bottom Skid w/Mount for B4/T4	$29.99
Alloy Motor Guard for B4/T4	$25.99
Alloy Front Shock Tower for T4	$29.99
Alloy Rear Shock Tower for T4	$29.99



Serious Modified Parts for the Mini-LST

Precision Parts made from 6061 aircraft grade aluminum alloy





Universal Drive Shaft (2) for Mini-LST	$15.99
EVO-X Graphite Conversion for Mini-LST	$69.99
Adjustable Upper Arm for Mini-LST	$24.99
Alloy Body Post Set (4) for Mini-LST	$9.99
Battery Cover Post Set (3) for Mini-LST	$5.99
F&R Bumper Brace (2) for Mini-LST	$20.99
Castor Block (2) for Mini-LST	$20.99
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F&R Hinge Pin Mount for Mini-LST	$19.99
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Front Bumper (1) for Mini-LST	$29.99
Front Upper Chassis Brace for Mini-LST	$20.99
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Rear Bumper (1) for Mini-LST	$29.99
Rear Upper Chassis Brace for Mini-LST	$29.99
Steering Block (2) for Mini-LST	$19.99
Heat Sink Motor Mount for Mini-LST	$16.99
Piggyback Shock Set (4) for Mini-LST	$65.99
Graphite RX & ESC Mount for Mini-LST	$16.99
Motor Plate Upright Mount for Mini-LST	$8.99
Adjustable Turnbuckle Set for Mini-LST	$13.99

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T3680 SHD Extended Center Skid Plate for T-Maxx 3.3



MSR8 Performance Shocks
Super Heavy-Duty for Monster Trucks



lock nut secured piston
extra heavy-duty thread
adjustable spring collar



T3664 Super Heavy-Duty MSR8 Shock Set (8) for T-Maxx



T7038 Super Heavy-Duty MSR8 Shock Set (8) for Savage 25 & Savage-X

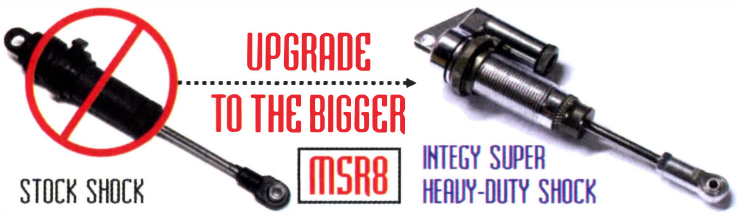


easy access for shock rebuilding

alloy spring retainer
4mm hardened shock shaft
quadruple o-ring seals
metal rodends

T3683 Universal 7075 Alloy Shock Tower for T-Maxx 3.3





C22603 23mm PRO Wheel Nut (2)





C22604 17mm PRO Wheel Nut (2)



* Available in black, gold & gun color beadlock rings



T3662 HD Rear Bumper for T-Maxx 3.3

T3681 SHD 7075-T6 Alloy Front Bulkhead for T-Maxx 3.3





T3661 HD Front Bumper for T-Maxx 3.3

T3682 SHD 7075-T6 Alloy Rear Bulkhead for T-Maxx 3.3



C22605 Beadlock X-Wide Monster Wheel (2)+SQ Pattern Tire
C22606 Beadlock X-Wide Monster Wheel (2)+H Pattern Tire



I lost the decal sheet and blamed Academy for forgetting them...



...but I probably just lost them.

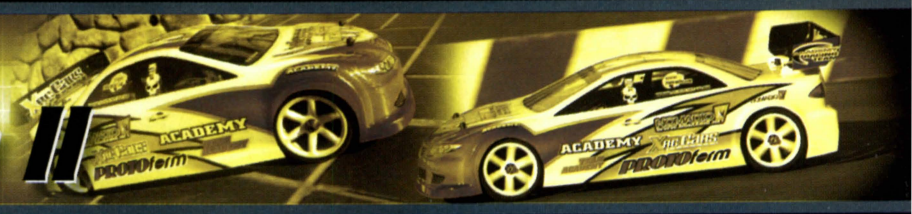
Academy STR-4 Pro II

Words: Michael Wortel ■ **Photos:** Oliver Bentley

Still got the shaft?

Ever since we did the "Budget Racer Grudge Match," I fell in love (again) with the electric sedan. There's something to be said for the simplicity and responsiveness of electric RC and the scale realism of TC in general. Academy has released their second-generation "Pro II" sedan that fills the gap between factory racing kits and budget cars—basically creating an intermediate racing sedan that is likely to see both the track and bashing lots alike. Although shaft-driven sedans have dwindled in popularity over the past couple years, the STR-4 appears to be well engineered. Let's see how it stacks up:

Academy STR-4 Pro II



• 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING C

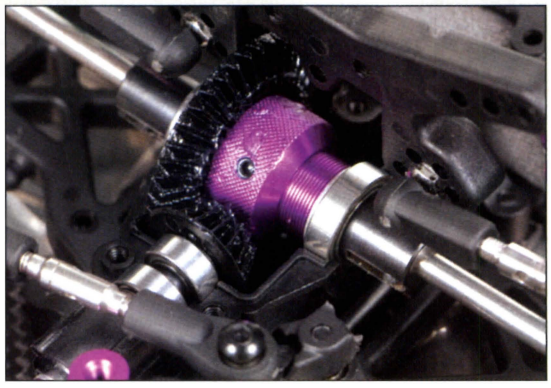
VEHICLE FEATURES

The first thing that jumps out on the sedan is the purple, anodized aluminum found on the motor mount, drive shaft, wheel hexes, shocks and heat sink. The chassis plates are made of rigid carbon fiber, and the top deck covers a lot of ground on top of both trannys. Academy includes wheels, tires, a pinion, multiple spur gears and extra mounting hardware.

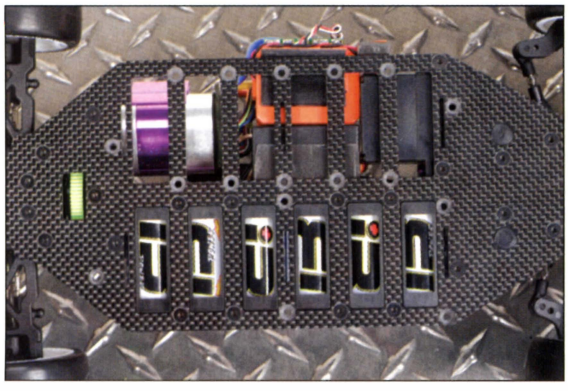


ONE-WAY STREET

"By slapping a one-way diff in the stock kit, it's clear that Academy means business." Racing a one-way in the front helps experienced races get through tight turns with more corner speed. In the sedan class, the front diff typically takes a lot more punishment than the rear, so the high-quality aluminum construction suggests that Academy's design has durability in mind.



CHASSIS OPTIONS



Since no two tracks are the same, the chassis is designed with symmetrical battery position slots from one side to the other. This chassis layout allows for four different battery placement configurations, so depending on the track, individual preference and electronics, you can exhaust the possibilities and find the right setup for the task at hand.

4 UNIVERSALS

For maximum efficiency, leading to better acceleration and cornering, the sedan includes a full set of CV-style drive axles. They are rebuildable, making replacing them much more cost effective. Take a look at the gauge of the shafts; they're thick as hell. This should lead to a more rigid drive train and skyrocket durability.



INSTRUCTIONS AND SETUP

Assembling the kit was painless. Most of the parts are individually molded, so you don't have to waste a ton of time pulling parts off of trees and sanding. The colored instructions are mostly diagram-driven with a bit of helpful text. While building the kit, Academy forgets to suggest using thread-lock in certain locations. Be sure to apply it to the setscrews on the front diff, the bottom motor plate screws, the axle setscrews and anywhere else a metal-to-metal connection exists. Be sure to plan out your intended battery configuration so that you can ensure adequate room for the electronics.



What exactly does "thick as hell" meant, anyways?

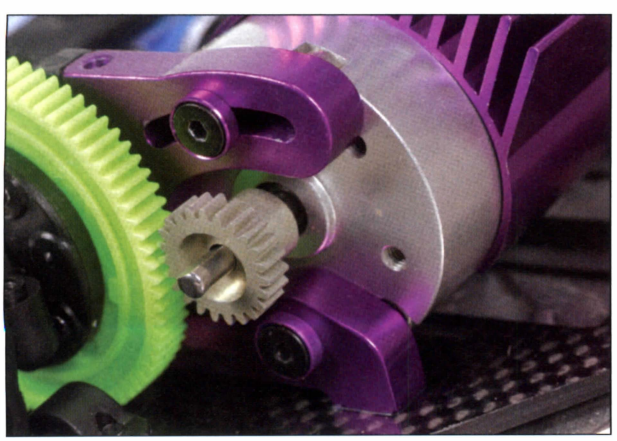


"...if you're a seasoned driver, you'll find just about every adjustment you'd expect TO SEE ON A RACECAR..."

I'm blaming the lousy battery soldering job on a crappy iron.

MACHINED MOTOR MOUNT

The motor mount uses high-quality aluminum that is anodized in the sedan's signature purple color. Not only is aluminum highly conductive to heat (which is beneficial by drawing temperature away from the motor), it's also durable. The mount also makes removing the motor and setting mesh very painless.



OPTIONS, OPTIONS, OPTIONS



Take a gander at the number of possible roll-center positions for the camber link. This is just one example of the sedan's highly adjustable platform. And it doesn't stop there. If you're a seasoned driver, you'll find just about every adjustment that you'd expect to see on a racecar, plus things like varying bulkhead spacers and optional sway bar mounts.

TESTING

The prospect of testing a sedan is exciting, because that means a trip to Tamiya's facility in Aliso Viejo, CA. The layout generally remains exactly the same, and the asphalt surface is clean and offers a ton of grip. The track features a long straight, hairpins, the notorious kink, long sweeper and a challenging chicane.

Acceleration and Speed • Utilizing a shaft drive, the STR-4 experiences some benefits and drawbacks when considering acceleration. It pulls hard out of corners, and the throttle response is aggressive, using the rigid shaft. But the torque of the driver train and motor make the sedan pull to one direction while accelerating, affecting acceleration out of corners. It's not something that the novice racer may notice but because the motor sits perpendicular to the driveline, its inertia will cause some torque steer. Like all shaft drive cars, it rips out of the hole and delivers the power to the ground without any lag.
Rating: 9/8

Braking • You definitely have to make adjustments to your braking approach when running a one-way. Gone is the ability to jam the trigger forward in the middle of a turn. But if you are familiar with the proper way to brake with a one-way, the STR-4 is predictable. Still, it takes more care and anticipation to brake aggressively without locking up the rear wheels. Tamiya's track has a couple spots where utilizing the brakes is beneficial, but for the most part, you're letting driveline friction slow you down in the technical sections without having to use the brakes. Remember to let off early, and the higher corner speed of the one-way will make help you roll through corners faster.
Rating: 8

Low-Speed Handling • The STR-4's initial turn-in was impressive, and this gave the sedan a ton of maneuverability at low speeds. The kit tires didn't offer a ton of traction, but using something more appropriate for the surface kept the sedan planted and gave the steering more bite. The one-way let the STR-4 glide through the slower technical turns and whip around hairpins. At low speeds, the sedan offered a lot of steering and traction, but there was still a slight tendency for the rear end to become loose when transitioning from side-to-side too aggressively.
Rating: 8

High-Speed Handling • The STR-4 was stable at high speeds. Its stiff suspension made the sedan reactive and maintain a lot of steering. But, in situations under large amounts of acceleration and steering movement (such as a chicane or exiting a corner onto a straight) the rear end would get a little loose, occasionally leading to a spinout. But the sedan was very strong through the fast sweeper and maintained a comfortable push if I wasn't too aggressive with the throttle. The one-way made the STR-4 roll efficiently through the chicane and kink, and let the sedan maintain momentum off-throttle.
Rating: 8

TEST GEAR



Radio: Nomadio React, NOM-110, $300

Servo(s): JR 8800S, JRPS28800S, $110

Receiver: Nomadio V2, (in NOM-110 combo)

Speed Control: Novak Super Sport, 3004, $225

Motor: Novak SS5800, (in 3004 combo)

Batteries: Trinity IB Team Level 4200mAh, TRI20057, $75

CONNECT

TEAM TRINITY	**ph:** 732.635.1600 **web:** www.teamtrinity.com
NOMADIO	**ph:** 215.854.8432 **web:** www.nomadio.net
JR (Distributed by Horizon Hobby)	**ph:** 800.338.4639 **web:** www.jrradios.com
TEAM NOVAK	**ph:** 949.833.8873 **web:** www.teamnovak.com

STICKER UPDATE: Wortel looked behind his desk. Guess what he found?



M11 Prestige



CNC Aluminum Parts:

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Custom Engraved Servo Heat-Sinks

			MSRP	
90271FMB	M11P/361Z(2)	2--4 Channel Computer Pistol Grip System, Includes (2) 94361Z Servos TX NiCd 1100 mAh Battery & Charger (Blue)	27,75	999.95
90271FMP	M11P/361Z(2)	2--4 Channel Computer Pistol Grip System, Includes (2) 94361Z Servos TX NiCd 1100 mAh Battery & Charger (Purple)	27,75	999.95
902?2FMB	M11P/362Z(2)	2--4 Channel Computer Pistol Grip System, Includes (2) 94362Z Servos TX NiCd 1100 mAh Battery & Charger (Blue)	27,75	999.95
902?2FMP	M11P/362Z(2)	2--4 Channel Computer Pistol Grip System, Includes (2) 94362Z Servos TX NiCd 1100 mAh Battery & Charger (Purple)	27,75	999.95



What do you get when you take the best selling, top of the line radio system and give it some class? The new M11 Prestige. We put together a super high-end system with some added CNC aluminum parts that includes 2 Rock-crusher servos and a 1100 mAh NiCd transmitter battery pack. This is truly the best of all radio systems. Available in blue or purple.

AIRTRONICS
Get The Advantage

Wrenching

Maintenance • The ease of maintenance of this sedan was about average. There weren't any severe design flaws where installation or maintenance became too difficult of a task. However, in order to access the diffs, almost the entire top deck of the chassis needed to be removed. Switching spur gears also required the removal of the upper deck—several screws in total. There was a lot of room on the chassis to mount the electronics, and the motor mount was very accessible, making it easy to swap pinions or adjust mesh. The sedan uses 2.5mm screws to attach the wheels to the hubs, instead of using a nut onto a threaded spindle. This isn't standard and results in more difficulty when removing and attaching the wheels in a pinch.
Rating: 8

Wear and Tear • The sedan was very sturdy, and at the end of testing nothing was broken. There were two crashes that would have been likely to cause damage, but the STR-4 drove away unscathed. Cups on the rear transmission hold the axle within the outdrive—preventing it from popping out. The spur gear managed to pick up a disruptive pebble. It is exposed on all sides, making it susceptible to sucking up small particles from the bottom of the track. The sedan held up very well and took the kind of punishment typical of a racecar.
Rating: 9

Tuning • Touring cars are very technical and complicated, so we're used to seeing just about every adjustment that someone could make to an RC car: Ackerman, toe, camber, caster, shock positions, roll-center, threaded-body shocks, servo saver, droop… you name it! Academy also made a nice step, including multiple spur gears, making the sedan's out-of-the-box setup very versatile. The included one-way diff up front is an enticing feature, suggesting that this a full-blown racing chassis.
Rating: 8.5

Conclusion

As its price tag indicates, the STR-4 falls between a "pro" and a "budget" kit. The parts are made from quality components and fit together well, but the high CG design of the upper deck is a drawback. For instance, on similar shaft-driven TCs, the bellcranks fit below the shaft, while they are above the shaft on the STR, raising the CG considerably. As one of the "hold outs" of changing to a belt drive configuration, those who seek the shaft drive configuration will be happy to see the STR-4 being sold. Without a solid race program behind the car you'll be alone at the track in the quest to go fast, but if you're one who likes to do it alone, the STR-4 is a bargain when you consider that most touring cars are now four hundred deep and growing. ✪

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

8	INSTRUCTIONS
8	PARTS QUALITY/FIT
9	DURABILITY
8.5	TUNABILITY
8	OVERALL PERFORMANCE
7.5	VALUE

HITS

- Battery placement options
- Stable at high speeds
- Pretty loaded with features.

MISSES

- Team/parts support not going to be as big as others
- Non-standard drive axles

If we had a black and white paint scheme, then we could have Police Academy.



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Academy STR-4 Pro II



• 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR

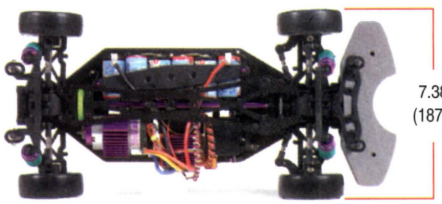
CONNECT:

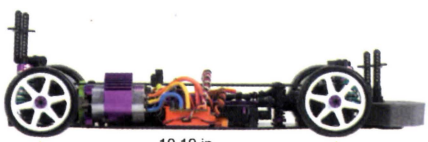
MANUFACTURER: Academy (dist. By MRC)
PHONE: 732.225.2100
WEB: www.modelrectifier.com

VEHICLE INFO

VEHICLE:	STR-4 PRO II
SCALE:	1/10
TYPE:	Electric touring car
PART #:	15102
STREET PRICE:	$300
PRICE AS TESTED:	$1,060
SETUP TIME:	10 hours
EXPERIENCE LEVEL:	Intermediate

DIMENSIONS





RUNNING WEIGHT:
3 lbs., 4 oz. (1482g)



I wonder what Officer Jones is doing these days.

TECHNICAL INFO

CHASSIS

LAYOUT:	Double-deck
THICKNESS:	2.5 mm
MATERIAL:	Carbon Fiber

SUSPENSION

TYPE:	4-Wheel Independent
TURNBUCKLES:	Steel
STEERING:	Dual bellcrank
SWAYBARS:	N/A

SHOCKS

BODIES:	Threaded aluminum
DAMPING:	50 wt. oil
PISTONS (F/R):	2-hole/ 3-hole
SPRINGS (F/R):	Green (19.5 lb.)

DRIVE TRAIN

TYPE:	4WD Shaft
DIFFERENTIAL:	(2) Ball/one-way
AXLE TYPE	CV-style
SPUR GEAR MATERIAL:	Plastic
SLIPPER CLUTCH:	None
BEARINGS:	Metal-shielded

GEARING

PINION/SPUR:	23/76
GEAR RATIOS:	
PRIMARY:	3.30:1
INTERNAL:	2.30:1
FINAL:	7.59:1

BODY, TIRES, WHEELS

BODY:	Not included
TIRES (F/R):	Academy medium compound
DIAMETER/ WIDTH:	2.40 in. x .94 in. (61mm x 24mm)
HEX SIZE:	12mm
WHEELS:	Academy 6-spoke

ITEMS NEEDED

Radio receiver, servo, speed control, motor, battery, charger, body, paint, tire glue.

MAIN COMPETITION

XRAY T2R, Hot Bodies Cyclone-S, Losi XXX-S, Associated TC4 EC, Tamiya TA-05, Yokomo MR4-TC CGM

WHO IT'S FOR

Intermediate sedan racers who want to stick out of the crowd

PERFORMANCE INFO

TEST CONDITIONS

WEATHER:	Sunny
TEMPERATURE/HUMIDITY:	68° F/32%
BAROMETRIC PRESSURE:	28.97 in.
ALTITUDE:	900 ft.
TRACK TYPE:	Asphalt

HANDLING

TURNING RADIUS:	4 ft., 0 in.
ON POWER:	Slight push
OFF POWER:	Neutral

BRAKING

CONTROL:	Good
FADE:	None
OVERALL BRAKING:	Good

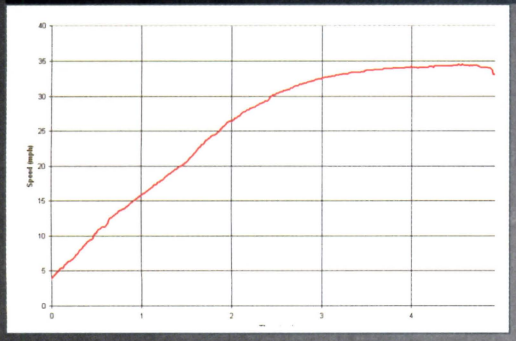
POWERPLANT INFO

The Novak 5800 brushless motor has been out on the market for quite some time now. It is a sensor-based motor that claims to be equal to an 8.5-turn brushed motor. That claim, however, seems a bit exaggerated. I would say that the 5800 more closely feels like a 12-turn brushed motor. After getting the gearing where it needed to be, the motor produced good power on the bottom end but felt more at home in the high RPM range. And it stayed cool. Even after driving the sedan back-to-back on new battery packs, the motor still produced consistent torque and didn't show signs of bogging, caused by overheating.



ACCELERATION CURVE

ACCELERATION AND TOP SPEED



ACCELERATION

ACCELERATION (0-60FT):	3.28 sec @ 30.1 mph
TOP SPEED:	35.2 mph @196 ft.
AVERAGE RUNTIME:	6 minutes

MOTOR DATA

MOTOR:	Novak SS5800
WIND:	8.5-turn

We usually like to give dyno information about the motors used for testing. In the past, manufacturers released Kv information for their motors which was supposed to be a way to compare which motor is faster. Since releasing multiple motors they have told us that there is no standard way of measuring the motors, so they simply rate their motors in turns. At this point, a brushless motor dyno doesn't exist, but once we develop a standard for testing brushless motors to compare directly we'll publish the results.

MOTOR SETTINGS

TIMING:	N/A
BRUSHES:	None (duh!)
SPRINGS:	None



Ahh, the infamous curb-in-the-back.

SUPER TOUGH

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Diablo



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WHEELS



8 Hole Beadlock Wheels

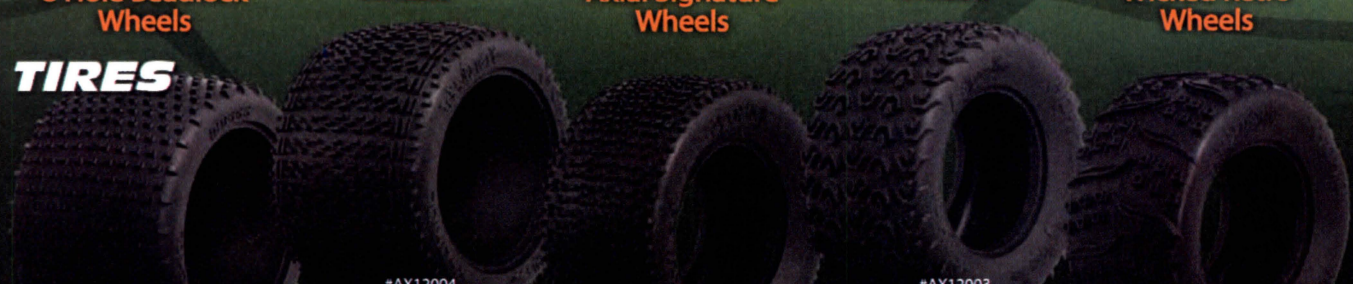
8 Spoke Beadlock Wheels

Axial Signature Wheels

8 Spoke Oversize Wheels

Wicked Retro Wheels

TIRES



#AX12002
Oversize Terra-izer
Monster Truck Tires

#AX12004
Oversize Cubes
Monster Truck Tires

#AX12001
Terra-izer
Monster Truck Tires

#AX12003
Monkey Paws
Monster Truck Tires

#AX12000
Dirt Devils
Monster Truck Tires

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War Wagon

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Baja Buzzard



TOOLS

Axial Wrench
17-23mm



#AX2004

#: AX20000

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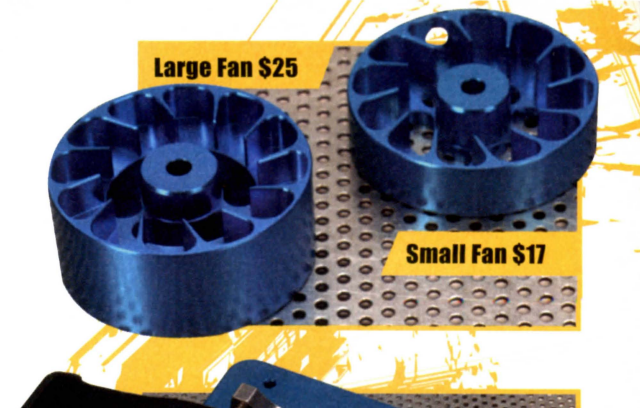
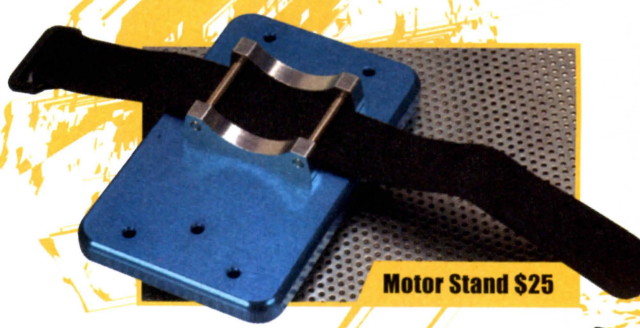
•Super-Mod 435+	1.237+	4 cell	$50.95











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True Hollywood Story: James Revilla was named after James Bond, but he's not British...

XRAY T2 '007

Words: James Revilla ■ **Photos:** Oliver Bentley

Casino (Carpet) Royale

In early 2006, I had reviewed XRAY's newly-redesigned T2 touring car platform, which ended up being one of the best touring car platforms we had ever seen. Its test performance was nearly flawless, and at any big touring car race, you'd see the T2 at or near the top of the winners list. With the year slowly winding down, it was time for XRAY to bump up the level once more, upgrading their all-new T2 with the machine you see here—the new T2 '007. With an emphasis on lowering the chassis' center of gravity, combined with other performance-enhancing refinements, the '007 took A-Main wins in its first outing. So, with team drivers behind the wheel, it's already continuing its winning streak. But what do we at *Xtreme RC Cars* think about it? Read on, my friends.

...but he has this thing for British actresses and their accents.

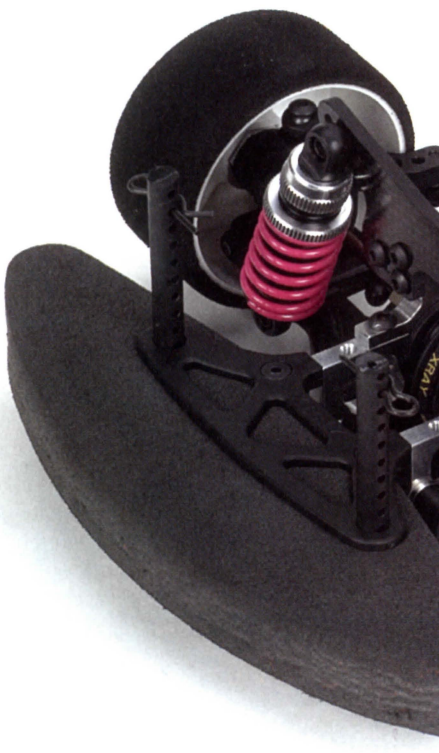
XRay T2 '007



• 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING

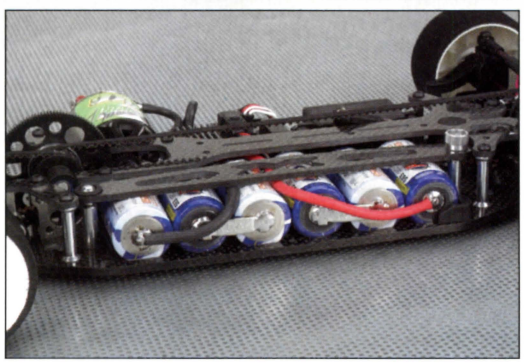
VEHICLE FEATURES

The 2007 model T2 '007 debuted at the 2006 IIC Championships in Las Vegas, NV. It isn't an all-new redesign like the T2 was to the T1; instead, it was more of an evolution and refinement of the T2. The bulk of the changes can be found between the front and rear axles. On a competition-spec chassis like this, it's hard to cover everything, but there are certain interesting features on the T2 '007 worth looking at in greater detail.

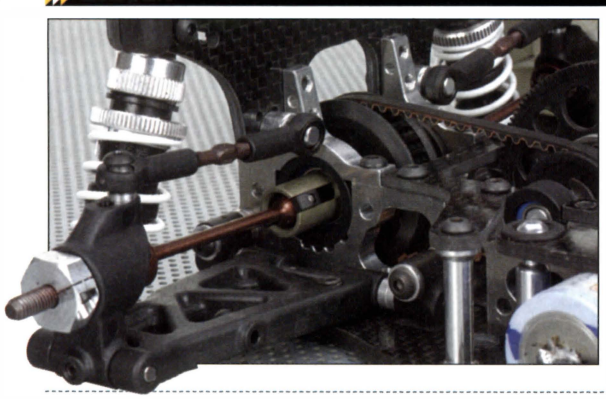


LOWRIDER

The '007 features an even lower center of gravity than the T2. The upper deck has been placed as low as possible, thanks to redesigned 7075 T6 Swiss CNC machined aluminum bulkheads. In turn, the layshaft position has been lowered, as well as the mounting positions of both front and rear differentials. The new wide upper deck has been redesigned especially for carpet use.



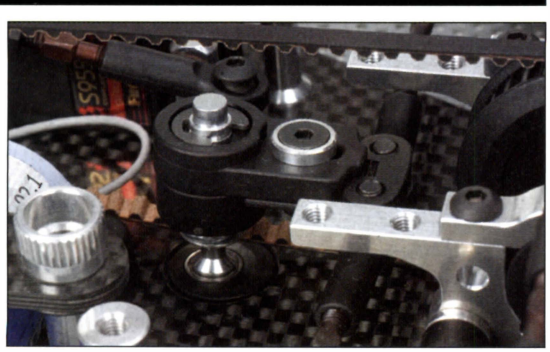
DRIVEN



The front and rear bulkheads are home to new aluminum ball diffs. Blade-style universals made of Hudy spring steel send power to the wheels. The lower suspension arms for the U.S. spec model are XRAY's extra hard (XH) versions, and the '007 features a full set of rubber-sealed ball bearings throughout.

MULTI-ANGLE

One of the more interesting features of the '007 is the new "Quick-Saver" steering bellcrank. Without disassembly, you can alter the steering Ackermann to one of five positions by simply loosening the captured screw. The upper deck is shaped to allow for fast Ackermann changes (upper deck removed for photo).



INSTRUCTIONS AND SETUP

After experiencing the excellent build process of the former T2, going into the '007 meant the same expectations. Needless to say, XRAY was still on point. Their full-sized, color instruction manual featured color-coded CAD illustrations that were easy to follow. Like the T2, there was also a host of extra literature included in the box: product catalogs, their reference-level setup and tuning manual, suggested starting setup sheet, a certificate of authenticity, and a quick-reference laminated card.



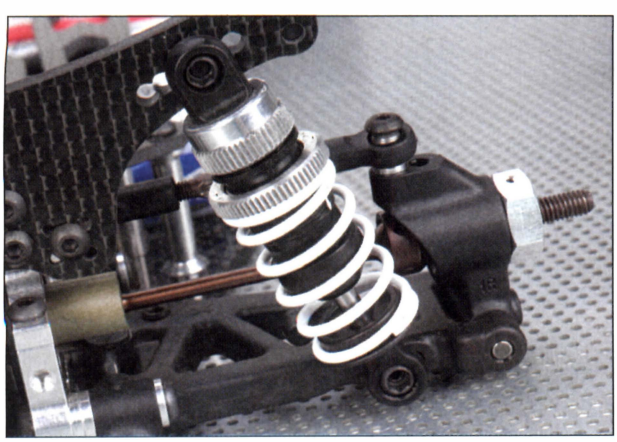
The James Bond films are the longest running movie series ever.



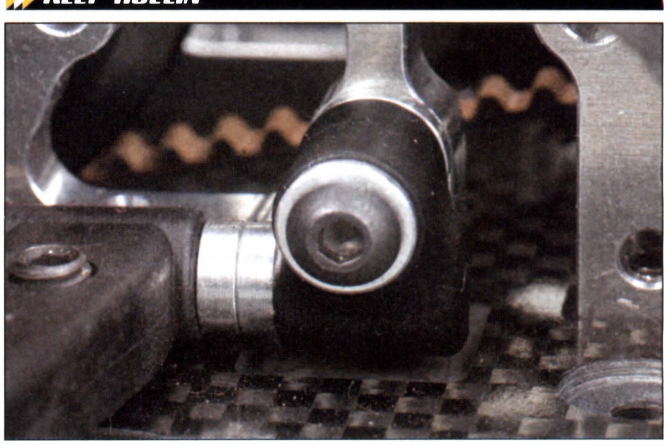
"...the '007 can change directions as quickly and precisely as A RACE CHASSIS SHOULD."

SHOCKWAVE

The '007 features composite threaded shocks with aluminum collars and caps. Identical to the units found on the T2, the '007's damper allows the use of standard pistons or XRAY's internal, adjustable 4-position pistons. Inside the box, carpet-specific spring rates help you get dialed in faster, and the bladder system helps keep air out.



KEEP ROLLIN'



On the inboard side of the lower suspension arms, you'll find molded suspension shaft mounts. With different spacer combinations, you can alter the 007's roll center and track width. Roll center is also adjusted by using the "Quick Roll Center" mounts to reposition the inboard end of the adjustable upper links.

TESTING

The kit I received was the U.S. Spec carpet version, so it was obvious that I should test at a carpet track. Here in SoCal, an indoor carpet track named Bending Corners Raceway, the only one of its kind in the area, recently opened its doors in the city of Orange. I headed down there with a box full of foams and charged-up batteries. After running the previous T2 on asphalt, I was eager to see how well I'd drive with the new generation '007 on a high grip, pinpoint-precise environment that only a true carpet track can bring.

Acceleration and Speed • Gun it with the '007, and you won't hear much other than the motor. The practically silent drivetrain almost hides the fact that the '007's acceleration is rocket-like, disappearing from your depth of field ever so quickly. At speed, the XRAY felt stable, yet light as a feather. Having the bulk of the weight as close to the surface as possible surely does the job of keeping the car feeling like it's magnetized to the track.
Rating: 9.5/9.5

Braking • The U.S. spec comes with ball diffs on both ends, so braking wasn't an issue. All it takes is a jab of the trigger and the '007 would quickly, yet almost uneventfully come to a stop. The enhanced braking (compared to when I tested the original T2 on rubber tires) was partly due to the foam tires' natural traction advantage, but nevertheless, braking with the lower-CG '007 was responsive and controlled.
Rating: 10

Low-Speed Handling • At low speeds, the '007 maneuvers like a squirrel. I'm not saying it's "squirrelly," though. What I mean is that the '007 can change directions as quickly and precisely as a true race chassis should. It didn't matter if I was on part-throttle, or if I was off the trigger entering a corner–the '007 would respond to my steering wheel movements almost instantaneously. For my driving style it was almost too responsive, but I wouldn't exactly call it twitchy, either, since it might have been just a case of heavy steering fingers.
Rating: 9.5

High-Speed Handling • Like last year's T2, the '007 was smooth and composed at high speeds. Even with the narrower straightaway at BC Raceway, I wasn't hesitant to go all out. Although the '007 had low-speed steering response, at higher speeds the chassis still stayed planted if I had to make steering corrections while at full bore. The lowered CG of the '007 helped at the high-speed 90-degree corner at the end of the straightaway, keeping her flat on the surface while I would power through at full speed.
Rating: 10

TEST GEAR


Radio: Futaba 3PK, #FUTJ32XX, $300


Servo(s): Futaba S9550, #FUTM0250, $80


Receiver: Futaba R603FS, part of #FUTL8926, $200


Speed Control: Robitronic iCube, #RS146T, $250


Motor: Peak Racing Dynasty Spec 19-turn, #PEK1320, $55


Batteries: Peak PowerFlo Worlds 4200mAh, #PEK43161, $100


Tires: Parma Pre-mounted Foam Cyan #16010/Magenta #16001, $20/pr.

CONNECT

FUTABA (Distributed by Great Planes)	ph: 217.398.0007 web: www.futaba-rc.com
ROBITRONIC (Distributed by Axial Racing)	ph: 949.600.8645 web: www.robitronic.com
PEAK RACING	ph: 714.692.8533 web: www.peakmotors.com
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After the 2006 IIC, I love racing touring cars on carpet.



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2nd: Win National Championships!



1/18th INDOOR OFF ROAD NATIONALS

RESULTS

4wd Brushless A main

Pos	Name	Battery	Motor	ESC
1	Frank Root	Thunder Power	Hacker	Quark 33A ProCar
2	Jake Thayer	Thunder Power	Hacker	Quark 33A ProCar
3	Josh Anderson (TQ)	Apogee	Mamba	Mamba
4	Zack Berry	Apogee	Mamba	Tekin
5	Carissa Figelski	SMC	Tekin	Tekin
6	Chris Wheeler	Thunder Power	Hacker	Quark 33A ProCar
7	Tim Mohr	Apogee	Mamba	Mamba
8	Carl Smart	Unknown	Hacker	Quark 33A ProCar
9	Joe Mason	Intellect	Mamba	Mamba
10	Nick Zaccaro	Unknown	Unknown	Unknown

33A Combo



- Quark 33A Pro Car Controller
- Hacker E30-13L Brushless Motor
- Special Package Price: **$119.95**

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Wrenching

Maintenance • The '007 retains the original T2's layout of electronics on one side and battery pack on the other. Access to diffs involves removing only four screws (per diff). No fancy screws, no weird procedures to get to. Our production sample had one minor flaw: The included 116t spur gear's teeth barely touched the graphite rear flex plate. A few seconds with a file provided the clearance, but after working with the previous T2, I wouldn't have expected something like this from the newer, refined '007.

Rating: 8.5

Wear and Tear • In my eagerness to chase other cars on the track during testing, I did manage to clip a few corners at various speeds throughout the day. I happened to be running a lightweight body (which, if you don't know, is about as thin as paper), and by the time I got home from the track, the body had non-repairable damage to the front end. It was literally split in half. So why am I talking about the body and not the '007 chassis? Simple. Because nothing broke, bent, or tweaked out. The solid 2x4 boards at the track weren't "chassis-friendly," but even after t-boning the center island a couple of times (don't ask), the '007 came out unscathed, ready to race another day.

Rating: 10

Tuning • If you want to see super tuning options, the XRAY platform is usually one of the best examples, and this latest version continues to please. The '007 mirrors the T2's diverse adjustability, so practically everything you need to get the right setup for the track is at your disposal. A nice feature is XRAY's new "Quick-Saver" steering bellcrank. By just loosening a single screw, you can adjust the Ackerman setting in seconds to any of five positions. Tuning innovations like this one puts XRAY very high up in the touring car scene.

Rating: 9.5

Conclusion

When you shop for real cars, there are certain brands that get placed higher up in category, even if they're similar to another vehicle—kind of like how a 2-seater, rear engine, convertible Toyota MR-S will never be directly compared to a 2-seater, rear engine, convertible Ferrari F430 Spyder. XRAY is similar to the latter. You can't compare most typical 2-belt, 4WD mainstream chassis to the XRAY, an unquestionable, high-performance racing machine that will never fit in anything other than world class. ✪

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

10	INSTRUCTIONS
9.5	PARTS QUALITY/FIT
10	DURABILITY
10	TUNABILITY
9.5	OVERALL PERFORMANCE
9	VALUE

HITS

- Tunability is extensive
- Super low-CG
- Near-perfect fit, finish, quality, and handling

MISSES

- Kit spur gear hit upper deck in our sample
- Will only be 'current' for about a year

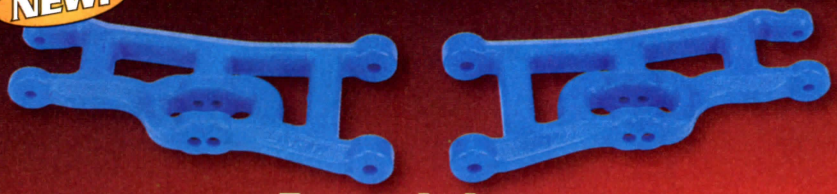
Sean Connery > Daniel Craig > Pierce Brosnan > the rest.



RPM

NEW FOR Traxxas Rustler& Stampede

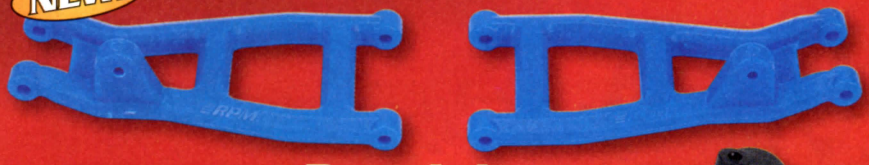
NEW!



Front A-Arms

Electric—Black #80242, Blue #80245
Nitro—Black #80492, Blue #80495

NEW!



Rear A-Arms

Electric—Black #80182, Blue #80185
Nitro—Black #80532, Blue #80535



Molded Gear Cover

Electric—Black #80402, Blue #80405



Front Oversized Bearing Carriers

Electric Only—#80372
5mm x 11mm bearings not included



Rear Oversized Bearing Carriers

Electric Only—#80382
5mm x 11mm bearings not included



Wide Front Bumper

Electric & Nitro—Black #81162,
Blue #81165



Spring Adjuster Clips

Black #73152, Blue #73155,
Yellow #73157, Purple #73158



Spring Cups

Black #70322, Blue #70325,
Yellow #70327, Purple #70328



ESC Mounts

Rustler—Black #80252, Blue #80255
Stampede—Black #80362, Blue #80365



Head Guards 2.5 & 2.5R

Black #80502, Blue #80505, Silver #80506 (dyeable)



Heavy Duty Camber Links

Electric Only—#81262

NEW!

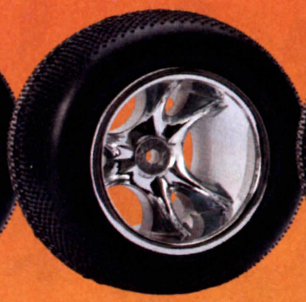


REVOLVER

NEW!



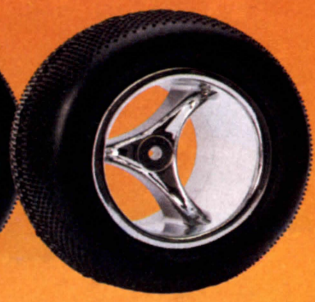
BULLY



CLAWZ



SLINGSHOT



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XRay T2 '007



• 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR • 1/10-SCALE ELECTRIC TOURING CAR

The first 007 film started filming on January 16th. James was born on January 16th. Wow.

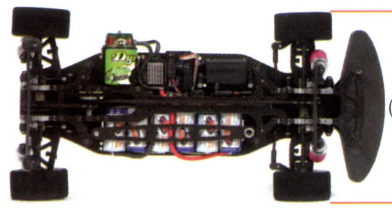
CONNECT:

MANUFACTURER: Team XRay (Distributed by R/C America)
PHONE: 214.744.2400
WEB: www.teamxray.com

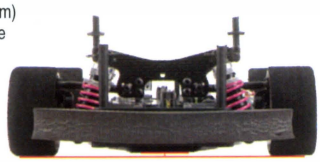
VEHICLE INFO

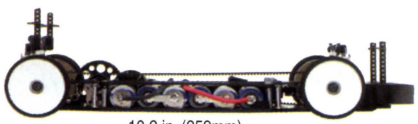
VEHICLE:	XRAY T2 '007 U.S. Foam Spec
SCALE:	1/10
TYPE:	Touring car
PART #:	300007
STREET PRICE:	$409-420
PRICE AS TESTED:	$1,434
SETUP TIME:	7 hours
EXPERIENCE LEVEL:	Advanced

DIMENSIONS



WEIGHT w/Out FUEL: 2 lbs., 13 oz. (1275g)





TECHNICAL INFO

CHASSIS

LAYOUT:	Double-deck
THICKNESS:	3.5mm
MATERIAL:	Carbon fiber

SUSPENSION

TYPE:	4-Wheel independent
TURNBUCKLES:	Hudy Spring Steel
STEERING:	Centered bell crank, ball bearing, and built-in servo saver
SWAYBARS:	N/A

SHOCKS

BODIES:	Molded composite
DAMPING:	30 wt. Team Orion oil
PISTONS:	4-Position adjustable (tested with #3)
SPRINGS:	F/R light purple/white (30 lb./17.5 lb.)

DRIVE TRAIN

TYPE:	4WD dual belt
DIFFERENTIAL:	Ball (2)
AXLE TYPE	Rebuildable CVD-type universals with blade drives
SPUR GEAR MATERIAL:	Plastic
SLIPPER CLUTCH:	None
BEARINGS:	Rubber sealed

GEARING

PINION/SPUR:	32/116
GEAR RATIOS:	
PRIMARY:	3.51:1
INTERNAL:	1.70:1
FINAL:	5.96:1

BODY, TIRES, WHEELS

BODY:	Not included
TIRES (F/R):	Not included
DIAMETER/ WIDTH:	Not included
HEX SIZE:	12mm
WHEELS:	Not included

ITEMS NEEDED

Radio transmitter, receiver, servo, speed control, motor, battery, battery charger, body, wheels, tires, paint, tire glue.

MAIN COMPETITION

Tamiya 415MSX MRE, Associated Factory Team TC4, Corally RDX, Hot Bodies Cyclone Moore Edition, Losi JRXS Type R, Schumacher Mi2 Carbon

WHO IT'S FOR

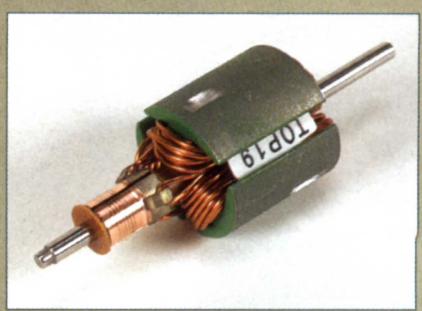
Advanced/Pro level touring car racers



POWERPLANT INFO

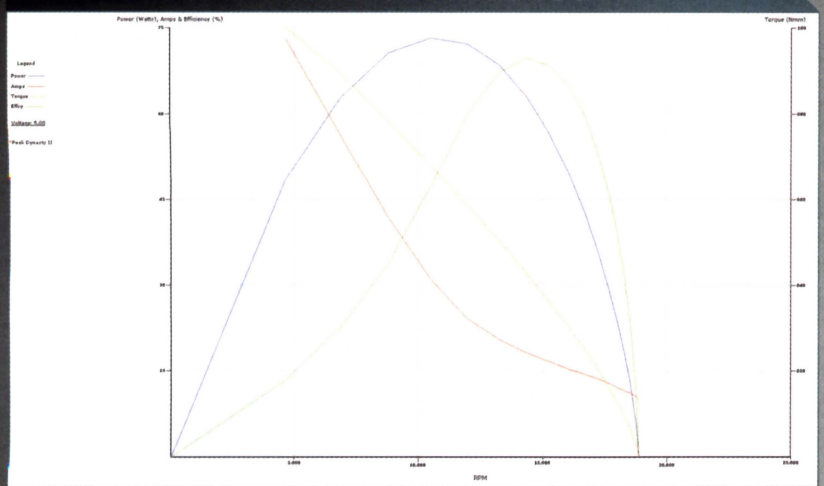
For this review, I installed a Peak Racing Dynasty motor to run one of the more popular classes these days: 19-turn spec. The Dynasty uses a TOP-based can with laydown brushes and heatsinks. Although not as high-tech as the newer Revolution-based powerplants, the Dynasty V1 had power typical to many 19-turn spec racing motors. I had the '007 geared a tad low for the course, adding to motor stress, but the Dynasty held on and gave me power when I needed it. After a full run, the motor can wasn't as hot as I had anticipated (due to my selected gear ratio), and after about four battery packs, it still felt punchy down low, but I sensed a tiny loss at top end. It's not uncommon for racers to cut the comm after a couple of runs (which I didn't do during testing), so this small loss might not have occurred if I were, you know, a serious racer.





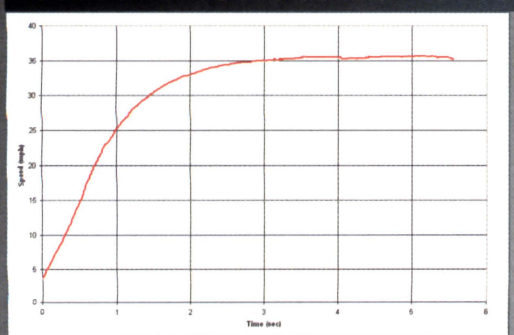
FANTOM DYNO DATA

POWER PLANT DYNO PERFORMANCE



ACCELERATION CURVE

ACCELERATION AND TOP SPEED



ACCELERATION

ACCELERATION (0-60FT):	3.12 @ 32.6 mph
TOP SPEED:	36.0 mph @ 201 feet
AVERAGE RUNTIME:	5 minutes

MOTOR DATA

MOTOR:	Peak Racing Dynasty
WIND:	19-turn single
MAX POWER*:	73.17 W @10,479 RPM
MAX TORQUE*:	99.67 Nmm
PEAK RPM*:	18,852 rpm @ 2.0 sec.
EFFICIENCY*:	69% @ 14,317 RPM

*Results as tested.

MOTOR SETTINGS

TIMING:	24-degrees
BRUSHES:	Peak serrated pro stock (enduro)
SPRINGS:	Medium copper springs

PERFORMANCE INFO

TEST CONDITIONS

WEATHER:	Cool, breezy
TEMPERATURE/HUMIDITY:	78-deg. / 10%
BAROMETRIC PRESSURE:	29.97 in.
ALTITUDE:	900 ft.
TRACK TYPE:	Indoor prepared carpet

HANDLING

TURNING RADIUS:	3 ft., 2.5 in.
ON POWER:	Neutral
OFF POWER:	Neutral

BRAKING

CONTROL:	Excellent
FADE:	None
OVERALL BRAKING:	Excellent

The first big 007 win was... in a casino. Go figure.


WHEELY
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Optimized weight distribution and wheelie bar make wheelies fun and easy!
LONG TRAVEL!
6" of suspension travel for all-terrain driving.
Tough TVP (Twin Vertical Plate) chassis with tube frame design
Efficient sliding center universal drive shaft delivers power to the solid rear axle.
Realistic chrome wheels and 5.4" Mud Thrasher tires



king

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- Tough TVP chassis with tube frame design

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#10820 RTR Wheely King Truck with Mini GT-1 Truck Body

Have you ever experienced the excitement of a monster truck event? Here's your chance to bring that excitement home! HPI is proud to announce the release of the newest addition to our electric monster truck line, the Wheely King! The Wheely King is designed with wheelies in mind. Specially tuned weight distribution and a rear wheelie bar allow you to pull wheelies and bash with the best of them. Realistic looks add to the monster truck experience with features like Tough TVP (Twin Vertical Plate) chassis with tube frame design, shiny chrome "Classic King" wheels, authentic 5.4" Mud Thrasher tires and front and rear solid axles with pivot arms. To top things off, the custom painted truck body sports flames from front to back and bold "Wheely King" graphics...pre-painted, trimmed, mounted, with decals applied. It doesn't get any easier than that! The Wheely King is a fun and easy monster truck that is preassembled and ready to go right out of the box, just charge up the included battery pack and start driving!

hpi-racing

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NAM2

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POWERED BY
NAM-NAM BRUSHLESS SYSTEMS

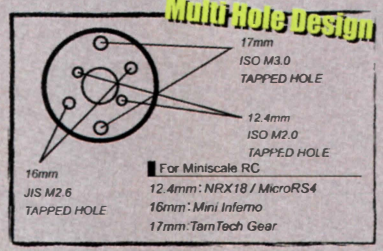
Brushless Motors



SPEC.

- Shaft Diameter : 2.0mm
- Shaft Size : 11.5mm
- Weight : 50g
- Screw Diameter : 2.0mm/2.6mm/3.0mm Depth:4mm
- Screw Pitch: 12.4mm/16mm/17mm
- Motor Size : Diameter 22mm (+Heatsink 24mm) X Length 36mm

Multi Hole Design

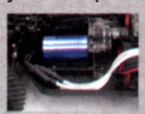


LINEUP

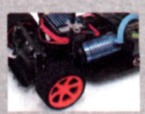
NEW	NAM-3700	KV3700
NEW	NAM-4200	KV4200
NEW	NAM-4800	KV4800
NEW	NAM-5200	KV5200

NAM-NAM Brushless MOTOR

From NAM-NAM who is New Brand from Japan, We release new Brushless Motor!! It is fantastic to work with Mini Scale Cars!!! Not only for that, this Motor is designed that you can put it on various vehicle.


Mini Inferno


TamTech Gear


NRX-18

Attention:
Brushless motors put a great strain on your R/C car. So we strongly recommend that you modify it with some reinforced parts

Brushless Controllers



Easy setup! and Low Price!

NEW

NAM-RC25A

NAM-NAM Brushless Motor bring you to set up easily, reasonable price for you can be familiar with it easily and easy way to run your R/C!!
NAM-NAM motor is included with a Stylish Blue Sink-Head.

- Input Voltage : Ni-Cd/Ni-MH 4~10cell Li-Po 2~3cell
- Current: 25A / 30A (15 Sec)
- Rate: 8KHz
- Resistance: 0.0045ohms
- Voltage Cut-Off
- Mode: Reversible / Braking (Nomal / ABS)
- Size: 37 X 25 X 15 mm
- Weight: 35g

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Team Losi MICRO T

Words: Michael Wortel ■ **Photos:** Oliver Bentley

Napoleon Complex

Okay, this thing is tiny! But not only is it small, it's a real RC car—not a toy that you'd buy at a retail store. When Losi sent the initial press release for their 1/36-scale truck, I was excited, not skeptical. See, when Losi released the Mini-T, they proved that they could scale down big time without sacrificing the driving experience. Now they're taking another small step forward (so to speak) and hitting the XXX-T with another, even more powerful shrink ray. Enter: the Micro-T.

Look, we use Macs in the office... and yes, we drive over our keyboards.

Team Losi MICRO T

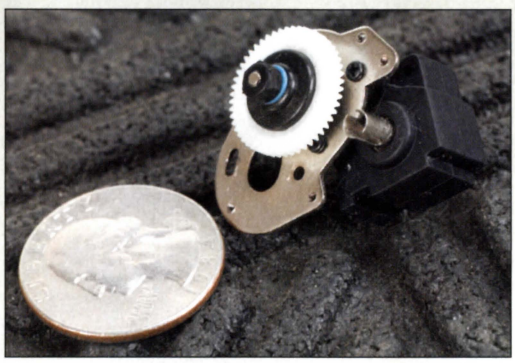


• 1/36-SCALE MICRO • 1/36-SCALE MICRO • 1/36-SCALE MICRO • 1/36-SCALE MICRO • 1/36-SCALE MICRO •

VEHICLE FEATURES

Yes, apparently they do make diffs that small! The transmission itself is the same (although scaled down) as its 1/10-scale counterpart. Add an adjustable slipper clutch, and you have the potential makings of a racecar.

Losi includes a portable quick charge system for the micro Ni-MH cells. And there's no need to find an outlet, because the charger runs on 8-AAs and zaps the pack in about 20 minutes. To top it all off, Losi includes AAs for both the charger and transmitter. This is the first RC car that I have ever seen where you can literally open the box in the parking lot and get running immediately.





Introducing: the floormat montage.



CONNECT:

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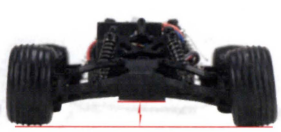
DISTRIBUTOR: Horizon Hobby
PHONE: 909.390.9090
WEB: www.teamlosi.com

DIMENSIONS





RUNNING WEIGHT: 3.4 oz. (96g)



VEHICLE INFO

VEHICLE:	Team Losi Micro-T
SCALE:	1/36
TYPE:	2WD micro off-road stadium truck
PART #:	LOSB0230
STREET PRICE:	$80-$100
PRICE AS TESTED:	$99
SETUP TIME:	20 minutes
EXPERIENCE LEVEL:	Novice



If there were a category for 'fun'
THIS TRUCK WOULD SCORE A RESOUNDING '10'...

...hope you like microscopic E-clips!

TECHNICAL INFO

CHASSIS

LAYOUT:	Plastic tub-type

SUSPENSION

TYPE:	4-wheel independent
TURNBUCKLES:	Fixed plastic

SHOCKS

BODIES:	Plastic
DAMPING:	Friction-type

DRIVE TRAIN

TYPE:	2WD
DIFFERENTIAL:	Gear (1)
AXLE TYPE	Dogbones
BEARINGS:	Metal-shielded/plastic bushings

GEARING

PINION/SPUR:	14/60
GEAR RATIOS:	
PRIMARY:	4.29:1
INTERNAL:	2.71:1
FINAL:	11.63:1

ITEMS NEEDED

Absolutely nothing!

MAIN COMPETITION

Only vehicle in class

WHO IT'S FOR

Something this novel is for everyone.

ACCELERATION

ACCELERATION (0-60FT):	5.20 sec. @ 12.1 mph
TOP SPEED:	12.2 mph @ 65 ft.
AVERAGE RUNTIME:	12 minutes

POWERPLANT INFO

The included micro motor doesn't offer a ton as far as features, but it is more than adequate to power the miniscule stadium truck. The endbell is sealed and isn't rebuildable, but maintenance isn't too much of a concern for such a small powerplant. Even running on thicker, boggy carpet, the motor stayed cool enough for operation and provided a nice range of torque and RPMs.

TESTING

You won't be piloting the Micro-T on a 1/8 or 1/10-scale track; it's simply too small for the terrain. But the Micro-T is one of the first vehicles I've tested that has been designed for indoor use as well as on the street and on well-manicured, off-road surfaces.

Acceleration and Speed • Weighing-in at less than 1/4 of a pound, the Micro-T accelerates quickly and with a surprising amount of torque for such a small motor. It easily pops a wheelie on carpet, and you can use the slipper to find a happy medium. The top speed of the stock Micro-T is also a pleasant surprise—feeling quicker than some larger, stock minis.
Rating: 8/8

Handling • Even with the use of tiny friction shocks, the handling characteristics of the Micro-T are somewhat impressive. With lots of traction on carpet, it carves out a consistent line and has a ton of turn-in off throttle. There's some push to be found on-power, because it doesn't take much to upset the super-light front end.
Rating: 7

Rough-Track Handling • You can't expect this truck to go over jagged, off-road terrain with much control; it's just so small and light, and the friction-type shocks are bouncy. But the Micro-T did surprise me with its ability to navigate around on thicker carpeting.
Rating: 7

Jumping • Going over two-foot tall jumps with the micro isn't very realistic (think of the scale). But when faced with appropriate jumps and bumps, the truck behaves pretty well. There isn't a lot of hang time, but throttle inputs can be used to manipulate the truck in the air.
Rating: 8

Wrenching

Maintenance • The Micro-T is simple, and there are fewer parts than found on a larger scale truck. In that sense, working on the truck is brainless. But if you thought working on a larger 1/18-scale mini was tedious, be prepared to shrink it to the next level, which is probably why Derek Claus gave his little Wort elf this truck to begin with. The parts are very small–much like working on a watch–but if you can handle a little frustration, it's no problem.
Rating: 8

Wear and Tear • After 20+ runs with the micro—hitting desk legs, walls, wedging it under doorways, and being pounced on by my cats—nothing broke. The parts are light and very flexible, so the construction is quite forgiving. However, when I drove the truck off of a 4' table, directly onto the side of the left-rear wheel, the left hinge pin mount snapped. I honestly anticipated some breakage, due to the incredibly small size of the truck, but it took a lot of abuse before anything broke.
Rating: 9

Tuning • Out of the box, the Micro-T doesn't have any real tuning options. All of the turnbuckles and camber links are fixed, as well as the shock mounting positions. The only adjustable aspects are the slipper clutch and trim you could use different viscosities of grease in the diff). But like anything that's designed to be fun, there are sure to be many hop-ups for the Micro-T, so there may be a brighter tuning future for the micro to come.
Rating: 5

Conclusion

Don't judge this review by the numbers alone. This is the first car of its class that we've ever tested, and it doesn't quite fit into our regular scoring criteria. If there were a category for "Fun," this little guy would score a resounding "10." In recent years, Losi has taken more innovative steps with RTR's and small-scale RC than probably any other manufacturer The Micro-T is likely to prove successful for Losi, and other manufacturers are almost certain to follow suit. Verdict: This micro is for everyone.

RTR GEAR



Radio: 2-Channel AM pistol

Receiver: Team Losi integrated micro unit

Servo(s): Micro, LOSB0187

Motor: Team Losi micro

Battery: Team Losi 150mAh, 4.8V NiMH

Charger: Team Losi AA-size charging module

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

7	INSTRUCTIONS
7	PARTS QUALITY/FIT
9	DURABILITY
5	TUNABILITY
8	OVERALL PERFORMANCE
9	VALUE

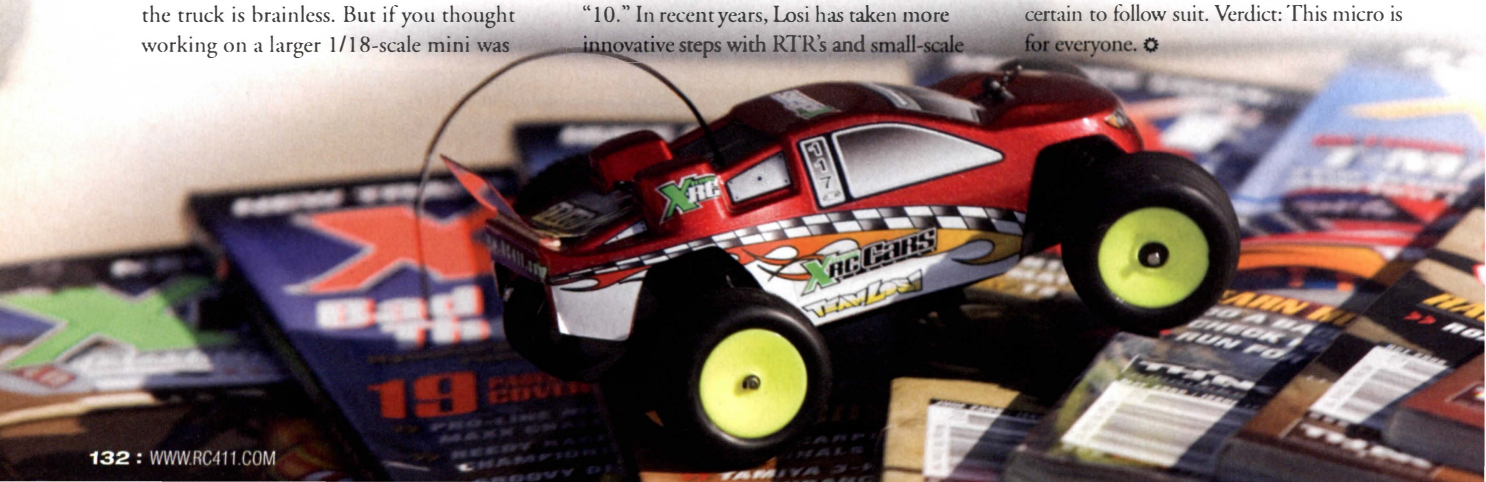
HITS

- Outrageously fun
- 100% ready-to-run
- Faster out of the box than original Mini-T

MISSES

- Charger would benefit from DC adaptor
- Teeny, tiny parts
- Not tunable out of the box

"Derek Claus" and "Wort Elf" is what happens after a few cold ones.



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DISASSEMBLE ANY ENGINE IN 15 MINUTES

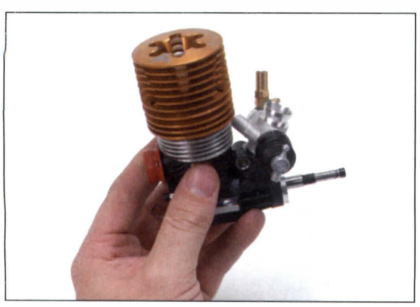
Try to remember how it goes back together.

Words: Derek Buono **Photos:** Oliver Bentley

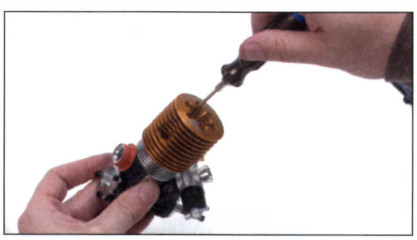


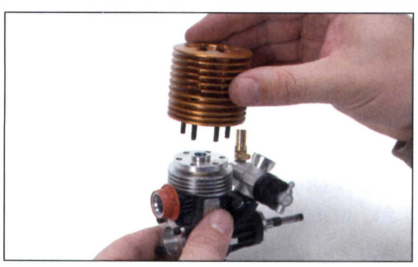
I'm not too embarrassed by this fact, but until we got our dyno I never really took apart an engine. With the amount of cars and engines that come across my desk, it was rare for me to even use an engine in a race season long enough for it to require maintenance. If there was a problem, odds were I would be running a different car the next time. But once we got the dyno, and my interest in providing information from it increased, I had to take engines apart. And something strange happened—I enjoyed the process of taking them apart, and putting them back together. I was never really shown how to do it, I just did what most do: take a part off and put it down on a clean towel. When I ran into a problem I asked the people I knew who spent all day playing with engines. Now I'm pretty good at taking an engine apart and putting it back together. I do still make a mistake or two if I'm not paying attention, but for the most part, taking an engine apart is no harder than twisting a few screws. Here's how we do it:

1. Strip the engine down to its bare essentials. If you're starting with a dirty engine, give it a good cleaning. The engine must have everything removed to start the process.



2. The first step is to remove the head. Some engines still use a flat-head screw, but most use an Allen wrench (either 2mm or 2.5mm). If it's a flat-head style screw, I recommend that you have a screwdriver that fits perfectly. Any slippage could result in a stripped screw and a major PITA to get it out. Once the head is removed, place it to the side.





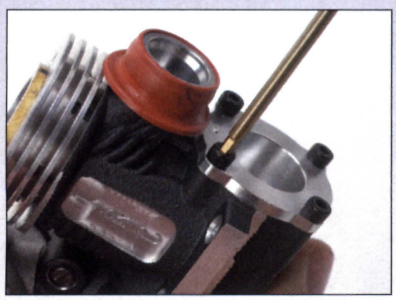
3. Remove the head button. Some engines may have additional screws holding the head button on, but for the most part it should pop off with little effort. Be careful of the head shims that may be under the button. They are used to adjust the compression of the engine. Place them on a clean towel and get ready for the next step.

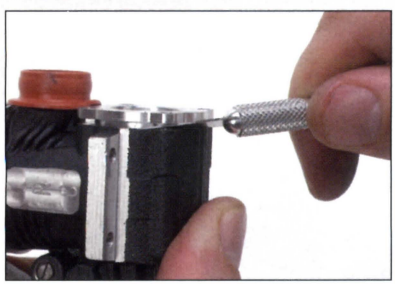




For a fun RC prank, take your buddies engine apart and leave him a pile of parts!

4. Remove the backplate. On the back of the engine there is either a backplate or a starting mechanism (pull start or roto start). Removing them is the same process of taking the four screws out of the back. The backplate may be slightly hard to get out; use an X-Acto blade to create some space until you can get your Twinkie-fingers on it for a good tug.

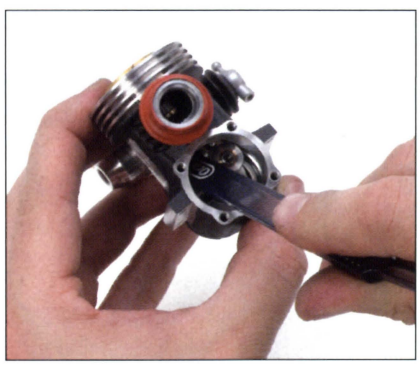




5. Removing the sleeve is sometimes the easiest thing to accomplish, and sometimes more difficult. Occasionally you can get it to slide out with nothing more than turning the crank and having the pinch of the system slide the sleeve out of the block. Other times you need to help it (tighter fit is actually more ideal). There are a couple of "approved methods" of removing the sleeve. Remember that the sleeve is easily scratched, so never use anything "hard" when working on *removing it. If the engine* is cold, you may want to use a hair dryer to get the engine warm, which generally makes it easier to work on.



5b. Set the piston to top-dead-center (TDC). One of the most-used methods of getting the sleeve out is using a toothbrush. Using the handle, push upward on the bottom edge of the sleeve, inserting the toothbrush through the back of the engine. The sleeve should just slide up, allowing you to pull the sleeve out of the block.



5c. Set the engine to bottom-dead-center (BDC). Using a thick zip-tie, or folding a thinner one in half, slide the zip-tie in the exhaust. Spin the crank so the piston moves up in the sleeve. The zip-tie will then catch on the sleeve, and you should get enough upward movement of the sleeve to grab it and pull it out of the block. Remember to NEVER grab the sleeve with any sort of pliers.



6. Removing the piston and rod is the next step in the process. With the sleeve out of the engine, spin the crank until the piston is TDC. With your finger, pull the rod where it attaches to the crank, making sure that the crank is not being pushed into the engine. The rod should slide off the mount and the piston should slide out of the top of the engine. Sometimes it may require some finagling



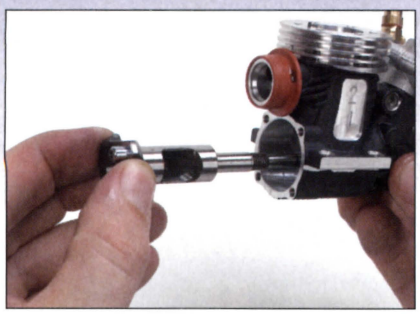
Bearing Removal

Taking the main bearings out of an engine isn't something that you should do without the proper tools. You can easily damage the bearings or damage the case by doing this. Several companies actually make tools for extracting the bearings from the case, and more importantly, putting them back in. Misaligned bearings can cause all sorts of issues, from loss of power to rod breakage.

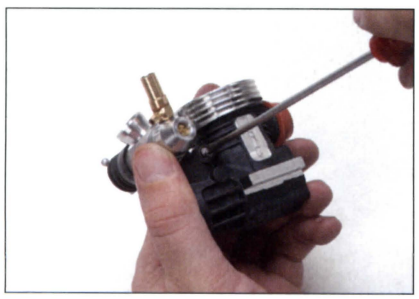
to get the rod off. The crank may have to be rotated to the side, or the rod may have to be "walked" off the mount.



7. The last major step in the process is sliding the crank out of the block. Just push the crank from the front of the engine and it should slide out.



8. To remove the carb, loosen the bolt that holds it in place, which can be found at the base of the carb. Sometimes it takes a slight tap on the end to get both sides loose, which will allows the carb to be pulled right off.



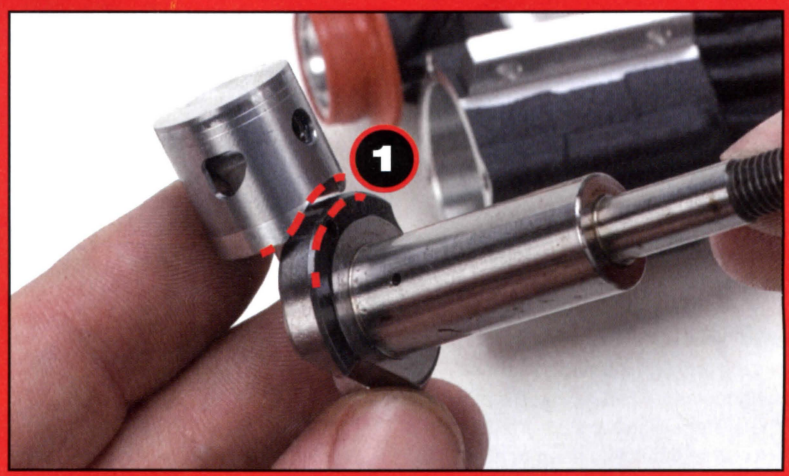


Reassembly Tips and Tricks

Putting the engine back together is basically reading from the end of the article backwards. Instead of just repeating the steps in reverse order, I'm only going to highlight the steps that require special attention. While the engine is apart, it's always a good idea to check for wear and clean the parts. Before re-assembly, coating parts with After Run Oil will make things easier to put back together and prevent scoring of the parts.

Piston Direction

The rod is directional, and is required to go on the right way to operate correctly. If you just took the piston and rod out together the orientation is easier. The skirt of the piston has material removed to clear the crank. The "open" space (1) should point toward the front of the engine.



If you are just putting a new connecting rod on, putting that back together properly is crucial. There is a lubrication hole in the rod that feeds the bushing, and it must point toward the front of the engine. This allows fuel (which has oil in it) to be forced in the hole, with lube getting to the bushing. Make sure this hole is pointed forward. So basically, both the hole and the piston skirt—with the material removed—face toward the front of the engine.



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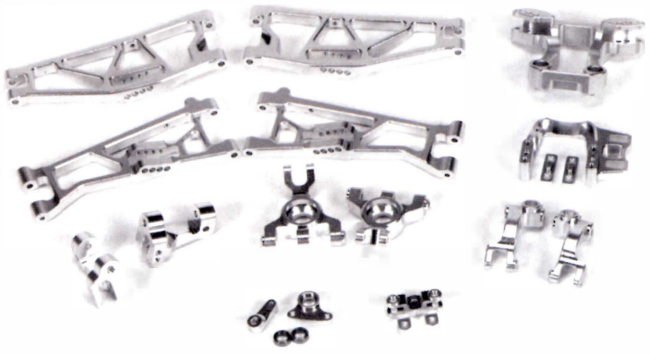

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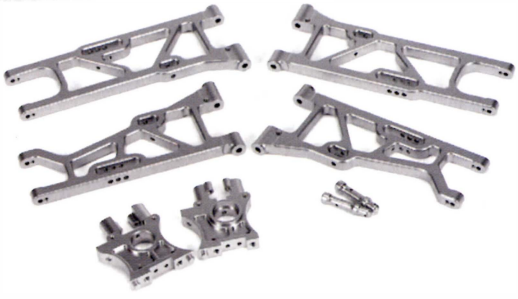

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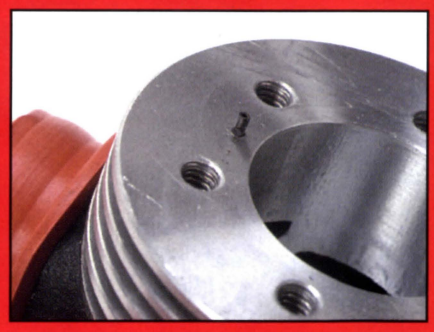
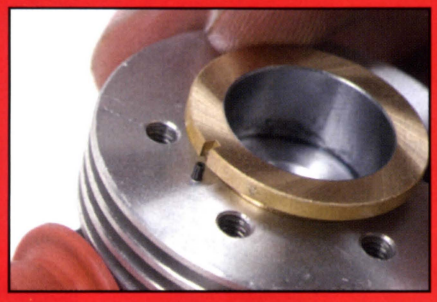
Sleeve Direction

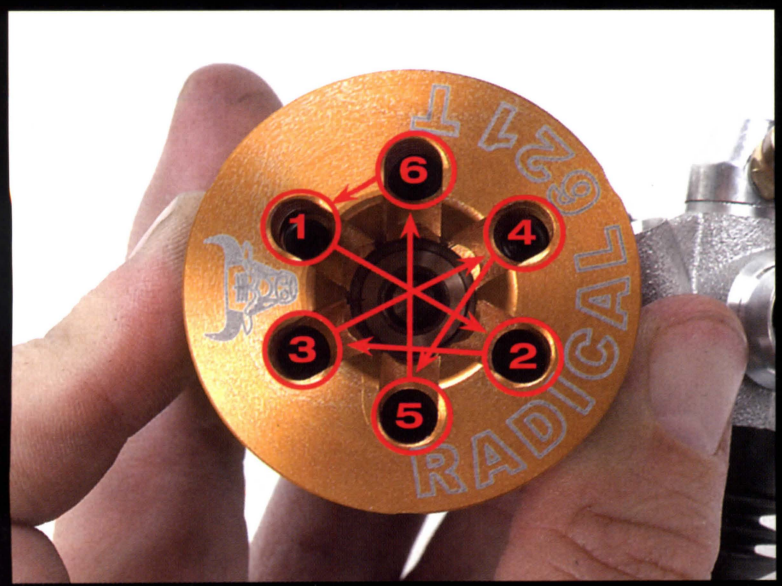
Unless you've been taking apart engines for a while, if I pulled the sleeve out and asked you to point to the intake port, you may get it incorrect. All those ports have matching ports in the crank and make your engine operate correctly. Thankfully there is a "safety" pin on the case to help you align everything correctly. Align the sleeve so that the pin fits perfectly in the slot of the sleeve. If they don't line up, pull the sleeve out some, and realign it. Using some After Run Oil on the sleeve will help you rotate the sleeve in the case easier.





Retightening Pattern

This tip is pretty obvious to some, and news to others. When retightening the head and backplate, you must use an X-pattern. This will allow the head and backplate to be tightened flat to the surface and not at an angle. ✪



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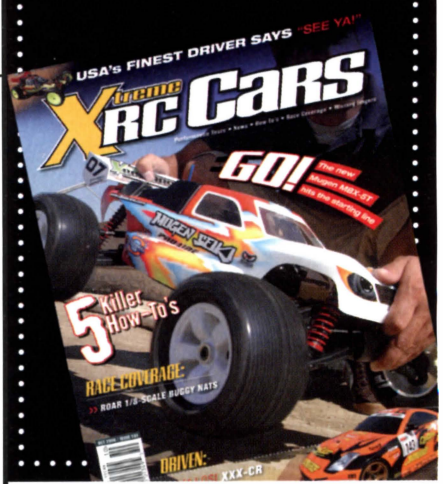

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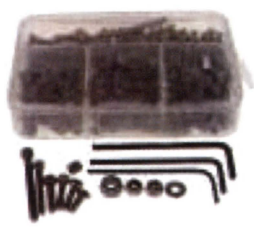





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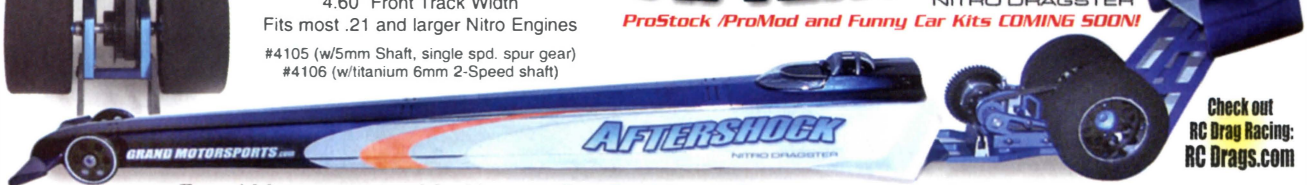

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JAC Racing Products, Inc.

SET UP YOUR THROTTLE LINKAGE

Don't Be The Weakest Link!

Words: Jeff Eveleigh



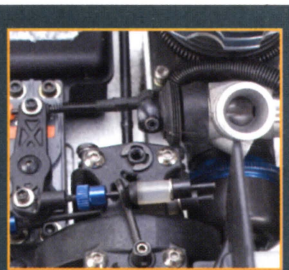
It isn't uncommon to build a kit that has NO linkage assembly instructions.

It's that time of year again, when we discuss a boring topic that has huge repercussions if not addressed properly. That's right, it's throttle linkage time! Calm down, I know you're excited. Everyone knows that to properly control your horsepower-ridden mill and stop your machine with Formula One-style authority, you need a precise assembly of rods and linkages to interconnect your throttle servo, carburetor, and brakes. Well, everyone doesn't really know this but it is true. There is nothing worse than driving a nitro ride with a poorly set up linkage, causing run-on into a corner, weak or unresponsive brakes, and the reliability of a sketchy mechanic when his rent is overdue. Read on and be prepared to drive a car that actually does what you tell it to do when it comes to throttle and brake control.

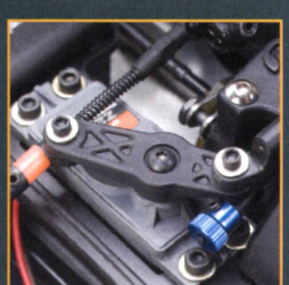
LINKAGE CHECKLIST

The throttle linkage within your car has a definite duty, and it can be broken down into three criteria that must be fulfilled in order for the linkage to work properly.

1. First, there must be an exact neutral position. This means that whenever the throttle trigger on your radio is returned to the neutral position, the barrel on the carburetor will also return to its neutral position. This is one of the areas that seems to need the most attention when it comes to throttle linkages. Many people have their linkage set so that when the radio is in neutral, the carburetor does not fully return to the throttle-stop-screw position. This leads to something called "run-on." A setup that causes "run-on" will create a car that is very hard to drive, because as you slow down for a corner, the engine will not return to idle and the clutch will not disengage. This will force you into the turn with too much corner speed, creating a push.



2. Let's proceed to the second criterion of a properly set up linkage. When full throttle is inputted through the radio, the carburetor barrel also opens fully, but does not try to overextend, which creates undo stress on your servo and carburetor.



3. On to the third and final objective of the perfect linkage. When the brakes are applied from the neutral position, the carburetor barrel doesn't move at all. This also relates back to the first issue we discussed, i.e., having the carburetor fully return to the throttle-stop-screw once a neutral input is applied on the transmitter. If you can make all three of these things happen, then you've built your throttle linkage properly.



DIFFICULTY METER

SKILL LEVELS: 1=MONKEY • 5=EINSTEIN

Xtreme RC Cars magazine

3.0

TIME TO COMPLETE

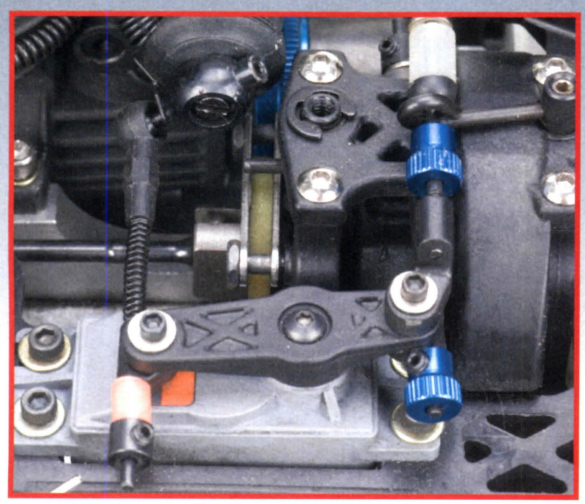
VARIES

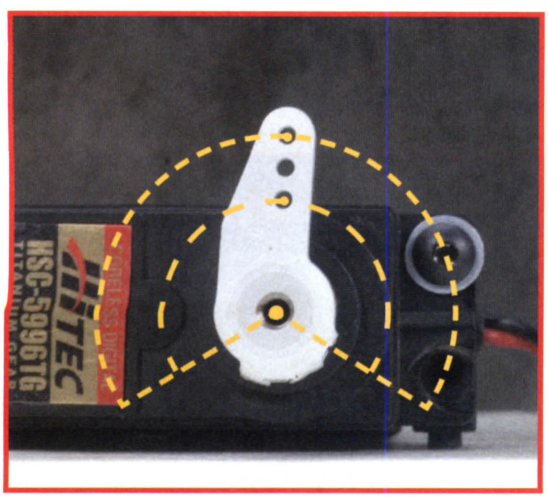
THE TOOLS

- Thread-lock (blue)
- Hobby knife
- Drill and various bits
- Fuel tubing

THE BUILD

Build your throttle linkage as described in your manual for your specific chassis, and get ready to install everything onto your servo and into your car. Don't do the newbie mistake of not centering your servo before attaching your servo arm. Turn on your radio, power your receiver, ensure that all sub trims and regular trims are set to neutral, and then press your servo arm onto your throttle servo. Try to keep everything set 90 degrees, where possible, meaning that your servo arm should be installed as straight onto the servo as possible, and your linkages should travel away from the servo as close to 90 degrees as possible. If the servo splines don't line up to keep everything straight, then use a bit of sub trim on your radio, if you have that option. This will center the arm so that you still have the full usage of your regular trims that are more accessible to your hands during a race for fine adjustments. It is wise to adjust the ball joint on your carburetor (for slide carbs) so that the throttle linkage runs parallel with the chassis, making sure that it doesn't interfere with any other components, such as center differentials, cylinder heads, etc.



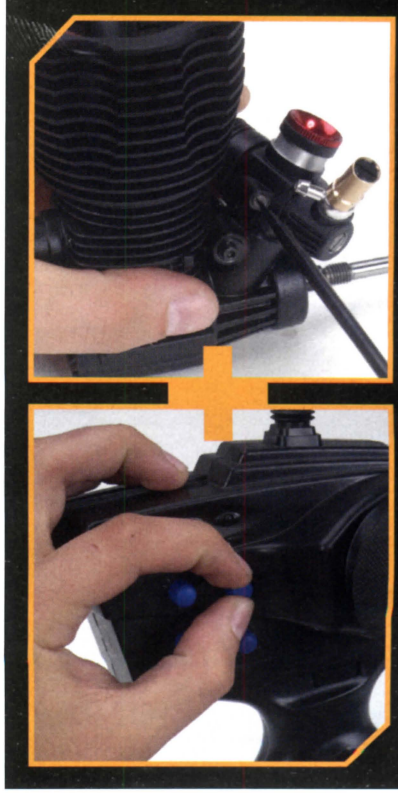


PHYSICS 101

With the new wave of inexpensive digital radios, there is a good chance that you have the functionality within your system to adjust sub trims and end point adjustments right on your transmitter. There are still many radios that don't offer these features, so if you fall into this category, you'll have to mechanically alter the mounting points of your throttle and brake linkages to change the amount of movement they have. It is time for a quick review of your high school physics class regarding leverage and throw. The farther away from the center of the servo arm your linkage is mounted, the more throw it will have and the greater distance the linkage will travel. The opposite is true, as your mounting point moves closer to the center of the servo arm; the throw is reduced and the shorter the distance of movement you'll get from your linkage. Let's say, for example, that if you apply full throttle and your carburetor barrel does not fully open, you will need to move the pivot point for the throttle linkage farther away from the center of the servo arm to open the carb fully. If—when you apply full throttle—the carburetor fully opens and then the servo continues to try to open it further, stressing the servo, then you need to move the linkage pivot point closer to the center of the servo arm. Unfortunately, you'll have to use trial and error when playing with mounting holes until you get it right. But in the end, once it is set up, you won't have to think about it again.

IDLE ADJUSTMENTS

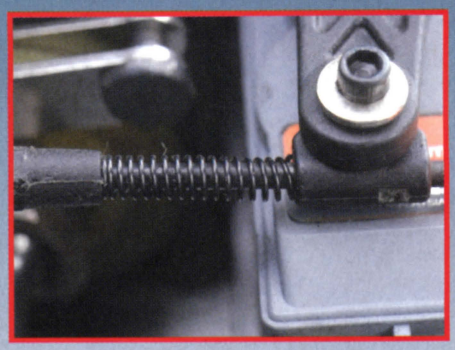
When it comes to the idle settings on your engine and linkage, you have to remember that the throttle-stop-screw on your carburetor is what determines the idle rpm, and not the stopping position of your linkage. If you set your idle speed with the linkage and not the stop-screw, then once you input brakes from the radio, the idle will drop until the carburetor barrel hits this stop-screw. This would be breaking one of the main rules of linkages in that the engine rpm should not change from idle to full brakes. With that being said, you need to set your idle with the throttle-stop-screw on the carb first, and then fine-tune your linkage to that setting. Also remember that if you need to alter your engine's idle settings, you must do so by first adjusting your throttle-stop-screw, followed by a quick trim adjustment on your transmitter to match your linkage to your new stop-screw idle setting.



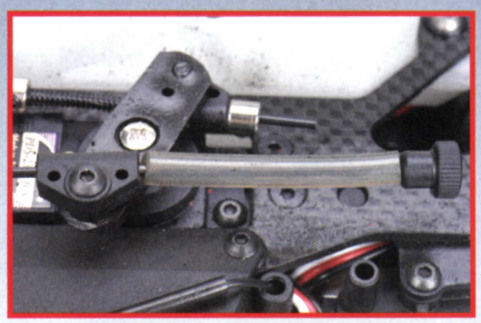
Those are the beat-up hands of a real working man.

When trimming the servo horn, trim AWAY from yourself!

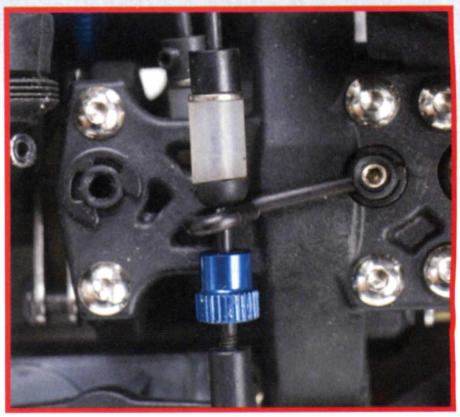
SETTINGS



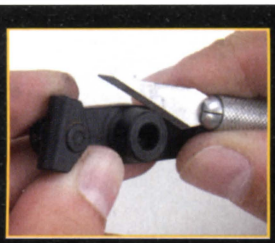
1. You want to start by setting your throttle linkage up to the neutral position and working from there. With your idle stop screw adjusted on your carburetor to leave about 1mm of gap between your carb barrel and body, you want to set a slight preload in the linkage spring. This lets the servo arm close the carb fully, then adds a little more pressure to ensure that even a slightly sticky carburetor will return to an immediate idle on command. When the preload in the idle position is set, there should be about a 0.5mm gap between the throttle pivot and the retaining collar while the spring is slightly compressed. As a side note with this setup, the slight preload in the servo at idle does not mean that your brakes should be engaging when the servo moves past the idle position. You should set the brake portion of your linkage after you've set the neutral position.



2. Your next step is to set the full throttle end-point. As mentioned earlier, your linkage must move enough to open your carburetor fully at full throttle, but there shouldn't be so much movement that you stress the servo at full speed as the servo tries to open the carb too far. Cut a short piece of fuel tubing about ¼" long and place it in between the throttle pivot and the retaining collar to absorb a bit of the movement, should your servo overextend slightly. This way you can actually set your radio to overextend a tiny bit, and the fuel tubing will absorb the extra deflection without the risk of damaging your servo. This setup will ensure that you are getting the full power potential out of your engine by eliminating the chance of not having a fully-opened carburetor.



3. Your final linkage setup has to do with your brakes. Your brakes should only be applied when the radio input has moved the servo from the neutral position into the braking position (unless you want a bit of drag brake, in which case the brakes should slightly engage while the servo is in the neutral position). Although there is a definite neutral position, as soon as the brakes are applied, the brake cam lever should start applying pressure through the brake pads and onto the brake disk. Many people leave huge gaps between the adjustment nut or collar and the brake cam lever, providing an inefficient braking system. It is a wise idea to place a small spring or short piece of fuel tubing between the adjustment nut or collar and brake cam lever. This offers a progressive brake feel that increases your stopping power as more brakes are applied. A small plastic washer between the spring or fuel tubing and the brake cam lever will also ensure that even pressure is applied to the lever.

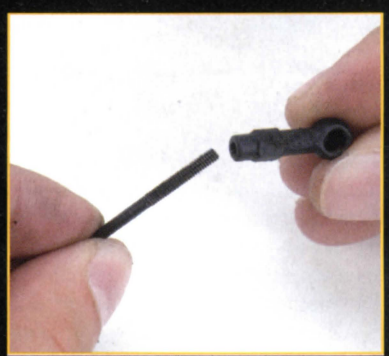


THROTTLE LINKAGE TIPS

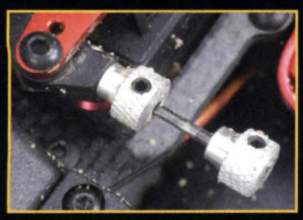
Servo Arm Shimming • Depending on the brand and type of servo arm you are using, the base of the arm could rub on the top case of your servo and rob valuable speed and power from your throttle and brakes. Check to see that the arm doesn't rub on the case when it is firmly screwed on. If it does, you could either trim a bit of the servo arm away with a hobby knife, or place a small shim inside the servo arm hole before you install it over the main output shaft. This will move it slightly away from the top servo case.



No Metal on Metal • Metal on metal contact can cause unwanted radio noise, which can cause glitching. To help eliminate this problem, use small shrink tubing to cover up the metal rods on the brake linkage where they pass through the metal brake calipers. Make sure that the shrink tube isn't so large that it binds or alters the performance of the brakes. It is also wise to use a plastic washer instead of a metal one between the fuel tubing and brake cam lever on your braking linkage, to again eliminate metal on metal contact.



Worn Ball End • The plastic ball cup that connects your throttle linkage to your carburetor can wear out over time, and if this sucker pops off, you can consider your race finished (and possibly your engine too, if you don't have the proper fail-safe installed). Swap out this plastic ball cup for a fresh one every once in a while to ensure it stays snug on your carb where it belongs.



Double Collar • The collars that secure all of your linkage bits are vital when it comes to having a properly working linkage and keeping your accurate settings where they belong, so why not double up and use two collars just in case one loosens? It isn't uncommon for one of the small setscrews in the collar to loosen. Use two collars in the vital areas. A drop of blue thread-lock on the setscrews won't hurt either.



Bendy Wire • On the end of your throttle rod, farthest away from your carburetor, bend a small 90-degree angle in it just behind the retaining collars. This will serve two purposes. First, it will keep your collars in place in case a setscrew loosens, and second, it will act as a small handle that will allow you to reach inside your body and blip the throttle manually while you are waiting on the line to warm up your engine—before you are able to turn your radio on.



Bigger Hole • If your throttle wire fits relatively snug in the pivot hole, it may bind up as dirt and debris enter the picture. It can especially bind up if you get into a collision and bend the linkage slightly. To help prevent this bind problem that can destroy a perfect throttle linkage, enlarge the hole slightly to reduce the tolerances. Don't go too far and create excessive slop, but a little bit of extra movement can keep your sliding throttle rod moving free all race.



Carburetor Angle • It is wise to rotate your carburetor slightly on your engine to keep the linkage as direct as possible. (When rotating your carburetor, be sure to push it down firmly once the angle is set, to ensure the seal between the carb body, O-ring, and crankcase will keep unwanted air leaks from occurring.)

CLOSING

By now you should have the ultimate connection between your servo, engine, and braking system, allowing you to drive deeper into the turn, fully reach top speed, and drop to an idle on command.



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1/10-Scale Brushless Motor GUIDE

Words: James Revilla

Poor motor spring has just been forgotten.

For all you 1/10-scale drivers out there, you no longer have an excuse. Brushless is here to stay, and nowadays there are more than enough brushless motors available to cater to all types of 1/10-scale vehicles. The advantages of virtually zero maintenance, more power, and longer run times outweigh the slight price bump over the tried and true brushed design that we've been familiar with for years. When combined with Li-Po batteries (another relatively new technology), you get a powerful one-two combo that's the future of RC—here and now. To help you get into the brushless groove, we've put together this guide that includes everything available to the mainstream.

TRINITY

Neo Series

When it comes to brushed motors, Trinity has always been a big player, leading the way with new technology that would often become the industry standard. Now Trinity gets into the brushless game with their neo N60/N80 brushless motor. Both cans feature rare-earth neodymium magnets, a sintered balanced rotor, and sensorless technology. Dual ball bearings keep things spinning smoothly.

N60 Touring Car (#TRI10201) $90
N80 Monster Truck (#TRI10203) $90



SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS

- Cheapest price
- External solder tabs
- ROAR legal

MISSES

- Comes in any wind, as long as it's 3-turn

CONNECT

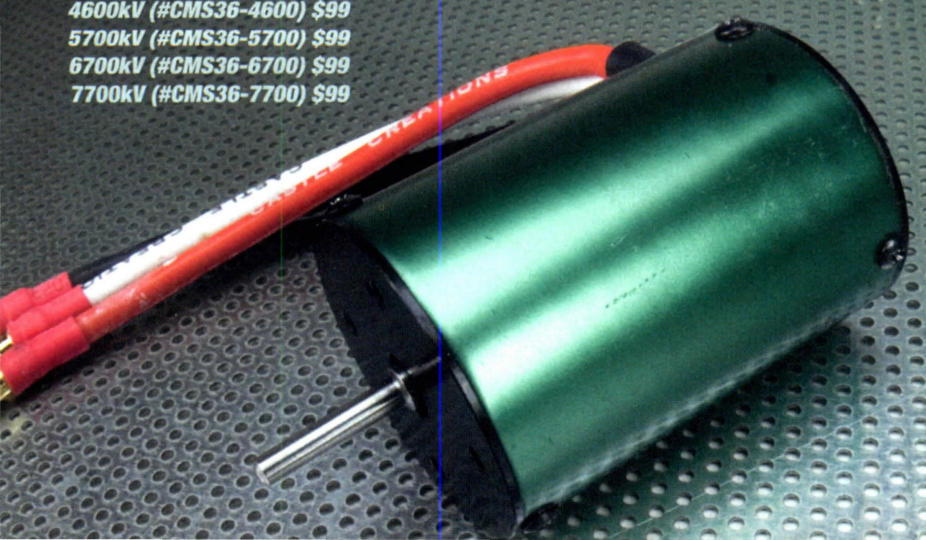
MANUFACTURER: Trinity
PHONE: 732.635.1600
WEB: www.teamtrinity.com

CASTLE CREATIONS

CM36 Series

Folks over at our sister publication *RC Heli* are very familiar with Castle Creations products, and along with their micro-sized brushless systems, Castle Creations brings their technology to 1/10-scale with their CM36 lineup. Their sensorless motors feature high-torque neodymium magnets, oversized "lifetime" bearings, a hardened 2.3mm rotor shaft, and a cool green anodized casing.

4600kV (#CMS36-4600) $99
5700kV (#CMS36-5700) $99
6700kV (#CMS36-6700) $99
7700kV (#CMS36-7700) $99



SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS

- A mainstay in brushless technology
- 12-cell battery limit for the 4600-6700Kv cans
- Gold connectors

MISSES

- Fastest version limited to 8-cells max

CONNECT

MANUFACTURER: Castle Creations
PHONE: 913.390.6939
WEB: www.castlecreations.com

The Little Group

When you look at certain brushless motors (i.e., Reedy, Novak), you'll notice an extra wire harness that connects to the ESC, separate from the main motor wires. But what does it do? Without getting super technical about square waves and the like, here's the simple explanation: that little group of wires connects the rotor sensor to the ESC. This sensor is inside the motor can, and it basically tells the ESC the direction and velocity that the rotor is turning in order to effectively control battery voltage to keep you running. Newer "sensorless" motors delete this sensor (obviously), leaving the job of rotor position detection to the ESC itself. In this case, the ESC 'reads' the rotor's position and velocity by how much voltage the motor is generating. (Remember, a motor is also a generator.) Hacker's new E40 series leaves this confusion aside, as their E40 lineup works with both sensored and sensorless ESCs.



I cut my hair short every other week, so am I brushless?

TEAM NOVAK

Velociti / SS / HV Systems

With 11 motors and counting, Team Novak doesn't plan on leaving the segment that they helped make popular. Their brushless motors are separated into three divisions: the Super Sport systems, great for all around bashing or weekend racing; the High-Voltage HV systems, designed for today's monster trucks; and their top-of-the-line Velociti systems, when race-winning power is the only name of the game. All Novak brushless motors are sensored, have external solder tabs, and will work with any sensor-based ESC.

VELOCITI SYSTEMS

5800kV 7.5R (#3407) $129
6400kV 6.5R (#3406) $129
7400kV 5.5R (#3405) $129
9000kV 4.5R (#3404) $129
10500kV 3.5R (#3403) $129

SUPER SPORT (SS) SYSTEMS

5800kV SS5800 8.5 (#3400) $129
4300kV SS4300 10.5 (#3401) $99
3300kV SS13.5 (#3413) $129
2700kV Crawler 18.5 (#3418) $159

HIGH VOLTAGE (HV) SYSTEMS

3100kV HV 6.5 (#3426) $115
4800kV HV 4.5 (#3424) $115



SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS

- Novak quality and reliability
- Has the only "stock-equivalent" motor in their line up
- ROAR legal

MISSES

- Sensor cable is hard-wired to the can
- HV series are 3/4" longer than a 540 brushed can

CONNECT

MANUFACTURER: Team Novak
PHONE: 949.833.8873
WEB: www.teamnovak.com

MOTOR COMPARISON CHART

Team Novak	Velociti Series	kV rating	Sensor	MSRP
#3403	3.5R	10500kV	Yes	$129
#3404	4.5R	9000kV	Yes	$129
#3405	5.5R	7400kV	Yes	$129
#3406	6.5R	6400kV	Yes	$129
#3407	7.5R	5800kV	Yes	$129
Team Novak	**SS Series**	**kV rating**	**Sensor**	**MSRP**
#3400	5800 (8.5)	5800kV	Yes	$129
#3041	4300 (10.5)	4300kV	Yes	$99
#3413	SS13.5 (Stock)	3300kV	Yes	$129
#3418	Crawler (18.5)	2700kV	Yes	$159
Team Novak	**HV Series**	**kV rating**	**Sensor**	**MSRP**
#3424	HV 4.5	4800kV	Yes	$115
#3426	HV 6.5	3100kV	Yes	$115

Trinity	Series	kV rating	Sensor	MSRP
#TRI10202	N60	N/A	No	$90
#TRI10203	N80	N/A	No	$90
Hacker Brushless	**C40 Series**	**kV rating**	**Sensor**	**MSRP**
#C40 6T	C40	6942kV	No	$180
#C40 7T	C40	5950kV	No	$180
#C40 8T	C40	5250kV	No	$180
#C40 9T	C40	4667kV	No	$180
#C40 10T	C40	4200kV	No	$180
#C40 11T	C40	3818kV	No	$180
#C40 12T	C40	3500kV	No	$180
#C40 13T	C40	3231kV	No	$200
#E40 4.5	E40	6886kV	Both	$TBA
#E40 5.5	E40	5720kV	Both	$TBA

Reedy	Neo-One Series	kV rating	Sensor	MSRP
#113	4-Star	8600kV	Yes	$129
#111	3-Star	7700kV	Yes	$129
#112	2-Star	6900kV	Yes	$129
#110	1-Star	6100kV	Yes	$129
Castle Creations	**CM36 Series**	**kV rating**	**Sensor**	**MSRP**
#CMS36-4600	CMS36-4600	4600kV	No	$99
#CMS36-5700	CMS36-5700	5700kV	No	$99
#CMS36-6700	CMS36-6700	6700kV	No	$99
#CMS36-7700	CMS36-7700	7700kV	No	$99
Dynamite	**C4 Big Stick**	**kV rating**	**Sensor**	**MSRP**
#DYN3720	C4	4600kV	No	$99
#DYN3721	C4	5700kV	No	$99
#DYN3722	C4	7700kV	No	$99

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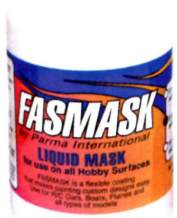



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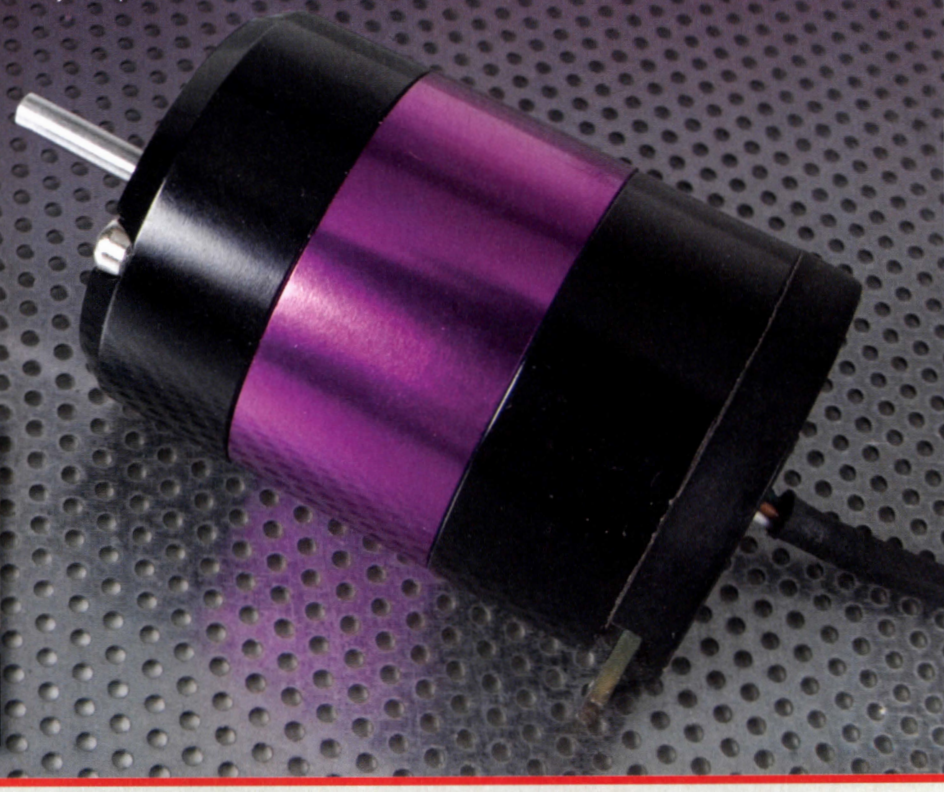
HACKER BRUSHLESS

C40/E40 Series

One thing I learned about Hacker when I had to race against them one time is that they're fast. How do they go that fast? With their C40 and E40 Series, of course. With no less than 16 different winds to choose from, the C40's are their largest lineup. The new E40 series (which is so new, we barely got the specs as this article was going to print) was designed to be compatible with both sensored and sensorless brushless ESCs. Either way, Hacker lays the power down!

6942kV (#C40 6T) $180
5950kV (#C40 7T) $180
5250kV (#C40 8T) $180
4667kV (#C40 9T) $180
4200kV (#C40 10T) $180
3818kV (#C40 11T) $180
3500kV (#C40 12T) $180
3231kV (#C40 13T) $200
6880kV (#E40 4.5T) $TBA
5720kV (#E40 5.5T) $TBA



Some brushless controllers look more like car audio amplifiers that are miniturized.

SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS

- At home in the heat of racing
- E40 works with both types of brushless ESCs

MISSES

- Significantly higher in price compaired to others

CONNECT

MANUFACTURER: Hacker Brushless
PHONE: 480.726.7519
WEB: www.hackerbrushless.com

BRUSHLESS CONTROL

Unlike brushed motors, brushless cans require a brushless-compatible controller (though brushless ESCs can generally run brushed motors too). You cannot run a brushless motor with a standard brushed-compatible ESC. Therefore, if you're ready to make the jump to brushless, make sure you know that unless you have an ESC listed here, you'll not only have to buy a brushless motor, but you'll have to upgrade your ESC as well. Brushless motors run three wires instead of just two, and some brushless motors also have a separate sensor cable that runs from the brushless can to the ESC, independent of the main voltage wires. Likewise, some brushless ESCs are "sensorless," so they won't work with sensored cans. Regular brushed-only ESC do not have these extra features, so make sure that when you're shopping around, you buy a brushless motor and a brushless ESC that are compatible with each other.



ESC COMPATABILITY CHART

Manufacturer	Part #	MSRP	Castle Creations CM36	Dynamite RC C4 Big Stick	Hacker Brushless C40	Hacker Brushless E40	Team Novak Velociti	Team Novak Super Sport	Team Novak High Voltage	Reedy Neo-One	Trinity Neo
Castle Creations Mamba Max	MMB-MAX	$159	X	X		X					X
LRP Sphere*	LRP80500	$329			X	X	X	X	X	X	
LRP Sphere Competition*	LRP80700	$349			X	X	X	X	X	X	
Novak GTB*	1710	$325			X	X	X	X	X	X	
Novak Super Sport Plus*	1705	$289			X	X	X	X	X	X	
Quark Roadster			X	X		X					X
Quark Competition			X	X		X					X

* Indicates an ESC that can be re-wired to be used with most standard brushed motors.

REEDY
NEO-One Series

Reedy, a well-known veteran of championship RC race-winning motors, offers their NEO-One brushless motor series for both on- and off-road 1/10-scale vehicles. The NEO-One's power output is rated in stars, with the 4 Star being the fastest. Features for all NEO-One brushless motors include external solder tabs, replaceable sensor wire, and precision ball bearings.

8600kV 4-Star (#113) $129
7700kV 3-Star (#111) $129
6900kV 2-Star (#112) $129
6100kV 1-Star (#110) $129



The Reedy name is being phased out!

SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS
- Reedy's racing reputation
- Replaceable sensor cable

MISSES
- Reedy name will be leaving the motor

CONNECT

MANUFACTURER: Distributed by Team Associated
PHONE: 714.850.9342
WEB: www.teamassociated.com/reedy

DYNAMITE RC
C4 Big Stick Series

Dynamite's products cover a broad range of RC. They already offer more than many enthusiasts could ever wish for, and now they've taken the leap into the brushless arena with a "bang," using their new C4 Big Stick line of brushless motors. The 540-sized cans feature ball bearings, sensorless operation, and a voltage range of 7.2-12v 6-10 cells. You get three winds to choose from, to match any 1/10-scale racing or bashing application.

4600kV (#DYN3720) $99
5700kV (#DYN3721) $99
7700kV (#DYN3722) $99



SCORECARD

1/10-SCALE: BRUSHLESS MOTOR GUIDE

HITS
- Pre-wired with gold plated bullet connectors
- Compatible with up to 10-cells

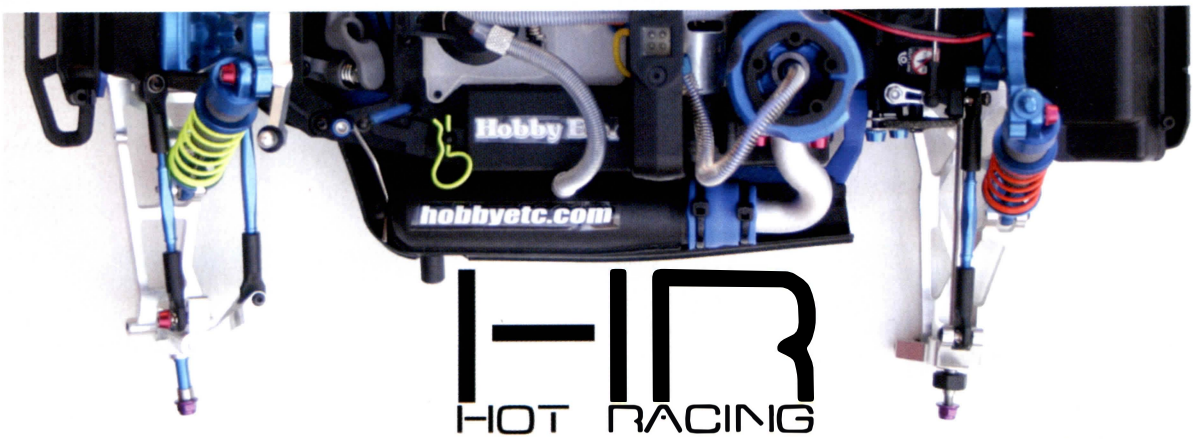
MISSES
- Came into the game a little late

CONNECT

MANUFACTURER: Distributed by Horizon Hobby
PHONE: 877.504.0233
WEB: www.dynamiterc.com

Conclusion

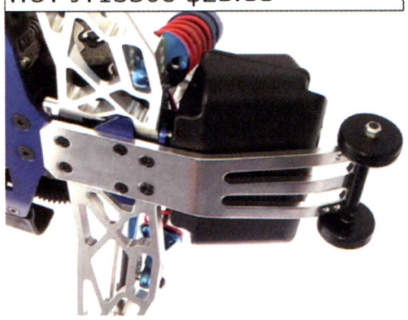
With all these brushless motors to choose from, there's bound to be one that will fit the bill for your RC driving pleasure. Whether it's to gain that extra advantage over the competition, or to have a solid, reliable, maintenance-free backyard basher, you can't find many negatives in going brushless. By the time you read this, don't be surprised if there are even more options—from the many manufacturers going this route. One thing is for sure: Brushless technology now stands on firm ground in the RC world in which we live.



HOT RACING

ALUMINUM ACCESORIES FOR TRAXXAS JATO 3.3

HOT JT13308 $23.88



AJ25566	1300 5 cell flat reciver pack Jato	32.00
AJ44226	Blue 7075 alum. t6 tie rod se Jato	16.88
AJ44130	Silver 7075 alum. t6 tie rod set (6) Jato	16.88
AJ44196	Hard Anodized Alum Ball (14) Jato	10.88
AJ45628	Ez color coded tunnersystem Jato	13.88
AJ28857	Mini-t Alum. wrench Jato	2.80
AJ34687	5mm 5.5mm tumbuckle wrench Jato	2.00
AJ12455	J.I.S.Philips tips Alum Driver set Jato	28.88
AJ47882	Nut Driver Aluminum Handle set Jato	28.88
AJ47879	5.5mm Nut Driver Aluminum Handle Jato	8.88
AJ45512	Black wheel wrench 23 and 17 mm Jato	18.88
AJ45513	Red wheel wrench 23 and 17 mm Jato	18.88
AJ47116	Quick Retum Piston Jato	0.00
AJ44321	Head Guard Red Tra2.5 Jato	9.88
AJ44317	Head guard blue: tra 2.5 Jato	9.88
AJ36269	Blue alum. foam air filter Jato	13.80
AJ27732	Silver alum. foam air filter Jato	13.80
AJ44315	Red slinky glow lead guard Jato	2.88
AJ35625	Blue slinky glow lead guard Jato	2.88
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AJ44313	Silver slinky glow lead guard Jato	2.88
AJ43897	Blue 9 lb gtr fs rear spring Jato	3.80
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AJ43901	Gunmetal 5.7ib gtr fs re spring Jato	3.80
AJ43895	Yellow 4.0lb gtr fs fr spring Jato	3.80
AJ46508	gunmetal 53t steel spur gear jt Jato	19.88
AJ46509	Silver 54t steel Stock Spur Gear Jato	19.88
AJ46510	Purple 55t steel spur gear jt Jato	19.88
AJ46511	Blue 56t steel spur gear jt T-Maxx33 Jato	19.88
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HOT RVO154M06 $8.80



AJ44132	Blue Alum. front axles (2) Jato	8.88
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AJ34322	Silver alum. shock upgrade kit Jato	18.80
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AJ46198	Blue front anti-roll bar Jato	13.88
AJ46312	Silver front anti-roll bar Jato	13.88
AJ46309	Front anti-roll bar Jato	8.88

HOT RVO230506 $13.80



AJ46199	Blue rear anti-roll bar Jato	13.88
AJ46313	Silver Rear Anti-Roll Bar Jato	13.88
AJ46310	rear anti-roll bar Jato	8.88
AJ44330	Alum. rear arm mount Jato	6.88
AJ43912	Silver Alum. Throttle Link Arm Jato	8.80
AJ44217	Stainless steel drive shafts Jato	38.88
AJ45006	Stainless steel cv bones (1) Jato	12.88
AJ45014	Joint stainless steel (1) Jato	8.88
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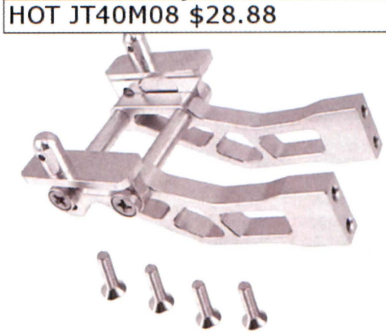
AJ45005	Stainless steel rear cv axle (1) Jato	12.88
AJ46405	2.6mm lp screws for jt5508 or jt5608 Jato	2.88
AJ46435	Silver Alum. Wheelie Bar Jato	23.88
AJ46413	Silver Alum. Wing Mount Jato	28.88
AJ46801	White 1/10 off road wing Jato	8.88
AJ46802	Yellow1/10 off road wing Jato	8.88
AJ43911	Silver alum. rear gear box brace Jato	18.80

HOT JT40M08 $28.88



ALUMINUM ACCESORIES FOR ASSOCIATED GT2

AK48753	Blue Alum upper plate GT2	24.88
AK46516	Replacement tip 2mm 5/64	2.88
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AK48752	Silver Alum Steering Servo Saver GT2	28.88
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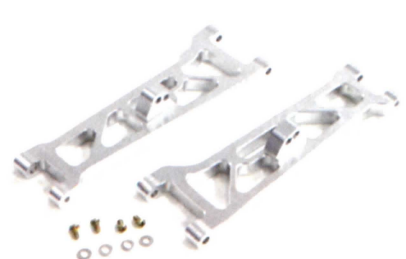
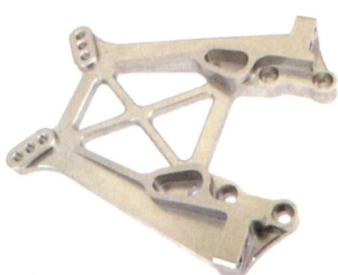
AK01291	Blue Alum. Rear Arm Mounts Fact Team	13.88
AK48754	Front wide bumper w/ skid plate GT2	28.88
AK48761	Blue Alum. Wheelie Bar Jato GT2	23.88
AK46435	Silver Alum. Wheelie Bar Jato GT2	23.88

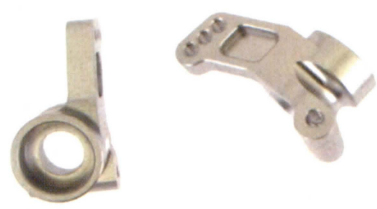
HOT GTT5508 $23.88



HOT GTT2808 $23.88



HOT GTT2208 $28.88



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SHOCK POSITIONING

Stand Up! Lay Down!

Words: Jeff Huneycutt

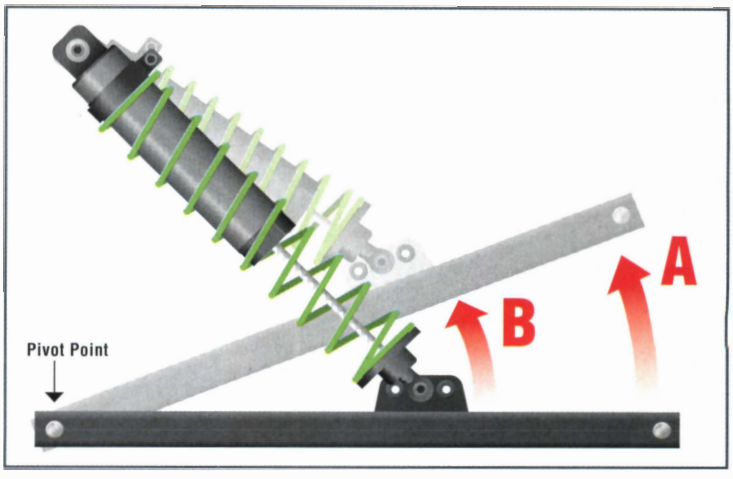


Many upper-end chassis feature several holes in a pattern to allow different shock mounting positions. The key is understanding how moving your shocks around can affect how your car or truck handles. The working title for this edition of *Dialed In* started out as "What are all those stupid holes for?" Unfortunately, it was a little long, but you get the idea. Many of us, when starting out in RC, noticed that some cars and trucks offered multiple mounting holes for the shocks and wondered what all those were for. Maybe you've settled on a shock location that works for you but aren't sure why. Well, here's the down low.

Stand up. Lay down. Bark like a dog...a big dog.

IT'S A LEVERAGE THING

Where the shock mounts on the lower control arm is important because the arm acts as a lever. For example, if the bottom of the shock is mounted at the midpoint of the arm, the movement of the wheel **(A)** will be twice as great as the movement of the shock piston **(B)**. Because the control arm is essentially a lever, moving the shock closer to the wheel will both increase the amount of shock travel and make the spring feel stiffer.



The first thing we have to remember when discussing chassis adjustments is the only thing that matters is what happens at the wheels. This is a way of saying it doesn't matter exactly what changes you make, or how you make them, as long as it maximizes all four tires' ability to maintain traction around the racetrack. Moving the upper and lower mounting locations of the shocks is useful because it helps control how much influence the springs have on pushing the tires down.

For simplicity's sake, we are only talking about standard setups here, where the upper end of the shock is mounted on the vehicle's shock tower, while the lower end is fixed to the lower control arm. While some of this information may be applicable, we aren't really talking about cantilever-style suspension systems where the shocks are horizontally mounted—like the Revo or OFNA's DM-One.

In the vertical-mount system, both ends of the shock must be able to pivot to keep the suspension from binding, but only the lower portion of the shock moves. Since it is attached to the lower control arm, it moves as the arm moves. This movement is not only up and down, but since the arm pivots around the hinge shaft, it also moves a little bit in and out.

Finally, the lower control arm acts like a lever for the shock. Remember all those days in geometry class that you thought were a total waste? Well, now you have some use for them other than figuring out how far a spitball should travel when shot through a straw at the nerd in the front row. As we've already discussed, where the inside of the arm is held in place by the hinge pin is the pivot location; where the tire connects to the outside of the arm is the location of the force input (the energy the suspension absorbs any time the tire hits a bump; and where the shock connects to the arm is the location of the resistance. The pivot and the force input are fixed locations, but if you have multiple lower shock mounting locations, this is your variable. You can either move the lower half of the shock out (closer to the tire), or in (closer to the pivot point).

MOVING SHOCKS LATERALLY

There are three general directions you can move the shocks. First, you can move the upper shock mount the location up or down, which will raise or lower the ride height. This is straightforward enough. Next, you can move both shock locations in toward the middle of the vehicle, or out toward the wheel. In this instance the angle of the shock really doesn't change; it is only moving laterally. And finally, you can move one or both of the shock locations to change the angle of the shock. For example, moving the upper shock mount in toward the center of the car while moving the lower mount out toward the wheel in essence lays the shock down, or puts it in more of a horizontal orientation. Doing the opposite stands it up.

Moving both shock mount locations in the same direction to move the shock laterally makes the most logical change, so we will start there. When the shock is moved out toward the wheel, it gains a more direct relationship with the wheel's movement. If the wheel moves half an inch, the shock piston will move close to half an inch. Moving the shock out will make the spring feel slightly stronger and the shock oil slightly thicker.

If the shock is moved inboard the opposite happens. This is because of the principle of the lever. When the shock is closer to the lever's pivot point (the hinge pin) the input force (the wheel reacting to bumps) exerts more relative force. Now, if the wheel moves half an inch, the shock shaft moves considerably less. Because the wheel now has more leverage on the shock and spring, the spring will feel softer and the shock oil thinner. This can make for a plusher ride, but it can also allow more body roll. One advantage of moving the shocks inboard is that it allows more suspension movement without bottoming out the shock shafts or trying to pull the shafts out of the shock bodies.

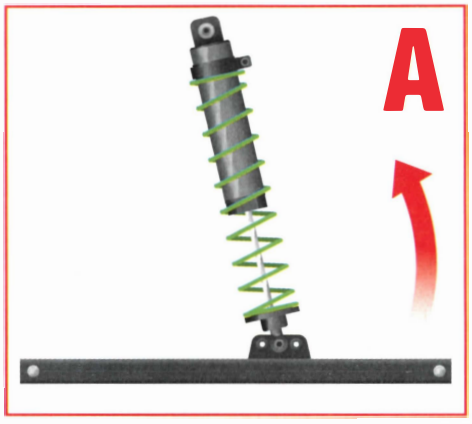
LAY 'EM DOWN

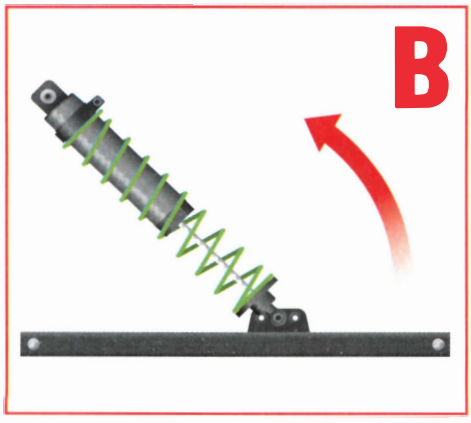
This illustration is a very exaggerated example, designed to help you picture how a laid-down shock angle affects handling. If the shock is positioned vertically (A), shock travel virtually mirrors wheel travel in the first portions of suspension travel. But if the shock is laid down (B), the first portions of wheel travel cause very little shock travel. But the rate of shock travel increases in the upper portions of suspension travel because the lower shock mount is moving in as well as up. This makes the spring feel more progressive—softer in the small stuff and stiffer on the bigger bumps and landings.

Moving the shock's upper and lower mounting points in opposite directions serves to either lay the shock down or stand it up. The change may not seem like much, but it does make a difference.

Moving the upper shock mount inboard while moving the lower mount outward increases the shock angle. The effect is to make the shock feel more progressive. It starts out feeling softer but gains stiffness as the suspension compresses. This is a benefit on the race track because the suspension is more plush and able to maintain traction over smaller bumps and ruts, but provides more resistance on the bigger stuff. It also helps reduce body roll through the turns.

The reason this happens is because of the arc the lower suspension arm travels in. Because the shock is laid down, it isn't compressed much in the early stages of suspension travel, but the rate of compression increases as the arm reaches the upper point of its arc and the lower shock mount begins to move in as well as up.





TECH TIP

TIPS FROM TONY



We spoke with Team Associated's Tony Phalen while gathering information for this article, and he stressed that moving shock mounting locations should only be considered a minor chassis tuning tool. This, however, doesn't reduce its importance. Tony gave the example of being stuck between two sets of springs. One set is too soft while the other is a little too hard. By moving your shock positions you may be able to get one of the two sets to feel exactly like what you are looking for.

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Conclusion

Because the effect of moving shock locations is small, do not consider it a primary tuning option. Instead, you can change shock locations to make springs that are a little too soft feel firmer, or springs that are a little too stiff act softer. ✪





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2.1cc 1/10 on-road

Displacement: 3.49 cm³
Bore x Stroke: 13.7mm x 14.25mm
Maximum Power: 1.6 hp
RPM (MP): 41,400 rpm
Crankshaft: No EFRA Turbo SG
Carburetor: 5.4mm Slide
Exhaust Type: Rear





NEW!

From Fusion Motorsports
Collari Race Engines!



NovaRossi 35 Plus 21
3.49cc 1/8 on-road

Displacement: 3.49cc
Bore x Stroke: 16.26mm x 16.80mm
Piston/Sleeve: ABC
Ports: 9
Head Button: Turbo
Crankshaft: SG
Carburetor: 9mm (interchangeable insert)
Exhaust Type: Rear



NovaRossi 086 **NovaRossi 053**

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NovaRossi Plus 21-5 & Plus 21-5T
3.49cc 1/8 stadium truck

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Bore x Stroke: 16.26mm x 16.80mm
Piston/Sleeve: ABC
Ports: 5
Head Button: Turbo or Standard
Crankshaft: SG
Carburetor: 8mm (interchangeable insert)
Exhaust Type: Rear



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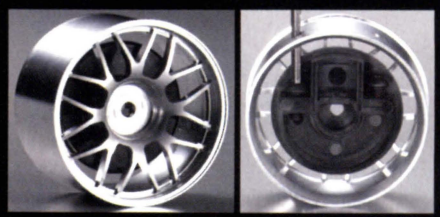
FEATURES:
- LIMITED PRODUCTION
- ALUMINUM HARD CASE
- RF-502FH SUPER MODULE
- MULTI ANGLE WHEEL EXTENSION
- POLISHED ALUMINUM SCREWS
- SOLID ALUMINUM WHEEL
- DECREASE ANGLE SPACER (SHOWN BELOW)



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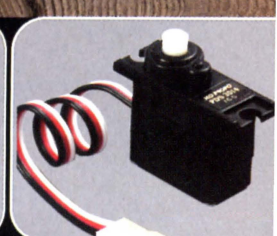
PDS-2413 ICS



PDS-2367 ICS



PDS-2368 ICS



PDS-3014 ICS

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BUILDING SHOCKS

Shocking, yet so true

Words: Derek Buono

We did an article a while ago where we addressed "the worst part" of building a kit. While I hate building turnbuckles, most people here seem to hate building shocks. I actually enjoy the process, and find comfort in ending up with a silky smooth damper. Although shocks vary in style—some with bladders, foam, or just air in the oil—the principles are the same. In this article we're going to tackle building both a bladder style shock and the emulsion-type shocks that welcome the intermingling of oil and air. The end result should be a newfound love for building shocks, and one item off our "we hate to build" list.

DIFFICULTY METER

SKILL LEVELS: 1=MONKEY • 5=EINSTEIN

Extreme RC Cars magazine 2.0



TIME TO COMPLETE



15 MINUTES PER SHOCK

THE TOOLS



- Shock Oil



- Shock Building Tools or Plyers



- Wire cutters



- Green Slime



- Hobby Knife



- File (fine)

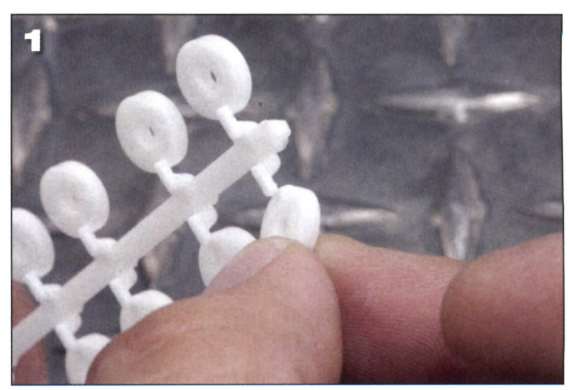


- Calipers

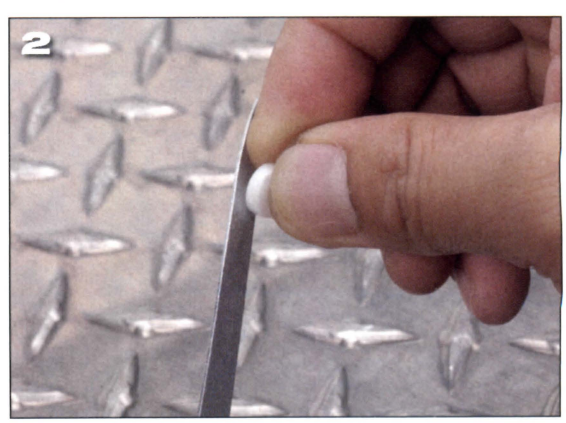
It's All In THE PREP

This is the one step that many just skip over, but it's here where you'll gain results for a small amount of effort. Most plastic parts are injection molded and that means flashing. In shocks, flashing is the worst thing you can have on the spacers, as it deforms, rips o-rings, and scratches shafts. Spending a few minutes with a file or sandpaper will work wonders.

STEP 1: Remove the plastic parts from the tree. Some parts have a certain way they are designed to be snapped off, to reduce the amount of flashing from the edges of the pistons and spacers. Pay attention, but if there isn't a pre-defined way to do this, use an X-Acto knife and carefully remove all of the parts required for the build.



STEP 2: A magnifying glass reveals wonderful things, and in this case, the flaws. Under the glass, use a fine file like a nail file, or some fine grit sandpaper, and remove all the flashing from the spacers and pistons. You don't want to change the shape of the part, but you want it to be smooth so it fits into the space it was designed to fit into without deforming the part.



Hey when you build shocks, you play with shafts.

Insert Part B Into Slot C, USING ADAPTER R

The assembly of shocks is just as important as the prep. Making sure that all parts are well-lubed before insertion is one of the often-skipped steps. Also remember that you should never force things together. If parts aren't sliding together or snapping into place, look into why that is happening beforehand.

STEP 1: Install the piston on the shock shaft. Be sure to keep in mind that the front shafts and bodies may be different lengths than the rear. Keeping the pairs separate will avoid confusion.

STEP 2: Lay out the order of the o-rings and spacers in front of each shock. Lubing the parts with oil will help things go together easier and avoid tearing the o-rings. Team Associated sells "Green Slime" which is used in-between the o-rings and spacers to help eliminate air caught in the spaces.

STEP 3: Lube the threads of the shock shaft and slowly insert it into the body. This is a very critical part of the process because the threads are usually still sharp, and they can tear an o-ring if you're not careful. Slide the shaft all the way down to the bottom of the body. Repeat this for each shock.

STEP 4: This step can be done last, but I like to get it out of the way early. Attaching the shock end is something that is more difficult than it seems. Lots of shocks have such a tight fit and hard plastic that it's hard to get a grip on the shaft. I use wire cutters to grab the last thread on the shaft. Unless it's a cheap shock, you can really put some force on the cutters to hold the shaft as you thread the end on.

STEP 5: Pull the shock shaft all the way out.

STEP 6: Fill the shock with oil. Tilt the shock on an angle to avoid getting air bubbles in the oil. Fill it to the top of the shock or just slightly below.











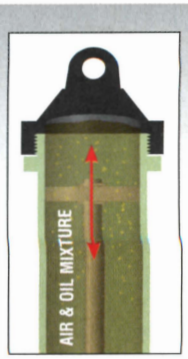


OIL CHECK

Here's where the "hard" part happens. Filling the shocks with oil is easy, but it's also easy to add too much or not enough, and this will alter the performance and consistency of the shock, possibly throwing the car out of balance. The next steps are specific for bladder and emulsion-style shocks. There are only a few differences in building the shocks, and this is *noted where applicable.*

Emulsion STYLE

Emulsion, by definition, means one liquid is suspended in another, and in shocks that's air and oil mixed together in a "frothy" like mixture. Because the oil and air are not separated, as in a bladder system, the volume needed to allow full stroke of the shock is found in the oil. As the shaft enters the emulsion, the air is forced to the sides and the shaft has room to enter. This also slightly affects damping, as air will slightly lessen the thickness of the oil. Therefore, to really check damping, you have to pump the shock vigorously to get the consistency of the emulsion to race conditions.



This is one case where having 'green slime' on your fingers is a good thing.

BLADDER TYPE

STEP 7A: Wait. Here's when waiting a few minutes pays off. Slowly pump the shocks to try and get all the air that may be trapped under the piston out of the oil and to the top. If you can get the shocks to fit in the Ride Shock Pump, this will speed the process (see sidebar). Otherwise, after pumping the shocks a few times, letting each one sit will allow most of the air to float to the top. Thicker oils will take longer.

STEP 8A: Place the bladder on the shock and press on the edges. You're trying to bleed some of the oil out of the body, but not create any bubbles.

STEP 9A: Put the cap on and tighten the cap all the way down. Remember to use any o-ring around the cap.

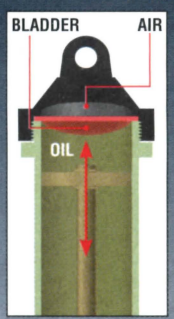






Bladder STYLE

Bladder-style shocks are ones that use a rubber diaphragm to separate the air from the oil. During compression the air at the top is compressed to allow the shock shaft the volume to enter the shock.



If too much oil is used there won't be enough airspace to allow the shock to function properly, and the damping rate is altered. This separation is more consistent than the non-bladder because of the separation of air and oil.

EMULSION TYPE

STEP 7B: Insert the cap or bottom-loading cartridge, and tighten it almost entirely. At this point you need to bleed out the excess oil, and leave enough air in the body to allow room for the volume of shaft.

STEP 8B: While the shaft is fully depressed, tighten the cap completely.

STEP 9B: This is where emulsion shocks will differ. By their design you should hear air in the shocks when you pump them. Pump them several times to get the air and oil mixed (emulsified), then test to see if there's the correct amount of oil in the shocks. Press the shock in and feel for resistance. The shaft should be able to be pushed all the way in and rebound slowly out.



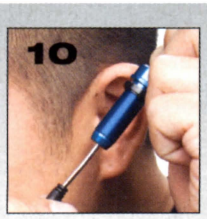




STEP 10: Check oil level by pressing the shock shaft all the way in the shock body. There should be no air in the oil. To check this, listen to the sound of the oil. If it's filled correctly you shouldn't hear air in the oil. If there's too much oil, the shaft will resist being pushed in all the way and will snap back at you.

STEP 11: Measure the shock lengths to ensure that they are built to the same length. Adjust shock end if necessary.

STEP 12: Complete the shocks using the remaining items that are shock specific. Put the spring retainers on the body, insert the spring, and finally add the spring perch to the bottom.







Conclusion

When you repeat this process four times—or eight times if you've got one of the trucks that uses double the pleasure—you'll end up with some super smooth and consistent shocks. After you build more than a few shocks, you may even learn to love the art form of building shocks. ✪

Bladder Emulsion; sounds like a medical problem.

LEARN HOW-TO

>> DO IT YOURSELF >> DO IT SMARTER >> DO IT BETTER >> DO IT FASTER >> DO

BUILD A HOME FOR YOUR RADIO

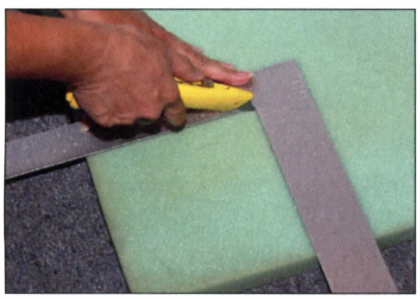
Inexpensive housing for your radio!

Words: Brian "Skinny" Skinner



The transmitter looks like it's stalking prey.

Your radio deserves a good home, but housing for radios these days can be expensive...what do you do? True, your radio needs to be protected from getting banged around and especially from facing the elements (like dust and moisture), but buying a radio storage case can be costly. Well, worry no more. After reading this how-to article you'll be able to build a storage case for your radio at half the cost of "production" cases. By building one yourself; you'll have a "personalized" look that will be different from the rest! There are many different cases to be found at hardware, camera, and container stores, so you have a lot of options and prices to choose from. You can spend more depending on the style you want to go for, but the case in this article only cost twenty-five dollars to make, and that's a pretty good price for radio security!



1. Measure Twice, Cut Once

After getting everything together for your project, measure the inside dimensions of the case you purchased and make a note of the measurements. Cut the foam side panels first and check to make sure they fit correctly. Then, on a piece of cardboard box, spray the back sides of the foam panels with 3M adhesive spray (use this procedure for gluing all foam) and place them on the inside.



2. Extra Pockets

Next make the partition for your extra gear (skip this step if you don't want one). Take your material for the partition and cut it out to fit the case (I used a scrap piece of diamond plate). Position it where you want; I suggest you lay the radio in the box and use it to get the position correct, then hot-glue, or use Shoe-Goo, to fasten it to the case (you can make a bracket if you like, but I wanted a clean look on the outside of the case). Let the glue set up and dry before you move on to the next step.



3. Padding the Stats

For those of you who did make a partition, cut out two more side panels using your original measurements and glue them to the partition (padding is key for protecting your radio and gear!)

Adding a Compartment

It's a good idea to have an extra compartment to store equipment related to your radio. For instance, I like to have extra servos and receivers with me when I'm racing. Some people carry the chargers and the receiver packs for their radios in their cases for better protection and convenience. It's up to you whether to have one, but it's a nice addition for your case.

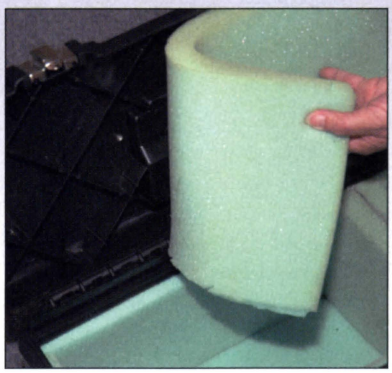
4. Foam Party

Now cut the foam for the bottom of your case and install it just like you did for the side panels. If you want (and it's a little easier), you can cut the whole length of foam for the bottom of the case first; and set it aside until you have the partition installed. Then do your crosscut to fit the foam for the partition. For those of you who skipped the partition, use this step to install the foam for the bottom.



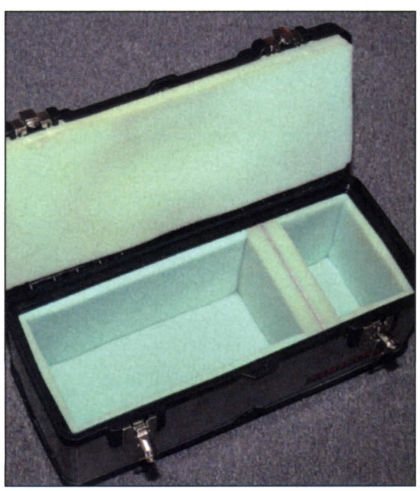
5. Security

Measure the inside of the lid of the case and cut your foam to fit. If you have a flat surface just glue it to the lid as you did with the other foam. If yours have cavities like mine does, you might want to just glue it in the center. This is done for aircraft security reasons; if you travel by air, TSA might want to check under the hood to see what's in the cavities, and if it's glued they will pull it up to check. If you're not flying around, then just glue the whole darn thing!



6. Tight Like A Tiger

You're done! Your new radio case should look something like in the photo—if not, I can't help you unless you call me. You want to check that the radio fits semi-snug in its new home and that all is well. If there is a little play and the radio can rock around in its compartment, you might want to cut a piece of foam to slide in there to stop it. That's what I needed to do and I left mine loose–you can spray some glue on the extra piece and beef up the compartment more. Whatever works for you is fine. Now go out and have some fun knowing your sweet radio is all safe and sound!



TECH TIP

What foam should I use?

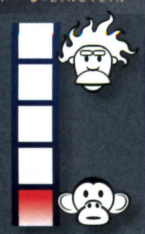
That's a good question. It doesn't matter as long as it's at least one inch thick. There are a few types of foam available and it depends on what you can find. Ideally, eggshell foam is the best choice, and if you can find it, the pre-cut square dice foam is great because you just glue it in and then pull out the squares to fit your radio. I couldn't find either of these for the story, so I went with a craft shop that carries cloth and craft supplies as anyone can find one of these shops in their town. These types of stores always have foam, so happy hunting and good luck!

DIFFICULTY METER

SKILL LEVELS: 1=MONKEY • 5=EINSTEIN

Extreme RC Cars magazine

1.0



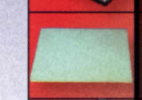
TIME TO COMPLETE

60 MINUTES

THE TOOLS



- One tool box from Harbor Freight (medium sized)



- Foam sheet



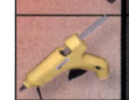
- 3M Spray Adhesive



- Carpet knife



- Carpenters Square



- Hot Glue Gun (optional)



- Wood or metal (optional)

Conclusion

As you can see, making your own radio case is pretty simple and inexpensive. This one only cost twenty-five dollars to build and I think it looks good for that price. I went with a small tool box because it's strong and I can even stand on it if I need more height on the drivers stand (yes, it holds my girth!). There are many cases to choose from, so "the sky's the limit." Good luck and good night!

Yes, the sidebar usually comes first, but Skinny writes a lot.

UNDER THE SCOP



NOMADIO **REACT RADIO SYSTEM**

THROWING ANOTHER PUNCH AT THE MARKET

Words: Michael Wortel

Nomadio's persistence is admirable. They've only been specifically involved in our industry for a few years, and every time they release a new product, they cater it to the consumer. Their first radio system wowed us with full telemetry, but the receiver was gigantic. The second generation scaled down the receiver a bit but still included a somewhat awkward radio. Nomadio's latest contender includes the same V2 receiver but a newly designed transmitter—the React. Some will recognize the TX case, but what's inside is uniquely Nomadio.

No, the React doesn't say "trim," and that makes me sad.

Features

React TX (NOM-111):

- 2.4 GHz DSS
- Frequency hopping (FHDSS)
- 100 frames per second (FHDSS)
- 128 x 96 resolution
- Telemetry ready
- Four cell rechargeable battery pack
- CPU interface outlet
- Internal antenna
- Fuel timer
- Lap timer
- Game mode
- Charging jack

V2 Receiver(NOM-103):

- Four channel
- Telemetry ready
- 14.6g
- 46 x 29 x 14mm
- Insulated antenna

Installation/Setup

The new, higher resolution LCD display on the transmitter features an intuitive menu, which is easy to navigate using five digital buttons. The menu is in the exact same configuration as the previous transmitter. Binding the transmitter to the receiver is simple and relatively brainless.

The V2 receiver doesn't look too bulky, but the height of the plugs may be an issue for installation. They are higher than most receivers, and you may encounter a problem if you have to lay the receiver on its side (electric sedan) or fit it in a cramped radio box (nitro in general). If you don't have at least 23mm of space for the plug, get creative in your mounting location or look elsewhere. The size issue is due to the fact that the V2 is telemetry-ready and needs extra circuitry to accommodate the additional functions. Nomadio promises a scaled-down receiver in the near future.

Performance/Features

The transmitter felt very comfortable in my hands—granted I'm about an average-sized guy. But passed around the office, reviews were mixed, as some felt that the trigger and handle were too cramped. I loved it, though. The light weight and lack of external antenna also made for an excellent feel. Throttle and steering response were excellent. Nomadio claims that this is the fastest transmitting and receiver combo on the market, and it felt that way (although nanoseconds are pretty impossible for a human to distinguish).

The React system does not come standard with the telemetry package, but the system is ready, and the telemetry sensors can be purchased separately at a reasonable price. Where you'd normally find the module on the transmitter, there's a slot for upgradeable memory and additional features. So when Nomadio thinks of something to make the React even better, it can be added to the existing transmitter. Siding off the battery case reveals the PC interface jack for CPU communication, including "game mode," which will allow you to use the React in many video game applications. There's also a plug that allows for direct TX to RX communication and setup. Finally, you'll find an industry standard charging jack.

Conclusion

By eliminating the telemetry hardware as standard equipment, Nomadio lowered the entry point of the system—costing about $150 less than the previous, Sensor model. And the ability to upgrade leaves you with a reassured feeling. It's also worthy to mention that the React system fills a specific niche. It's (currently) the only spread spectrum system (TX and RX combo) that offers higher level equipment as a complete package. Think about it: Some companies offer just a receiver and module, and some a high-quality TX and RX that still need a module upgrade. But the React gives you high-quality, spread spectrum equipment, across the board, not to mention the ability to upgrade even more. ✪

SCORECARD

SCALE RATINGS: 1=POOR • 10=EXCELLENT

CELEBRITY EQUIVALENT RATING



9.0

Willa Ford

HITS

- Approachable entry point
- Full of features
- Upgradeable system

MISSES

- Receiver still too bulky
- Transmitter ergonomics may be awkward for big guys

CONNECT

MANUFACTURER: Nomadio
DISTRIBUTOR: Nomadio
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PHONE: 215.854.8432
PART NUMBER: NOM-110
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GROOVY HEAD MODIFICATIONS

Direct the flame front

Words: Brian Kinney

BK's a "groovy" guy.

In the past couple of months while surfing the popular RC forums, I have come across a number of interesting threads pertaining to a certain head modification being performed to increase power in nitro engines. Some posts are very positive and swear by the procedure, while others completely dispel this mod as hogwash.

The modification in question is combustion chamber (or head button) grooving. This process has been around for many years (mostly in full-scale racing and gear head circles), but it still has a somewhat mysterious nature that few really understand. Derek and I had a few discussions about this subject, and he asked me to do a little digging on this modification as well as some simple back-to-back testing on the dyno—to once and for all prove this theory either right or wrong.

The entire concept behind these simple little grooves is twofold: to cause severe turbulence in the combustion chamber, and to allow the expanding flame front to reach the sides of the combustion chamber quickly, actively consuming the remnant bits of air/fuel left behind due to incomplete combustion. These in turn allow for better combustion and lower fuel consumption due to less waste.

DIFFICULTY METER

SKILL LEVELS: 1=MONKEY • 5=EINSTEIN

Xtreme RC Cars magazine

5.0

TIME TO COMPLETE

1 HOUR

THE TOOLS

- Brain

WARNING

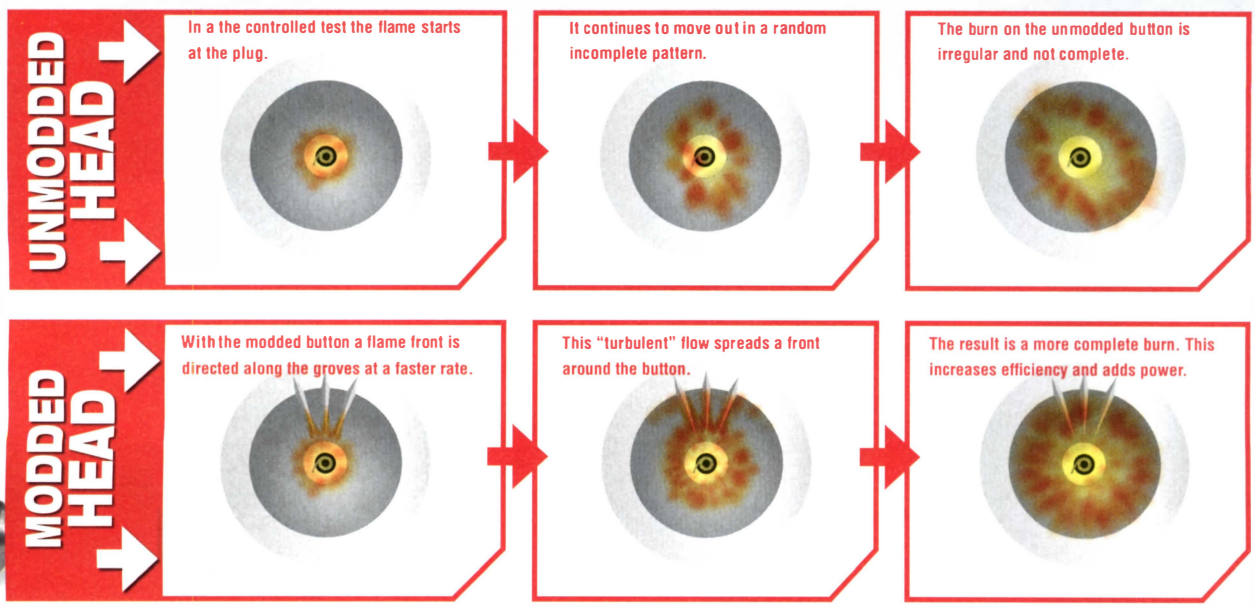
Performing the modifications below can result in irreversible engine damage and void your warranty. Only those who are comfortable with the risk and performing advanced engine modifications should attempt this modification.

SOME HISTORY

The concept was originally developed and realized by Somender Singh, a private engineer in India. His research was originally performed on low horsepower automobile engines, but has advanced into much more elaborate diesel engines and performance engines as well. For more interesting reading on the subject, visit his website at www.somender-singh.com.

I first caught wind of this process in 2003 and immediately began a series of tests to see if it could benefit 250cc, two-stroke motocross engines. After several weeks of testing, there was evidence of definite benefits to the modification, especially in its ability to run higher combustion ratios without the damaging effects of detonation rearing its ugly head. Also, the machine could be run in a leaner condition due to its better use of existing fuel charge, thus equating to better mileage.

What does all this mean to me, you ask? Well, after simple modification and testing on the dyno, I have documented power differences in just two simple groove designs. Actually, the benefits may be even more substantial, once more grooving methods are explored and tested. My modifying methods and testing results follow.



TESTING

My first step was to select a test subject. I have spent some time working with the Team Orion CRF .12 engines and thought one would make a great baseline test engine. I grabbed a completely stock, well broken-in CRF engine and mounted it on the dyno using a 2609 mugen pipe and a CRF #6 turbo plug. The fuel used in all this testing was O'Donnell 30% race fuel.

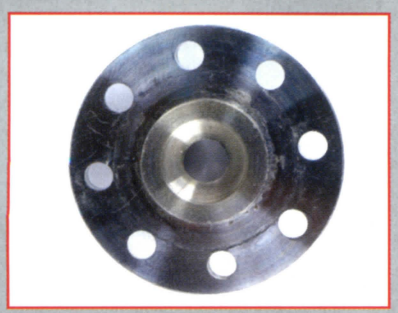
I made five power runs on the std setup in order to establish my baseline and to ensure the best possible settings to the carb for the current running conditions. The best performance the CRF engine could deliver with this setup was 1.03 HP @ 38,000 RPM and 28.15 oz. in. of torque @ 36,500 RPM with a maximum achievable RPM of 46,500. This is very decent performance for an engine that has five big races under its belt.

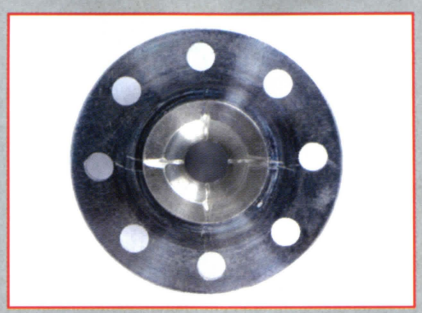
Next, I grabbed two spare head buttons from my parts bin and made a game plan for the modifications. One head was going to get the typical 4 groove star pattern on plane with the exhaust port, and the other was going to get a 3 groove pattern on only one side to direct the flame front either toward or away from the exhaust port (both tests were scheduled).

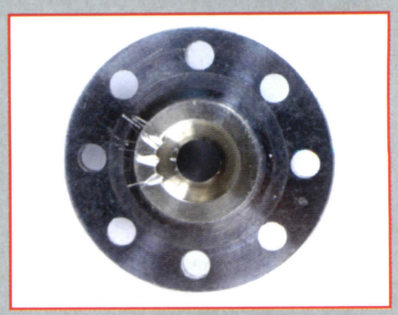
The modifications themselves are actually quite easy, but do require a precise touch in order to avoid unwanted damage to the delicate combustion chamber surfaces. (Remember, these are not GM 350 heads!) I found it best to use a small jeweler's round file to make the grooves instead of a dremel tool, as using the power tools can easily and quickly lead to disaster. Filing definitely takes more effort, but the precise results pay off in the end.

Fifteen minutes later, I was back at the dyno and ready for testing. One thing to note: When removing material from the combustion chamber surface, we are effectively raising the combustion chamber volume slightly, thereby lowering the effective compression ratio a tad. This slight change in volume needs to be accounted for when reinstalling the head on the engine. I was a bit lazy and didn't take the time to cc the heads before and after, but I did estimate that the change in head volume would require squish clearance readjustment. I made the smallest change I could, removing a 0.1mm shim and adding a 0.05mm shim to make the total adjustment, resulting in 0.05mm of squish clearance. This way the modification could be judged by merit of the grooves themselves, and not by a byproduct of altering the compression of the engine.

Many will use this article as a sleep aid.







Others have already started filing their head buttons.

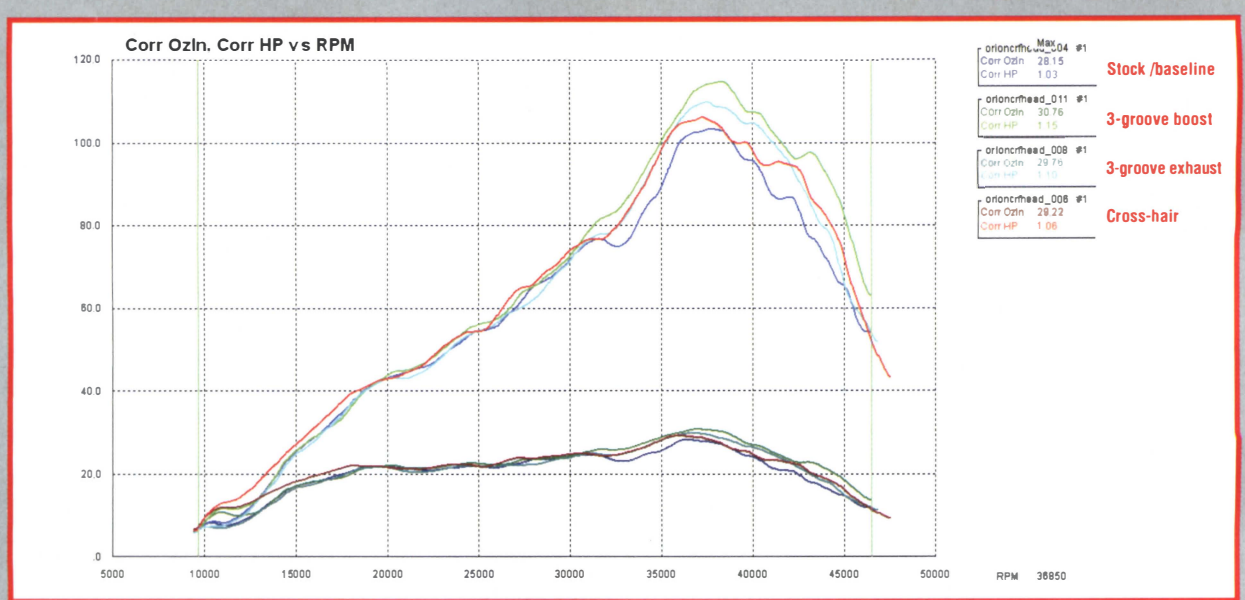
RESULTS

1. I first tested the 4 groove head, and after only two runs was impressed to see the differences between this head and stock. My first observation was the increased throttle response off idle and the added bit of power to the top end of the curve. This head delivered 1.06 HP @ 37,000 RPM and 29.22 oz. in TQ with a peak of 47,500 RPM.

2. Next, I tested the 3 groove head with the grooves facing the exhaust port. Unfortunately, this time round the throttle response felt the same as stock, but the big improvement was at the top of the power curve. This head made the engine pull strong into the over rev portion of the curve (portion of power past the HP peak). This head delivered 1.10 HP @ 37,250 RPM and 29.76 oz. in. of TQ with peak of 46,500 RPM.

3. Finally, I reversed the orientation of the grooves of the 3 groove head to face the boost port. This layout proved to be the best performer of the group and had decent gains to the front as well as substantial gains to peak power and over rev. This head delivered 1.15 HP @ 38,000 RPM and 30.76 oz. in. of TQ with a peak of 46,500 RPM.

Graphically you can track the progress of the BK-project. More power is obtained around peak HP.



A side note:

This testing is just one example of how this modification can change the performance of a typical nitro engine. The test engine used was a good condition engine that has had proper break-in and routine maintenance. These results may differ widely from engine to engine, as each engine may need different grooving techniques according to the varying needs of each engine's combustion strengths and weaknesses. Also, please don't assume that these modifications will make an old tired engine perform like new again. Old tired engines need love like new piston/sleeve sets, bearings, connecting rods, and seals.

Conclusion

What does all this mean? Well, first it is proof that this often-doubted modification does work to improve performance of small, nitro-powered, two-stroke engines. Second, it shows how easy it can be to perform such a modification to your own engine—especially since a head button is cheap to replace if you screw up. And finally, dyno graphs are always fun to look at!

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2007!

The January issue had a "Mad Libs" style editorial and it took a little bit to get a response, but these three were pretty good. I couldn't say one was better than the other, so each will win a special package for their effort! –Derek

Carl got an "A" in metrosexual handwriting!

Holy FRIJOLES, it's 2007! Weren't we supposed to have some space odyssey by now, or at least be able to wear robots that speak gibberish as necklaces? Well, I'm looking forward to the New Year, at least for the RC industry. I think we'll have a(n) MUY BUENO year, as some of the big names look to come out with UNO, DOS, TRES, or at least CUATRO new products.

This year, look for some MUCHO GRANDE changes to the magazine. We're going to DONDE ESTA the competition again, with some CHOW STYLE stuff. Imagine even more TUNA TACOS and less CHICKEN SALSA BURRITOS, if that's even possible. I don't know. You can bet that we will still FIESTA when it comes to giving you the most TORTILLAS and QUESO while still being DELICIOSO to read.

Even after five years behind the BORDER, I'm still excited to put out every issue. I enjoy the ILLEGAL side of things here, and still like to get out and HIDE FROM IMMIGRATION as much as I can. My PINCHE editorial will still be here, LOWRIDERS and GANG BANGING about SEXY MAMASITAS, cars, TEQUILA, and CERVEZA. Imagine that, my ESSE face and VATO LOCO comments will still be the first things you see in the magazine. Doesn't that make you want to SAY "AY CARAMBA"?

VAMANOS the New Year, may all your goals be reached. Do one CHICANO thing to someone else, and remember to keep reading XRC every month and store it in the CASA DEL ~~BANDO~~ PANO.

ORALE HOLMES,

JESUS E. SIERRA

Continued on page 174





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Continued from page 172.

Wortel and Oliver got "D's" in 3rd grade handwriting!

Holy Oat Meal, it's 2007! Weren't we supposed to have some space odyssey by now, or at least be able to wear robots that speak gibberish as necklaces? Well, I'm looking forward to the New Year, at least for the RC industry. I think we'll have a(n) desirable year, as some of the big names look to come out with rickety, or at least mediocre new products.

This year, look for some devilish changes to the magazine. We're going to Swaddle the competition again, with some Senseless stuff. Imagine even more oaf and less yokel, if that's even possible. I don't know. You can bet that we will still strive when it comes to giving you the most derrson and narrow while still being incoherent to read.

Even after five years behind the urinal, I'm still excited to put out every issue. I enjoy the luminous side of things here, and still like to get out and ridicule as much as I can. My Stupendous editorial will still be here. confusing and drooling about trinkets, cars, organications and hedge hogs. Imagine that, my unobservant face and mindless comments will still be the first things you see in the magazine. Doesn't that make you want to squall?

feston the New Year, may all your goals be reached. Do one slutish thing to someone else, and remember to keep reading XRC every month and store it in the bathroom.

Dear Mr. Buono,
I am new to your magazine (1st one I have ever read) and don't mean to offend. It is this best I have ever read keep up the good work. You guy rock.

Dwight D Stanton
Owensboro, KY

P.S.–If I win can you send a 3x t-shirt? I am a fat man. Thank you for the fun.

Hey Derek,
This month's issue caught me between subscription renewals and I had a bitch of a time finding the sweet new XRC in town. Luckily for me some Mom and Pop shop in the downtown red-light district (druggy pushin' core of my fair city) had a copy that they gladly held on to for me for the whole 30-minutes it took me to walk my fat RC'ing ass down there. It was an education to say the very least. This Mad Libs is inspired by my trek into the seedier parts of my city. Enjoy. (hey....you asked for it man)
...hey, it was a dark trip to pick up my happy lil copy of XRC this month. Happy freakin' New Year! Merry Christmas to ya and don't get so drunk as you can't remember the New Years party.

Cheers, David

Holy roachclip, it's 2007! Weren't we supposed to have some space odyssey by now, or at least be able to wear robots that speak gibberish as necklaces? Well, I'm looking forward to the New Year, at least for the RC industry. I think we'll have a(n) crackin' year, as some of the big names look to come out with bitchin', or at least pimpin new products.

This year, look for some over-priced changes to the magazine. We're going to proposition the competition again, with some nasty stuff. Imagine even more corpses and less asscrack, if that's even possible. I don't know. You can bet that we will still flash when it comes to giving you the most Sag and droop while still being disgusting to read.

Even after five years behind the gun, I'm still excited to put out every issue. I enjoy the darker side of things here, and still like to get out and run as much as I can. My freakin' editorial will still be here. bitching and moaning about money, cars, whores, and cats. Imagine that, my beaten face and pathetic comments will still be the first things you see in the magazine. Doesn't that make you want to vomit?

F*!K the New Year, may all your goals be reached. Do one stupid thing to someone else, and remember to keep reading XRC every month and store it in the ba throom.

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MSRP: $14/pair
Web: www.hpiracing.com

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Part Number: 3766
MSRP: $45/set
Web: www.teamgonads.com





Dynamite

Platinum Series .28 SG Off-Road Engines



Here are a couple of new powerhouses from Dynamite's new Platinum Series. Their new .28 SG off-road engines feature an SG-style crankshaft, knife-edged connecting rod, ABC piston/sleeve, oversized aluminum heatsink head, and O-ring sealed aluminum carb venturies. The .28 SG is available in pull-start and non-PS versions. Distributed by Horizon Hobby.

Part Number: DYNP5230 (non-p/s), DYNP5232 (pull-start)
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Web: www.dynamiterc.com



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Strengthen and add good looks to your Traxxas Rustler or Stampede with their new 7075-T6 aluminum turnbuckles. These tough rods come from Traxxas in fire-red or brilliant blue anodized finishes, and kits include a matching 5mm aluminum wrench. Get them in camber and toe sets, and if you happen to need to replace just one rod, you can get them individually as well.

Part Number: varies
MSRP: $12-22/set
Web: www.traxxas.com

Axial

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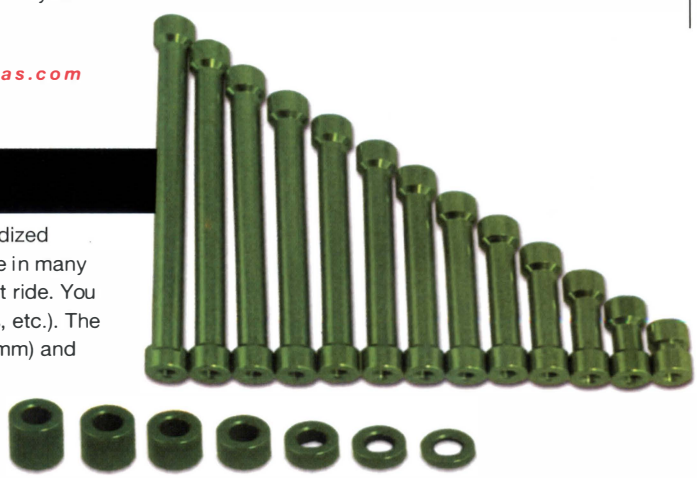

The cool guys at Axial now offer a selection of green anodized aluminum spacers and threaded posts. Both are available in many different sizes, so you can add some color to your current ride. You can also use them for custom projects (like rock crawlers, etc.). The posts are threaded and come in 13 lengths (10mm to 70mm) and the spacers come in seven sizes (0.5x6mm to 6x6mm). The posts are sold in pairs, spacers in packs of six.

Part Number: varies
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Web: www.rpmrcproducts.com

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LET'S PLAY CHECKERS

THE EASY WAY TO A CLASSIC COMPETITION LOOK

Words and photos: Mike Ogle



If there's one single graphic image that's universally understood to symbolize "racing," it's the checkered flag. The classic black-and-white checkerboard has been synonymous with racing (and used in race car paint schemes) for over a century. In fact, here's a bit of history: The earliest known photo of a checkered flag being used to signal the end of a race was from the inaugural Vanderbilt Cup Race in New York in 1904. These days, stylized checkerboard graphics are utilized on modern race cars not just because they symbolize victory, but also because the extremely high-contrast pattern makes the car very easy to see on track, which is great for an RC car! Here's an easy way I've found to produce a sharp, clean, checkered pattern in your next paint scheme.

DIFFICULTY METER

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Xtreme RC Cars magazine

3.0

TIME TO COMPLETE

60 MINUTES

THE TOOLS

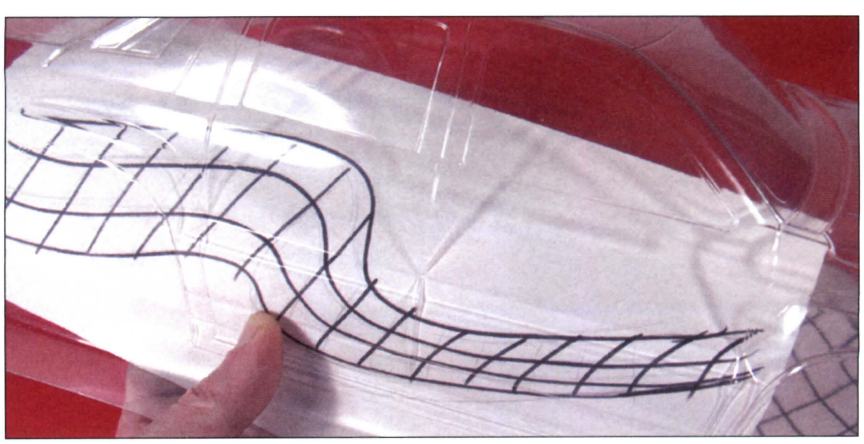
- Adhesive Shelf Paper
- Masking Tape
- Hobby Knife
- Lexan Paint

Prep The BODY

Once again, if you're going to want your paint and graphics to stick, you should first give the inside of the body a good cleaning. Some racers like the dish soap and water method of cleaning the mold release residue and stuff out of the body, but I always use a simple wipe-down of denatured alcohol (after I apply the window masks) because denatured alcohol dries almost immediately.

DRAW OUT YOUR SCHEME

I wanted a checkered flag graphic to flow down the sides of the Pro-Line Escalade body, so I first drew the scheme on paper, then held it up to the inside of the body to check the size and "fit" of the graphics. A few tips to drawing a successful checkerboard: The outside edges of the "flag" can be as curvy as you want; just be sure the horizontal "row" lines flow the same way. And the vertical lines are always nearly perpendicular (at a 90-degree angle) to the edges. Sounds complex, but it's easy after you do it once. Once you're satisfied with the design, outline it with a dark permanent marker so you can easily trace it.



We are bringing checker board back!

CONTACT!

For the actual masking material, I found that Con-Tact brand, adhesive-backed shelf paper (found in hardware and houseware stores) works great. It's a waterproof, vinyl-type material that produces clean, sharp edges, and has a nice, low-tack adhesive that removes easily. It comes in a lot of colors, but be aware that the back side (the adhesive side that you'll see when applied inside the body) may be simply white, not the color of the "face" surface of the material. I've found that the standard plain white works best, as you can more easily "see" through it to trace your designs.



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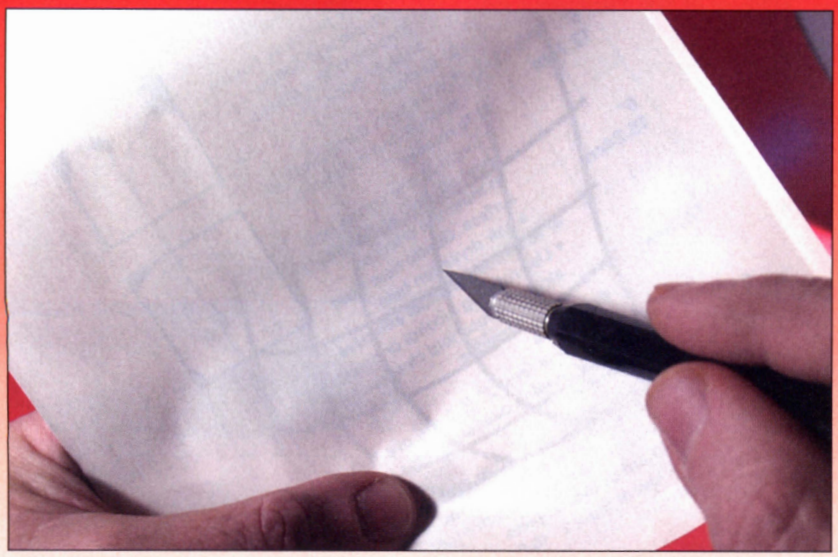
TRACING THE DESIGN

Tape your drawn checkerboard design under a piece of Con-Tact shelf paper, and hold it up to a light, or against a glass window with the sunlight shining through. You should be able to easily see the outline of your design, and be able to trace it with a sharp hobby knife to cut out your checkers. You don't have to use a lot of pressure, just enough to go through the vinyl, but not the backing sheet. To do the car's other side graphic, just flip your drawing over and repeat the process.



WEEDING THE GRAPHIC

When you've fully cut the design, take your hobby knife and remove every other checker and the surrounding *extra* vinyl material from the backing sheet to create your checker mask. This is called "weeding" the graphic. The remaining material is what you'll transfer to the inside of the body.



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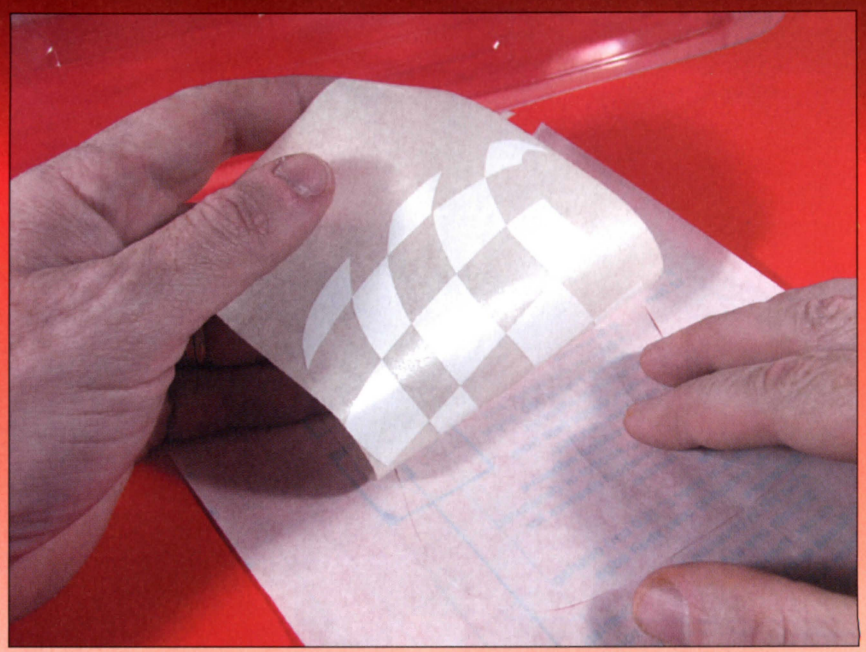
TRANSFER TAPE

When your graphic is fully weeded, take a piece of regular, wide masking tape and "de-sticky" it a bit by pressing it repeatedly to the palm of your hand, your pants leg, or anything—to lower the tackiness of the adhesive a bit. Then, place the tape right on top of your checkers and carefully peel it back up from one edge. The checkers should easily lift off the Con-Tact paper backing sheet, and now be stuck to the masking tape.





IN POSITION

Next, carefully position your checker graphic (on the masking tape) to the inside of your car's body, and burnish it down firmly with your fingernail, end of your hobby knife, or a popsicle stick. Then, carefully (again, from one edge) peel off the masking tape, leaving only the vinyl checkers stuck to the body!



READY TO PAINT

With the checkers in position, and any other graphics you may want to add, spray the main body colors. After the paint dries, you can remove the individual checkers and spray them a contrasting color, or you could just leave the vinyl material in there under the paint if you want!



CONCLUSION

Here's what the finished checkerboards look like. The white checkerboard is simply the Con-Tact material left in place; the yellow checkerboard has had the material removed and the color airbrushed in. The Con-Tact brand shelf material gives a good, sharp edge for masking almost any kind of graphic, and at a cost of just a couple of bucks, you'll be able to do quite a few bodies with a single roll. It's easy to work with, costs very little, and gives great results. What more could you ask for? ✪



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XTREME TOOLS

Xtreme Tools is the column that's devoted to anything and everything that can be used for wrenching on your RC. We'll search the world over for tools that will be helpful in your *wrenching* sessions and may even help you around the house for the "honey-do" list. There's no limit to what Xtreme Tools may bring you each month, so kick back and enjoy. If you have a killer idea you want to share with fellow RC fanatics, send it on over to: brians@rc411.com. Who knows...maybe it will wind up in here for everyone to see!

Words: Brian Skinner

If someone can make me "The Wort" keychain, I'll send you something cool.

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Spark Industries makes cool products such as the Micro-Temp line. These are sweet, affordable temp guns that can be used to measure temperatures of just about anything. You can measure engine temps, motor temps, and even track temperature if you need. Micro-Temp has a wide range of temp guns to suit your needs and is priced from $24.99 to $59.99. My two favorites are the Micro-Temp MT-002 and the Micro-Temp MT-PRO. I like the MT-002 because it's pocket sized and is easy to use at the track or during a day of bashing, and the MT-PRO is handy for more accurate temperature reading, because it's laser guided. No matter which Micro-Temp you choose, you will be happy. They all have digital read-out and features you need. For more information, check out their website for the temp gun of your dreams.

www.microtempusa.com





AWE.... THAT'S CUTE



I received this cool keychain from one of our readers. This is a Disney "Shrek" keychain and of course she sent it because I'm known as Shrek to many of you. I'm currently using this as my temp gun holder that clips to my *belt loop and it works nicely.* Just use the lanyard to clip to your pants and you have quick access to your temp gun at a moment's notice. If you want a Shrek keychain to show your love for yours truly, you can find them at a Disney store in your area, and it will run you around $5. Thank you Amy for the thought. I like my new keychain!

LOCK & LOCK CONTAINER

Here's a great container I found on one of my shopping excursions with Shrekett. This is an air-tight and water-tight container for food, but I saw it and envisioned a great container for oils and fluids. It has three compartments that are sealed by a rubber "o- ring" and is perfect for keeping shock and diff oils. This container is robust and the lid locks on all four sides—so you know nothing will spill out. The best part is, it only costs four dollars. I found it at 99 Ranch—one of Shrekett's favorite grocery stores—but you can find it at similar stores near you. Lock&Lock has a website and they have many killer "sealed" containers for a good price.

www.locknlock.com





SPEAKING OF LOCKS DON'T FORGET THREAD LOCKER

I know this has been talked about many times, but I still get asked how to keep parts from coming loose. The answer is simple: use thread-lock. This stuff goes on screws and helps bond the threads to the nut or part you want to keep from falling off. Thread-lock comes in different strengths—blue is usually the one to use, but red thread locker can be used on stubborn stuff. Just remember that red will be hard to undo...and always use thread-lock on metal-to-metal parts only. You can find thread-lock at any hobby shop or store, and it costs fewer than five dollars for the small bottle like this one.

BOESHIELD T-9 OIL!

Here's a lubricant you don't see in the RC world but is great stuff. T-9 was developed by Boeing Aircraft Company for their airplanes, so you know it has to be good! This lube is a liquid that deeply penetrates and then dries into a dry lube. It's waterproof, and is a rust and corrosion inhibitor. T-9 goes on and dries to a waxy film that lasts a long time and does not collect dirt. This makes cleaning much better, and it seems to work well for RC use. It's kind of hard to find at stores, but you can go to www.boeshield.com to find out more about T-9 and where to get it.



When you're done "sonic cleaning" your parts, go make some fries!



SONIC THE HEDGE-HOG

No, but the title sounded good. This is actually a sonic part cleaner that I saw at the recent world bicycle trade show in Las Vegas, and I thought you might like to see it as well. These puppies are good, but very expensive. A sonic cleaner is a device that cleans your parts without you having to do anything. Basically it ultrasonically vibrates all of the gook off of your part. You can see in the photo that there are two parts to the sonic cleaner—a container and a basket. The container has a device that sends out an ultrasonic vibration that vibrates the cleaning fluid (like Safety-Clean). The basket is for your parts, and you simply set the basket into the tank and it gets the parts clean in seconds. This would be a great tool for home use to clean your car with, but unless you get a huge paycheck like Derek, it's pretty expensive. For example, the cleaner you see costs $600 and is the small one of the bunch. If you have the extra money to get one, you can do a Google search and find many types of sonic cleaners. **Happy hunting!**

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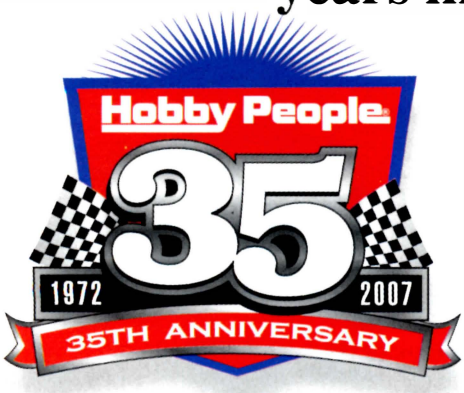



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X-DYNO TEST

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TRINITY DRAKE/ PLATINUM .28

A BIG DRAKE PUTS DOWN HUGE NUMBERS

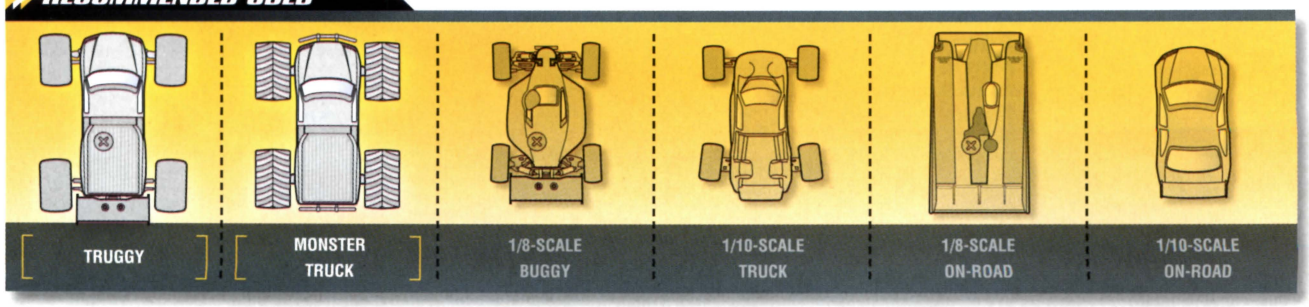
Words: Derek Buono

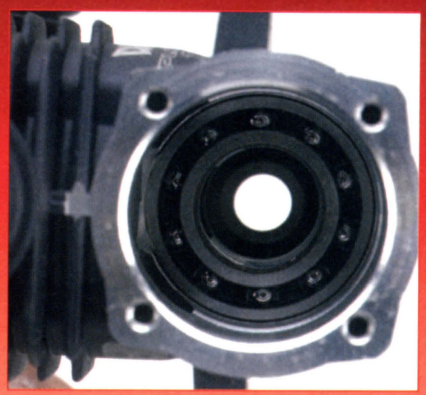
Getting "Draked" means you'll be flying.

The verdict on .28s for racing is still up in the air, but it's hard to deny them when looking for a new engine for your truggy or monster truck. There is still no replacement for displacement in nitro engines, as larger engines usually produce more torque and more power. In racing, the added power is generally not needed, and racers will opt for the slightly less powerful engine in exchange for better fuel economy. But if you want more power, racing, or just crushing your neighbor, purchasing a race bred .28 will yield the most "pucker" factor when pulling the trigger. The Drake/ Platinum edition is one of those choices for the power hungry. Offered in standard or "Draked" editions, either will add the missing rip you're looking for.

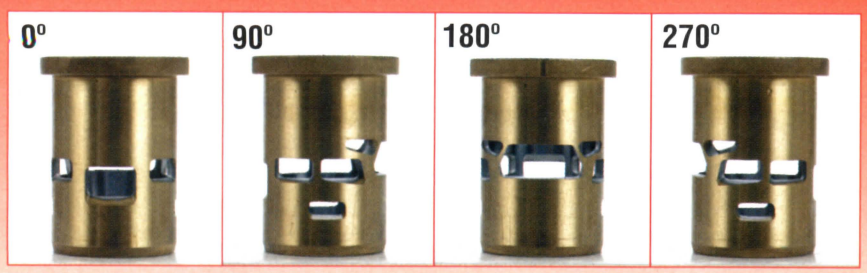


RECOMMENDED USES









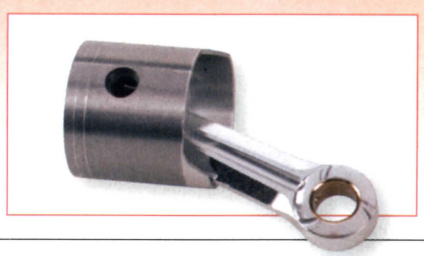
Specifications

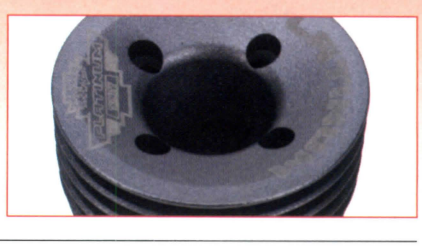
Engine: Trinity Drake/Platinum
Displacement: 4.66cc (0.28cu.in.)
Bore: 18.35mm (0.722 in.)
Stroke: 17.6mm (0.670 in.)
Piston/Sleeve: ABC
Ports: 5-port +2
Head button: Turbo
Crankshaft: 14mm / Pilot shaft (SG)
Peak X-Dyno HP*: 2.00 HP @ 26,400 rpm
Peak X-Dyno Torque*: 76.89 oz. in. @ 26,000 rpm
Peak X-Dyno RPM: 41,600
Correction Factor: 1.050
*All numbers are SAE corrected

Test Equipment

Fuel: 30%, 12% Oil
Pipe: X-Dyno Standard
Plug: O.S. #8







Drake's one of the most down-to-earth guys you'll ever meet.

Features

The Drake/Platinum .28 gets its shape and design from PICCO, which has long produced some of the most powerful engines on the market, and are sold under many other names. This edition gets Drake's input, and if you opt for the "Draked" edition, his fingerprints are all over the engine. The Drake motor should provide more power as he matches the piston and sleeve, making sure that your engine would actually be one he'd put in his vehicle.

Crankshaft/ Connecting Rod • The crankshaft probably won't make engine freaks jump for joy. It's a basic design, much like a base model performance car. It does the job, but doesn't have any bells or whistles to make it faster, or even look better. A few turbo scoop cuts and a large bore to get the fuel into the engine is all you get. If you're wondering why the .28 is so much cheaper than the .21 (as I was), you'll quickly see that the time spent on the machine has been cut down, which gives you a cheaper-priced engine.

The connecting rod has been beefed up a bit to handle some additional torque, but it's a rather plain Jane as well. This isn't a bad thing, but in terms of racing, this engine could probably produce more power if it had the high-end features found in pure racing engines. There are some interesting cuts on the bottom of the connecting rod.

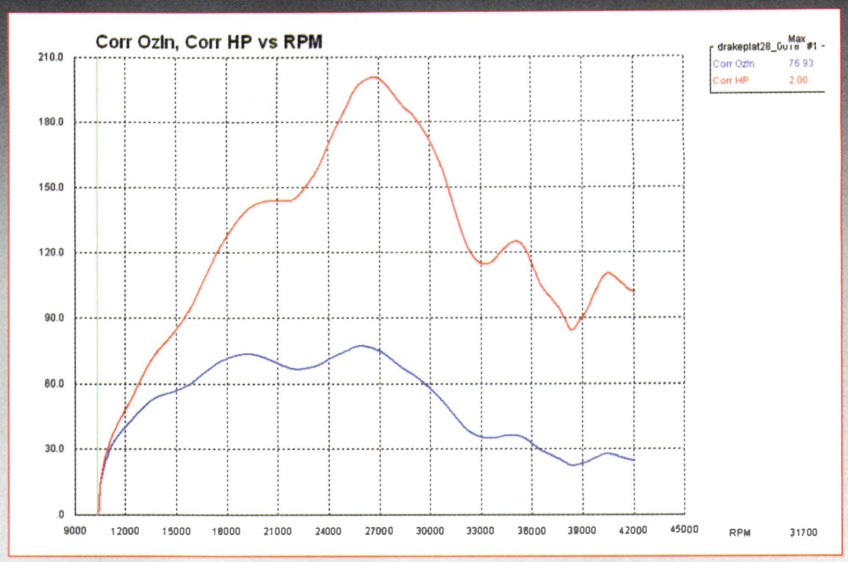
Carburetor • The Drake/Platinum features a composite carb, which is supposed to help reduce carb temperatures. This makes more power and helps reduce the chance of the engine vapor locking when things get a little hot (poor tuning).

Crankcase • The crankcase is finished in flat black for maximum heat dissipation. There are additional fins on the case to help fight the heat as well. Fit and finish are very good, as one might expect from a PICCO.

Cooling head • A vertically large cooling head should keep temperature readings on the temp gun lower, but could stick up too high and be the roll bar. If you see that the engine is the highest point on your ride, you might want to do the zip-tie trick.

Piston and sleeve • If you were betting that the sleeve and piston were pretty much stock, you won. Like I said before, there's nothing wrong with any of the parts in the engine, as it keeps the price lower, but in terms of the power that the engine can produce, it isn't maxxed out. But the added displacement of the engine will more than likely create the power of a high strung .21—but for much less.

Performance • After a rather routine break-in session, I was ready to get some data and see what the big engine would produce. I started with some rich pulls, and what I found was something I really wasn't expecting. Even before the engine was tuned for peak numbers, I could see a trend. That trend is power. I started to do a little screwdriver magic and the power just kept coming.



Once I saw repeated graphs on the computer, I did final twisting of the screws, and the result was pretty dramatic. The engine really tore it up with an insane 2.00 hp @ 26,400 RPM, and with that came a huge amount of torque—76.89 oz.-in. @ 26,000 RPM! Those were numbers I wasn't expecting, as the components didn't look special and pricing on the .28 comes in at least $50-75 cheaper than the .21. Power was a little peakier than some other big blocks, but anybody could live with more power and even a little peaky for a .28.

Even better: The engine wasn't afraid to keep spinning as it reached an incredible 41,600 RPM on the run shown here and could have spun a few more if I held on longer.

Unfortunately, I couldn't get this baby in a truggy to see if that power on the dyno would hit pay dirt in the real world, but the way the Trinity/Drake engine manhandled the dyno, I'd expect it to be much the same. Will you be able to use that extra power? Some may get it to the ground, but with the way things are overpowered right now, you'd get extra power with a big loss in fuel economy.

SCORECARD

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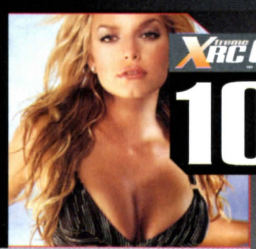

Jessica Simpson

HITS

- POWER!!!!!
- Costs less than a .21
- PICCO reputation
- Drake may have touched it

MISSES

- Doesn't include a glow plug

CONNECT

MANUFACTURER: Trinity
DISTRIBUTOR: Trinity
WEB: www.teamtrinity.com
PHONE: 732.635.1600
PART NUMBER: TRI40016
STREET PRICE: $275-$300

Conclusion

I actually had to re-write the conclusion for this engine as it blew away what I expected just minutes after I put it on the dyno. Unless you're looking to get better fuel economy and spend more money to get it, this .28 is worth every penny. It simply crushes power put out by most race .21s, and an equal in the .28 department is hard to find. Some may want to find fault with the tame port work and lack of machining, but this goes to prove, once again, that nothing beats a well-designed engine. Bang for the buck and power for the truck is what Trinity has here.





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Xtreme RC Cars magazine

ASK THE PROFESSOR

>> QUESTIONS >> ANSWERS >> QUESTIONS >> ANSWERS >> QUESTIONS >> ANSWERS >> QUESTIONS >>

KEEPIN' DRY

Hey Professor: I got a lot of snow last night and I really want to run my MLST over the winter. I know how to wrap the ESC and receiver in balloons and zip-tie them shut, but what else should I do?
Roketmini

A: Running in the snow is not the worst thing you can do to your truck— and it's not the best. Running in snow, rain, or mud requires much more "prep" and after-care than running on a dry, dirt-free street.

The electronics don't like water, so you have to do what you said to the receiver and the speedo to protect them from water. If they do get wet, stop immediately and take them out to dry. Taking the cases off and spraying the parts with a plastic-safe, electrical cleaner will help displace the water. It's not so much the water but the minerals in the water that short things out when it dries.

Servos and such can be made more water-resistant by sealing the cracks with silicone and using grease under the servo horn (this acts as a barrier).

The motor really doesn't mind the water; although, you will get more brush wear. The real effort is cleaning the car afterwards to get all the water out of the parts where water shouldn't be. Metal rusts, and bearings can too, so cleaning it afterwards is paramount. Also, getting oil back on bearings and bushings will help it run again after it dries.



So run in the snow–it's fun. But be prepared to do a little work beforehand, and a lot afterwards to ensure your MLST keeps going, and going, and going.
DerekB

GOT A QUESTION FOR THE PROFESSOR? The Professor isn't a person, but our message board where you can ask questions and get answers from racers like you around the world and the answers from avid racers, old-time pros, and factory pilots. Each month we'll choose certain questions and publish them here. ***If you've got a question, The Professor's got the answers!*** The Professor shown here is only a representation of what we think everybody on the Internet looks like. "Your" Professor may look different or be a toaster. Visit ***www.rc411.com*** to look, learn and help.



We actually have Tricia walk with an umbrella over our cars when it rains.

Material World

Hey Professor: I just want to know what I should buy as replacement parts for shock support plates, radio plates, etc. Should I go for aluminum or carbon fiber?
Stephane

A: Materials have different purposes, strengths, and weaknesses. Places you'll find one material on a certain car may be different than on others. Plastic is very light, very strong, and very cheap to produce after the initial mold costs. You'll find it used in lots of cars and in just about every place. Generally, it is one of the best materials because of all the characteristics I listed above. Sometimes we refer to plastic parts as carbon fiber when they have higher counts of fibers in them, but they are still technically a composite plastic.

Carbon Fiber • This material is something that is for looks and added strength. You'll find CF parts on places that require an added stiffness, like a chassis or shock towers, where flex isn't desirable. It is a very strong material that resists certain forces, but is susceptible to cracking or delaminating. If you're looking to upgrade to CF, it's a good idea for chassis and shock towers. Nitro cars don't use CF because it doesn't conduct heat like an aluminum one would, and it would chip easily from rubbing in corners. Carbon fiber is strong and lightweight, but can't be used in some areas. Also, it can be prone to delaminating and when it fails, it breaks.



Aluminum • Comes in a variety of 'specs' with some being stiffer, others being more flexible. It is heaver, but it can be used in places where plastics have trouble holding up. Hub carriers are often aluminum because they are in a high stress area, and the added weight is allowed because it's better to be heavy and have a part bend but still function at 50%, than to break and be out. Lots of times "aluminum" really isn't worth more than just the "bling-factor," as the plastic parts they replace don't break and are lighter.

Aluminum doesn't break like carbon fiber, allowing you to finish the run–but it's heavier than the plastic equivalent. Or if you want a "pretty" part, a copy of the OEM plastic will make it shinier.



Plastic • Generally the strongest part per density, but can be prone to breaking in high stress areas. If you aren't breaking the part, odds are that it's the best choice.
DerekB



SQUARE UP

Hey Professor: Hey, I'm back to join the hobby. I left off with my model RS3 EVO on road. All the parts are upgraded except the chassis. The problem I currently have is that the gears are making noises–too loose or too tight. Could moving the engine to adjust the gear mesh solve this? Thanks again. It seems easy to fix, but I just want to make sure. My Savage has its clutch assembly on the engine set loose, so can I fix that with screwing in the one screw to the engine right? Thanks, guys. Sorry if I seem overly cautious.
Glitch

A: You have to narrow down what you're looking at. To see if the gear mesh is the problem, the best option is to remove the engine and see if you feel like the transmission is the problem. Without the engine, the drive train should spin fairly free. If your tranny is adjusted too tightly then you'll have to see how to loosen the belts, or shim the diffs if you have that drive.

If the gear mesh is off, you need to reset the mesh so that everything works correctly. I hate to suggest the "paper method" but setting a gear mesh with paper in between the gears is a good start, though it doesn't work in all gear sets. Reset the gear mesh after you've eliminated the transmissions from the equation. Make sure the engine isn't twisted. A little trick I learned from racing nitro sedans is to remove the first gear spur, and set the inner mesh first. This way you can see the mesh better. Have it set "square."
DerekB



Derek's quote at every photoshoot: "Make it look sexy!"

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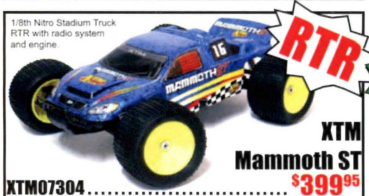
RTR



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RTR



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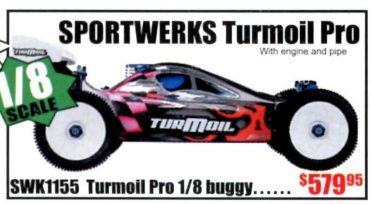

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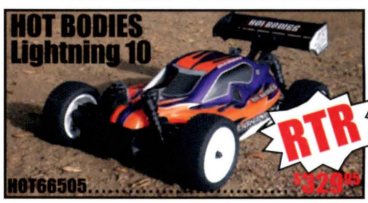
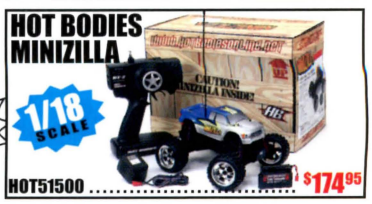


RTR

HOT66505..... $329.95

HOT BODIES MINIZILLA

1/18 SCALE



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RTR



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RTR



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XRA300006..... $399.95

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RTR



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RTR Monster Truck with .26 engine and XR2i radio

RTR



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ORN80000 ..... $319.95

The Trinity Drake Platinum Series of nitro engines carry an Italian pedigree and are designed for the serious racer.



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TRI40009	.12 Off-Road Draked Engine	279.95
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TRI40012	.21 Off-Road Standard Engine	299.95
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OS .18 TZ EB Modified Turbo Engine

Ed Bridges at EB Mods has fully balanced and blueprinted O.S. the .18 TZ powerhouse to boost performance to new levels! Whether you race on- or off-road, or drive a Traxxas T-Maxx or Revo truck, these engines offer the most muscle!



Slide carb, rear exhaust, SG shaft, non-pullstart

OSMG2116 .18 TZ EB Modified Engine 249.95

Fantom .21 FR21 Nitro Race Engine

When setting out to develop the 2006 FR21, Fantom's main goal was to build a high performance engine capable of competing at the highest levels of competition, that exceeds the highest quality standards, and is affordable.



Slide carb, rear exhaust, SG shaft, non-pullstart

FAN00100 .21 FR21 Nitro Engine 279.95

Werks .21 Team line B7 engine

This is exactly what the Werks team uses across the country, and abroad. The B7 features a 10 fin cooling head atop a new, highly efficient combustion chamber.



Slide carb, rear exhaust, SG crank, non-pullstart

WRXTL21B7 Team Line .21 Engine 289.95

.21 VZ-B V-Spec-T (P) Off-road Engine

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Slide carb, rear exhaust, SG crank, non-pullstart

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Vega.21 VGTHU Hurricane Buggy Engine

RPM: 36,000
PORTS: 7
HP: 2.75



Slide carb, rear exhaust, SG crank, non-pullstart

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Axial usesthe highestquality materials and the latest CAD and CNC techniques to maintain the maximum quality level possible.



Slide carb, rear exhaust, SG crank, pullstart

AX001 .28 Spec 1s Nitro Engine..... 119.95

LRP Z.28R Spec 3 Engine

RPM: 33,000
Ports: 6+1
HP: 3.5



Slide carb, rear exhaust, SG crank, pullstart

LRP32802 .28R Spec 3 Engine 189.95

Axial .32 Spec 1s Nitro Engine

The 32 Spec 1s is a .32 cubic inch big block engine featuring a machined cast aluminum heat-sink head, dual bushing aluminum connecting rod, and true ABC chrome sleeve construction.



Slide carb, rear exhaust, SG crank, pullstart

AX042 .32 Spec 1s Nitro Engine..... 179.95

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The NEW TURBO .32 will fit into any standard .21 engine mount or greater, including the HPI Savage, LST, MGT, Mammoth, 1/8th Buggies, Truggys and many more...



Slide carb, rear exhaust, SG crank, pullstart

RCESF10000 .32 Sure Fire Engine .. 198.95

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The Sportwerks Twister is one of the lightest, most compact starter boxes on the market. The Twister combines twin 550 motors with the Power Drive gear reduction system to create enough torque to start even the most high compression engines.

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The Hippo 2 is the first starter box to use nylon as in its case. Nylon is very strong and doesn't get bent or damaged like aluminum or steel cases. The Hippo 2 is also the lightest starter box around.

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SMCIB4204	IB4200 NiMH Matched Team, 4-cell loose	39.95
SMCIB4206	IB4200 NiMH Matched Team, 6-cell loose	59.95
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ORN10235	IB3800 Rocket Pack 6-cell 7.2 volt stick pack	46.99
ORN10237	GP3900 Rocket Pack 6-cell 7.2 volt stick pack	29.95
ORN10239	Drift Machine GP3900 6-cell 7.2 volt stick pack	39.95
ORN11308	IB3800 V-Max SPEC 6-cell Stick Pack	44.99
ORN11309	GP4300 V-Max SPEC 6-cell Stick Pack	49.95

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EP0055	GP3700 TEAM STICK PACK, 6-cell matched assembled	99.99
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EP0059	3800 ESP RACE, 6-cell matched unassembled	39.95
EP0062	3800 ESP RACE,6-cell matched unassembled	59.95
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EP0075	3800 ESP POWER BRICK 24 cells loose-unzapped	144.95
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Designed to break-in, condition and test all your standard and 1/18th mini-sized motors.

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PEK6004	DIABLO .12 Side exhaust non-pull, rotary carb, Std	59.99
PEK6005	DIABLO .12 Side exhaust pullstart, rotary carb, Std	59.99
PEK6030	DIABLO .15 Side exhaust non-pull, rotary carb, Std	59.99
PEK6031	DIABLO .15 Side exhaust pullstart, rotary carb, Std	59.99
PEK6032	DIABLO .15 Side exhaust non-pull, slide carb, SG	59.99
PEK6033	DIABLO .15 Side exhaust pullstart, slide carb, SG	59.99
PEK6060	DIABLO .18 Side exhaust Pullstart, slide carb, SG	59.99

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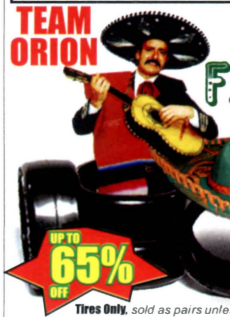

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ORN76406	MILITIA pro truck tires on front Associated rims	14.99
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DUAL ENGINE TRUGGY
PART DEUX

Start your Engines

Words: Jeff Eveleigh

Last month we showed you our Kyosho Inferno STR dual engine build but hadn't run the machine yet. This month we strapped on our drag racing helmet and found a location with enough room to crack the pair of carburetors all the way to ludicrous speed—and sing along to the purr of two powerhouses mounted to a chassis that wasn't designed for twins, but was surely up for the challenge. With the two Axial .28 mills bolted up and broken in, a fresh charge for the receiver and transmitter batteries, plus some race fuel, we were ready to see what this sucker could do.

They must be bored in Canada... but you gotta love this article.



During engine break-in and general testing, we noticed that the front end wanted to be anywhere but planted on the ground. At the speed we were expecting, it wouldn't be fun to shoot the nose into the sky and lose our steering at speed, so we stiffened up the rear suspension a bit and removed most of the droop from the front end to keep the front tires planted firmly on the driving surface.

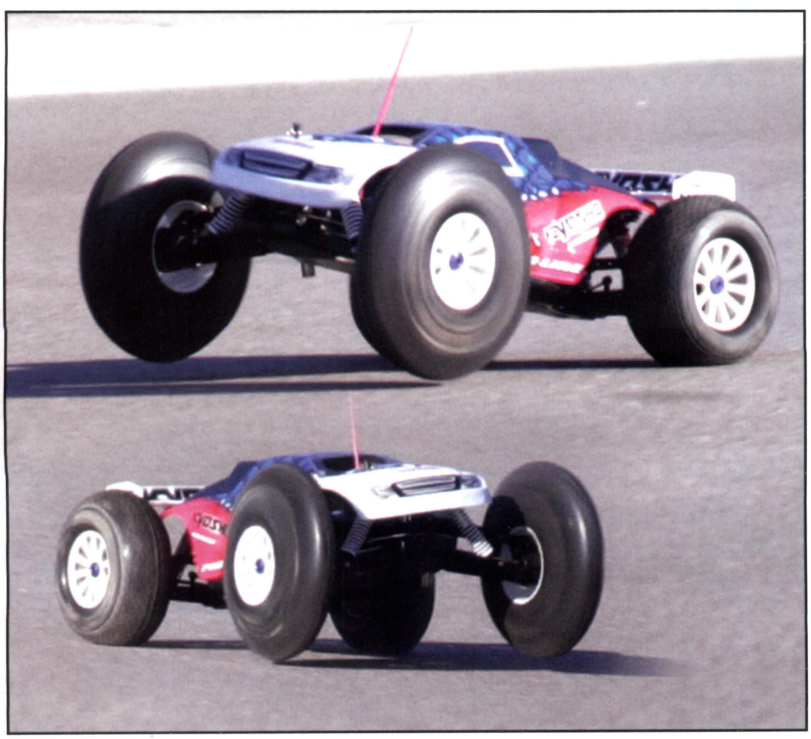
The incredible amount of torque output this ride had from the two big block engines was insane, causing much of the transferred weight at the rear to unload the front tires—allowing them to spool up to look more like pizza cutters instead of the Pro-Line rubber we glued up. We used 30,000 wt. Kyosho differential oil in the center, but thicker oil or even a center diff-lock would have kept more of the power at the rear wheels for this specific project.

TUNING AND SETUP

Starting the two engines was going to be a little tricky. To ease the pain a bit, we set up two separate starter boxes so they would line up perfectly with our pair of flywheels. Once we got the engines fired up and broken in, it was vitally important to get each engine tuned perfectly. This would allow us to squeeze out as much performance and convert the output RPM and torque to MPH on the radar gun. The ambient temperature in Canada at the time of testing was around 40 degrees Fahrenheit, so we wrapped some adhesive aluminum tape around a few of the cylinder head fins to allow the engines to get up to the desired operating temperature.



Cinnamon roll tires. That's nice.



FUEL

Since we were trying to get as much power as possible out of the Axial engines, we decided to feed them some Sidewinder fuel with 30% nitro and 10% oil content. With two engines and one fuel tank, of course this thing was a pig on fuel, giving us on average just over four minutes of runtime on a 150cc fuel tank.



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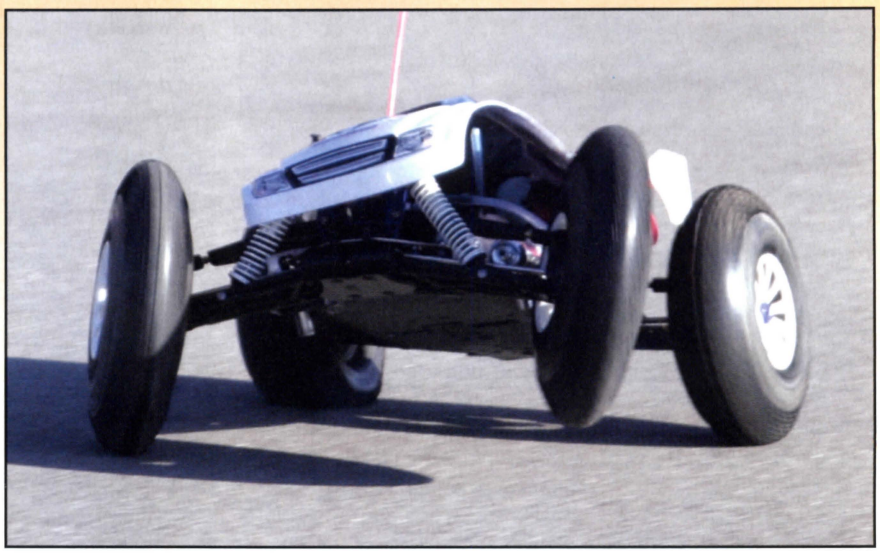
HANDLING

As soon as the throttle was tagged, the front tires erupted and ballooned up to almost Frisbee size—oftentimes tearing into the body when steering inputs were applied. Given the power, torque, and speed of this chassis, it was surprisingly stable when fully punched, although if we tried to carry a bit too much speed through a turn, the higher center of gravity of the STR chassis (as compared to an on-road car) caused it to flip. The Hitec servos offered tons of power and speed, providing responsive steering and plenty of stopping power when it was time to bring this project truck to a halt. On one of the days of testing, the wind coming from one direction was strong, so whenever a speed run was against that direction, the wind would get under the chassis and lift up the front, causing a semi-controlled wheelie that would often end up looping the STR onto its lid.





RIP IT UP

Once everything was tuned up to maximize performance and everything was tested, we were ready to break out the radar gun to put some concrete numbers down on paper. The overpowered Inferno STR accelerated like a rocket from a standstill and gave us a reading of 67 MPH on our first controlled pass. After some final tweaking of the two needles to perfect the air/fuel mixture, we wrapped up our day of testing with a huge pass of 71 MPH backed up with a 70 MPH pass in the other direction.

CLOSING

It isn't every day that we get to drive a 70+ MPH anything, let alone a Truggy, so this horsepower-filled Kyosho STR was a real treat to build, set up, and test. Although a setup like this would never be practical on the race track (or even allowed for that matter), it is always cool to test the limits of this hobby and step outside of the norm to fully appreciate the potential of the equipment we use on a daily basis. With thanks to Kyosho, Axial, and S+K Products for setting us up with the raw materials necessary to fire a nitro-powered Truggy past us at 71 MPH.

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Schedule

>Tues Feb 20th
Early Check-In

>Wed Feb 21st
Check-In
Scheduled practice two 7 minute rounds
8am-9pm Gates open at 7am

>Thurs Feb 22nd
1:10 & Truggy Qualifying
(Three 7 minute rounds, one throw out)
Gates open at 6am - Qual starts at 8am
7:30am mandatory drivers meeting

>Fri Feb 23rd
1:8 Buggy Qualifying
(Three 7 minute rounds, one throw out)
Gates open at 6am - Qual starts at 8am
7:30am mandatory drivers meeting
Friday Night Drivers Social!

>Sat Feb 24th
1:10 Truck & Truggy Mains only
Gates open at 6am, practice 6:30-7:30, mains at 8am
Trophy presentation after final A-main

>Sun Feb 25th
1:8 Buggy Mains only
Gates open at 6am, practice 6:30-7:30, mains at 8am
Trophy presentation after final A-main

classes

Truggy
1:8 Buggy - Pro*
1:8 Buggy - open
1:10 Truck - Pro*
1:10 Truck - Open
1:8 Buggy - 40+**

*Anyone can race in "Pro" but if you have a car mfr sponsor you must race in the "Pro" class.

**ID Required

Pro and Truggy A-mains **45min**
Open and 40+ A-mains **30min**

entry info

$60.00 per entry
-No entries accepted after February 1st, 2006
-One free race t-shirt per driver with paid entry
Entries are non refundable. No refund due to rain cancellation.
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entry form

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____

PHONE _____

EMAIL _____

T-SHIRT SIZE (S-XXL) _____

*Mandatory
PERSONAL TRANSPONDER NUMBER _____

1:10 Open 1st ____ 2nd ____ 3rd ____

1:10 Pro 1st ____ 2nd ____ 3rd ____

1:8 Open 1st ____ 2nd ____ 3rd ____

1:8 Pro 1st ____ 2nd ____ 3rd ____

1:8 40+ (ID required) 1st ____ 2nd ____ 3rd ____

Truggy 1st ____ 2nd ____ 3rd ____

Mail entries to:
The Dirt Racing, 140 E. Stetson Ave.
#300, Hemet, CA 92543
Please send check or money order.

CALL for CREDIT CARD ENTRIES!
Secure Private line! 951-925-7592
...leave info if no answer

Send Paypal entries to username:
thedirtracing@aol.com

Joey @ The Dirt contact info:
951-925-7592 office 951-347-4707 cell
951-765-5660 fax

Feb. 20-25, 2007 @ The Nitro Pit in Witmann, AZ. For more info and directions:
thedirtracing.com - prolineracing.com - thenitropit.com

WHAT THE???

Words by: Michael Wortel

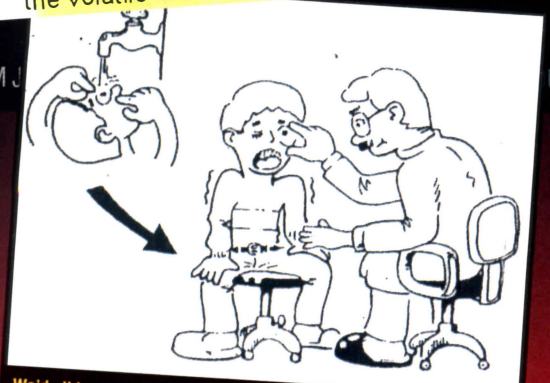
Who was you learned for spoke?

RC is truly a worldwide affair. Manufacturers from all over the world produce kits, parts, and tools that are distributed to numerous countries. With that in mind, there's usually a language barrier that needs to be broken. This is obvious whenever you look at an instruction manual and notice four or more different languages on the same page. It's inevitable that the manufacturer has trouble translating things into other languages. Sometimes the translation is accurate. Other times it's just plain hilarious. Here are a few that we've come across recently that deserve a second laugh! As a bonus, we've also interpreted some popular thumbnail illustrations that you're bound to come across:

Engine RC car runs at a very fast, and uses expensive flammable glow fuel for the model. Exhaust sound becomes noise sometimes to the other people. Operate the model in the area with safety, no troublesome, no personal injury, no property damage, and no accident.

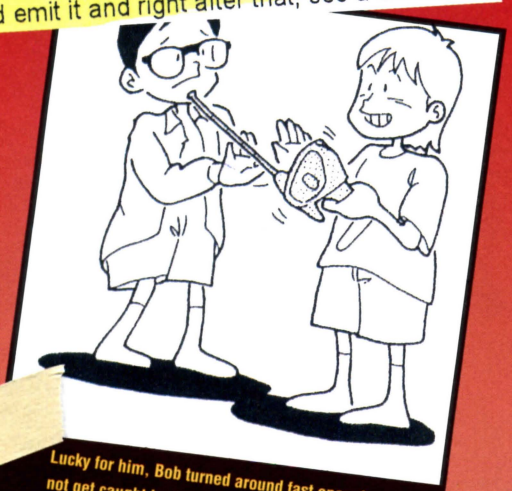
$15 bucks says there's only ONE GUY drawing all of these cartoons for instruction manuals. Kind of like fortune cookies.

● Fuel is harmful. It is dangerous to drink and to inhale the volatile element of the fuel and exhaust. Never do.



We'd all be shaking too if someone's finger was in our eye and his hand was approaching our crotch.

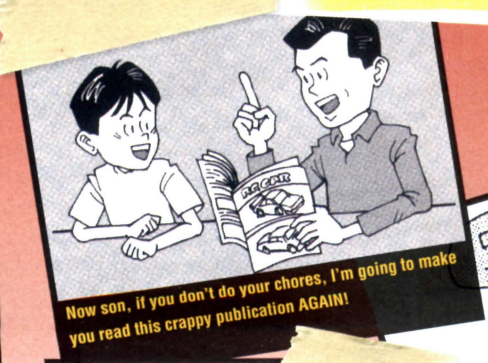
● If you drink fuel by accident, drink large quantities of water and emit it and right after that, see a doctor.



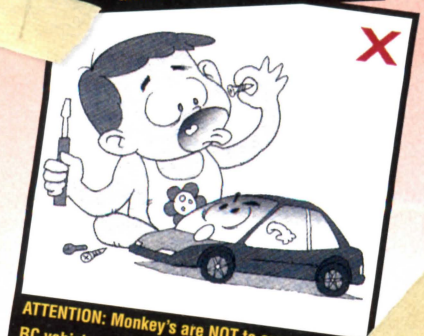
Lucky for him, Bob turned around fast enough to not get caught by Steve's "deep sea fishing" prank again.



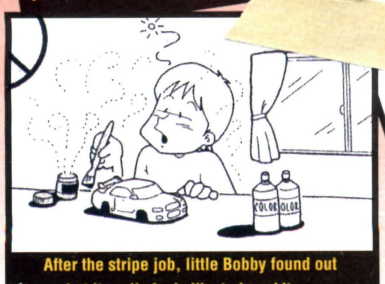
Crushed fingers and whacked-out eyeball aside... seriously- who still wears bandanas around their necks these days??



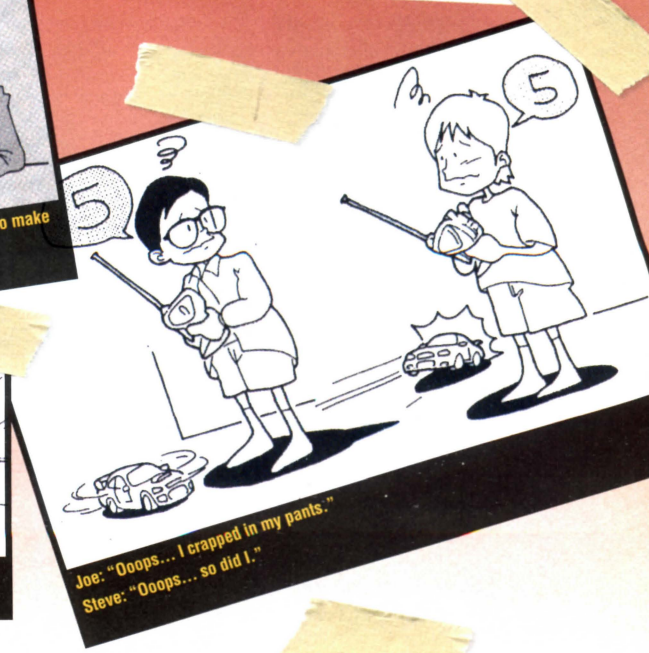
Now son, if you don't do your chores, I'm going to make you read this crappy publication AGAIN!



ATTENTION: Monkey's are NOT to operate RC vehicles at any time.



After the stripe job, little Bobby found out what it really feels like to be a kite.



Joe: "Ooops... I crapped in my pants."
Steve: "Ooops... so did I."

● Wipe out the spilt fuel with the useless cloth completely.

PURPLE LOVE

My name is Frank Messina, I am from Slidell, Louisiana, and this is my purple Savage X. I've installed just about everything purple, all from Integy. I've also added a set of Swamp Kong tires, an HPI three-speed transmission, HPI-tuned pipe, wheelie bar, and when anything new comes out I will buy and add more. Love the mag, keep up all the good work.

XTREME RC CARS WINNER of the month RACERS RIDES





Must be a Prince fan with all that purple.

HIGH FIVE'ING IN THE WORKSHOP

My name is Duane, and I am a huge fan of your magazine. I purchase every issue. I like all parts of your mag. I just wanted to send you a picture of my home RC workshop with the RCs I currently own. As you can see in the picture, I own five RCs:

1. Ofna Dominator: Hyper .21 Pro 8-port, 2-speed transmission (steel spur gears),Thunder Tiger shocks, Traxxas on-board temp gauge, Venom voltage meter and failsafe, topped off with a Pro-Line Ford Bronco (painted by myself) **2.** HPI Savage: Nitro Star .25, steel spur gears on the 2-speed transmission, Dynamite front, center and rear purple aluminum skid plates, purple aluminum gas tank guard, topped with a stock HPI truck body (painted by myself), Venom on-board temp gauge **3.** XTM XLB 1/7 Buggy: the buggy at this time is all stock, Venom on-board temp gauge **4.** XTM X-Terminator 1/8 Buggy: this is the original X-Terminator; I then upgraded all the parts listed, basically making it a deluxe model. I also added the 24.7 Pro motor. XTM 24.7 Pro, aluminum radio tray, aluminum front and rear shock towers, universal dust boot covers, aluminum suspension plates front and rear, aluminum servo saver plates, aluminum front and rear hubs carriers, aluminum front suspension arms, Venom on-board temp gauge, Pro-Line mugshot tires, topped with a stock body (painted by myself), M8 Radio with Spectrum module **5.** Team Losi LST: the LST is the new edition to my collection. I purchased it used and refurbished it back to stock. The only piece I have added so far is an RPM spear gear cover.



Well, I hope you enjoy my pictures and the small description of my collection. RC is the best hobby in the word, and even we Canadians enjoy the bashing and the racing. Keep up the good work, and I look forward to upcoming issues of your magazine.

Duane Schmidt
Trenton, Ontario Canada

WANT TO SEE YOUR RIDE IN RACERS' RIDES? Send us pictures of your car along with a description of what it's got. We prefer digital files (no zip files please) in a high resolution, so be sure to flip that switch on your camera to the "fine" setting. One submission per month will receive a full-year subscription to *Xtreme RC Cars*, an *XRC* T-shirt, and a copy of XXX-Main² DVD! ***Void where prohibited. Subscription offer is valid for U.S. residents only!***

Digital files should be sent to:
derekb@rc411.com
Please put "Racers' Rides" in the subject line.
If you still want to send film, please send your photos to:
Xtreme RC Cars Magazine
Attn: Racers' Rides
2000 S. Grove Ave,
Bldg "A", Suite 111
Ontario, CA 91761

We Got Tips

This is my TC4 with a McCallister late model body. I used the painting tips from XRC's August issue using drywall mesh tape. I have a Putnam 27 turn motor, Whiplash 3800 batteries, on HPI rims. This late model is really fun at the dirt oval. Thanks XRC for the tips that got this awesome paint job.

Kevin Warren
Madison, IN



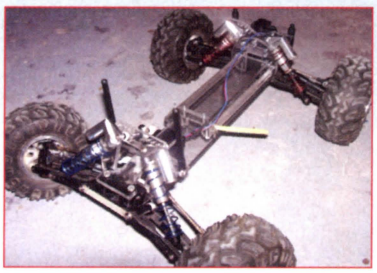


Rusty/Pedes

Here's my son Ryan's and my rigs! They are Rusty/Pedes! I custom built the chassis out of XL10 Lexan and mod parts as follows: The Chevy: Pro-Line body, MX3 Radio, Hitec 645mg servo, Novak SS5800, It's your standard Rustler hop up with exception of the Integy piggy-back shocks and RPM Revolver wheels with Pro-Line Moab tires!

My son Ryan's bus has the same upgrades with these differences: Traxxas TQ radio, Cirrus ms60 mg servo, Novak Explorer 2 ESC, Reedy 19-Turn Motor.

Christopher M. Hanson and Ryan C. Hanson
Spring Hill, FL





LEARN TO CRAWL

Here is a picture of my Custom Crawler. It's running dual Integy 55-turn motors wired in parallel. I also have a Tekin Rebel 2 ESC, locked spooled front and rear diff, a custom tube frame built by John Boyer, Rc4wd shock mounts, lockout axles, links, and servo mounts. Everything else is custom fabbed by myself. It is sitting on a set of Moab XI's mounted to Cheyenne Beadlocks.

Thanks for your time,
William Gauderman
www.rcbros.com





At the office, we've evolved; we're past crawling and are now learning how to walk.

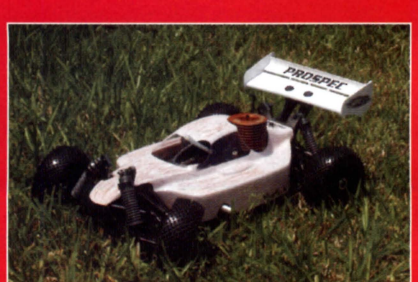
HUGE LIST

My name is Ryan Rodriguez, and I'm from Jacksonville, Florida. My buddies and I love the magazine and read it all the time. Here are a couple pix of my buggy and the crew at the last state race at B and B Hobbies in Hudson. **Mugen Prospec:** I packed in an RBws7III, RB 2045 pipe, Futaba servos (9451/9351), and spectrum of course. Other than that, it's pretty much stock, other then some dyed rims. The fancy paint job is thanks to my buddy at moto1rc.com.

Keep up the great work with the magazine!

Ryan Rodriguez







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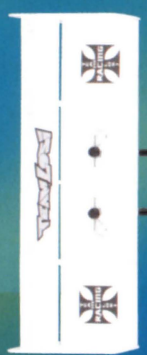
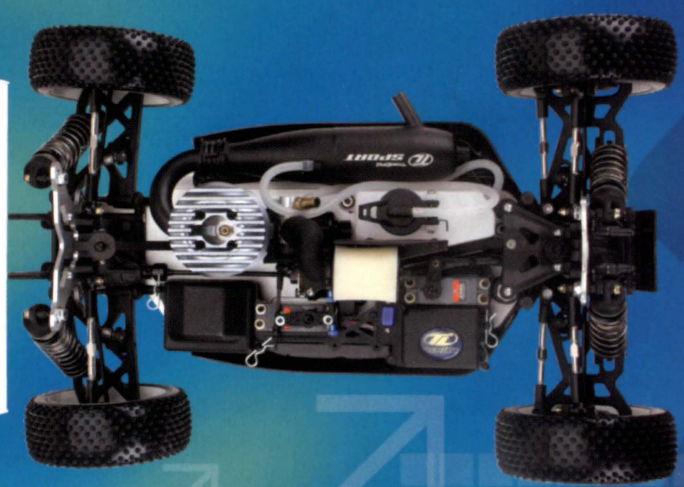
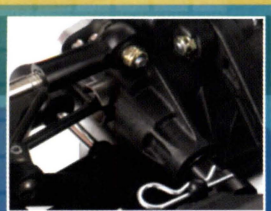






OVERSIZED, THREADED, HARD-ANODIZED SHOCKS



SEALED DIFFERENTIALS & HOUSINGS



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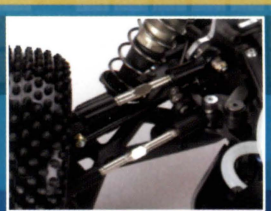

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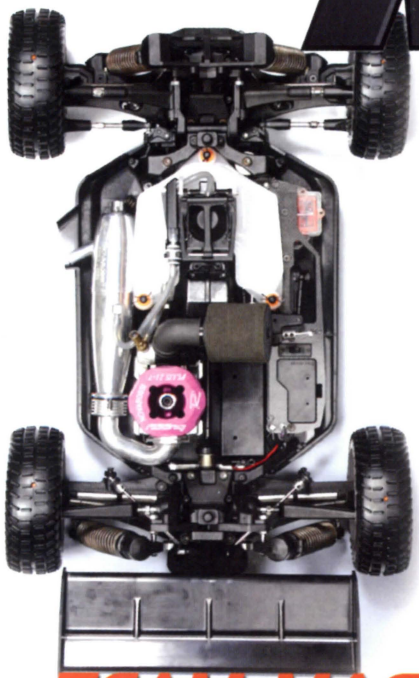

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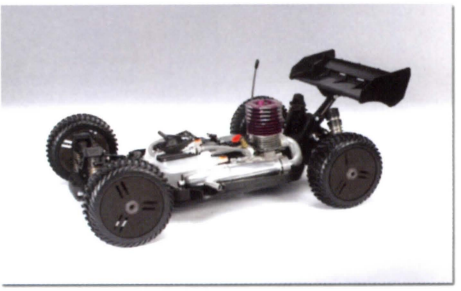
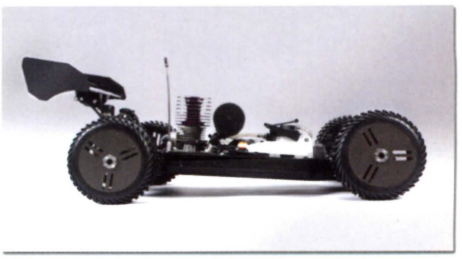
Low center of gravity one-piece center differential mount.
Aluminum-nylon Flying Wing™ composite suspension arms.
28mm low profile dual lay-down servo design.

Engine, pipe, radio gear, etc. not included.





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