Inside the Worlds winners!

Xtreme R/C Cars

The R/C Car Magazine For Racers and Competitors!



TAMIYA'S TGX GOES RALLY

How-To: TUNE YOUR 2-SPEED USE YOUR PISTONS

Uncovered!



ORION/PEAK TOP MODIFIED

10 color pages of IFMAR Worlds from Finland!



WARNING!

THIS MAGAZINE IS FOR GUYS WHO LOVE TO HAVE FUN, LIVE FOR THE THRILL OF VICTORY, AND AREN'T EASILY OFFENDED. IF YOU DON'T FIT THE ABOVE CRITERIA, YOU SUCK. YOU DEFINITELY DON'T WANT TO READ ABOUT SOME OF THE ANTICS THAT WENT ON IN FINLAND. IF HOWEVER YOU DO FIT THE ABOVE DESCRIPTION, ENJOY!

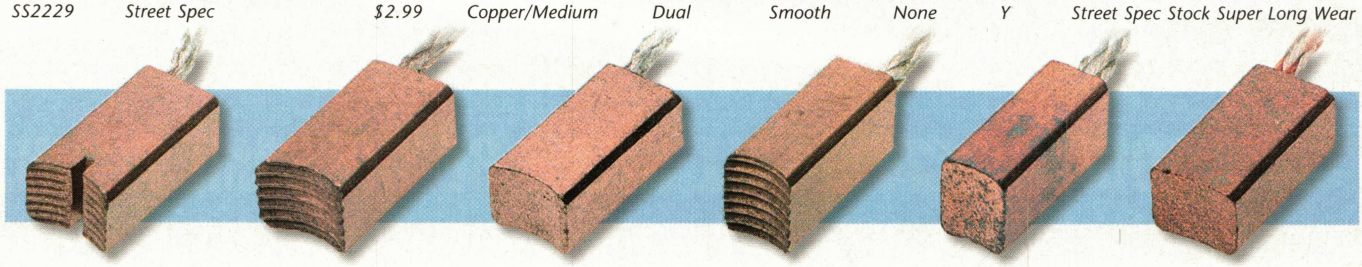
Oct.-Nov. 1999
USA $3.95 CANADA $5.75
11>
0 74470 92345 9
Issue 5.2


Totally Factory GT
FACTORY Team
GT Factory Blue Chassis #7525B
GT Factory Blue Titanium Turnbuckles #1280
GT Factory Blue Kickup #7305B
Blue Tuned Pipe #7742
Blue Manifold
Non P/S #7758
P/S #7750
Blue Inline Front Axles #6220B
Carb Restrictors
#7712 Silver .190
#7713 Blue .180
#7714 Black .170
Aluminum Brake Adaptor #7561B
RC10GT Blue Aluminum Screw Kit #7675
Send for your FREE Factory Team Catalog!
COMPLETE TUNING GUIDE
NEW! RC10GT TUNING GUIDE!
More than 50 illustrations detailing over 40 tuning options to set up your truck to WIN!
Cool parts for the RC10GT.
Visit our Website:
www.rc10.com
www.teamassociated.com
Associated Electrics • 3585 Cadillac Ave., Costa Mesa, CA 92626 (714) 850-93[illegible]2
Ad #1058

motor brush guide

checking out the hottest brushes in rc

Part #	Name	Price	Compound	Type	Face	Cut	Terminal	Usage
SILVER COMPOUND BRUSHES, LAYDOWN FOR STOCK MOTORS								
RC4070	Serrated L Slot	$3.50	Silver/Hard	Laydown	Serrated	"L" Slot	Y	1/10-1/12th Stock Oval
RC4077	Serrated	$3.50	Silver/Hard	Laydown	Serrated	None	Y	Same as 4070, Cut Your Own Face
RC4444	Original 4444	$3.99	Silver/Hard	Laydown	Smooth	None	Y	Stock On-Road, Midnight 2/X-Star
RC4499	"E" Midnight 2 Pro	$3.50	High Silver/Hard	Laydown	Serrated	None	Y	Midnight/Paradox Pro
RC4499NT	"E" Midnight 2 Pro	•$2.99	High Silver/Hard	Laydown	Serrated	None	Y	Midnight/Paradox Pro
SILVER COMPOUND BRUSHES, NORMAL FOR MODIFIED MOTORS								
RC4383	Serrated	$3.50	Silver/Hard	Normal	Serrated	None	Y	14 To 17 Turn Modifieds/MSJ4 Pro
RC4383NT	Serrated	$2.99	Silver/Hard	Normal	Serrated	None	N	14 To 17 Turn Modifieds/MSJ4 Pro
RC4455	Serrated Touring	•$3.50	Silver/Hard	Normal	Serrated	None	Y	All 4wd And Touring Modifieds
RC4455NT	Serrated Touring	•$2.99	Silver/Hard	Normal	Serrated	None	Y	All 4wd And Touring Modifieds
SILVER/COPPER COMPOUND POLARIZED BRUSHES, LAYDOWN FOR STOCK MOTORS								
RC4391	Serrated	•$3.50	1 Copper/1 Silver	Laydown	Serrated	"L" Slot	Y	Easier On Comm Then 2 Silver Brushes
COPPER COMPOUND BRUSHES, LAYDOWN FOR STOCK MOTORS								
RC4080	Serrated	$3.50	Copper/Hard	Laydown	Serrated	"L" Slot	Y	Long Wear On-Road
RC4080NT	Serrated	•$2.99	Copper/Hard	Laydown	Serrated	"L" Slot	N	Long Wear On-Road
RC4087	Full Serrated	$3.50	Copper/Hard	Laydown	Serrated	None	Y	Long Wear Off-Road
RC4475	Stock Japan	$0.99	Copper/Medium	Laydown	Smooth	None	Y	Stock Replacement Mid2/Paradox
COPPER COMPOUND BRUSHES, NORMAL FOR MODIFIED MOTORS								
RC4046	Medium Soft	•$2.50	Copper/Med. Soft	Normal	Smooth	None	Y	Easy On Comms, Machine Wound Mods
RC4380	Serrated Hard	$3.50	Copper/Hard	Normal	Serrated	None	Y	6 To 13 Turn Modifieds/MSJ4 Pro
RC4380NT	Serrated Hard	$2.99	Copper/Hard	Normal	Serrated	None	N	6 To 13 Turn Modifieds/MSJ4 Pro
RC4495	Stock Japan	$0.99	Copper/Medium	Normal	Smooth	None	Y	Stock Speed Gems/Monster Of Touring
COPPER/SILVER COMPOUND POLARIZED BRUSHES, NORMAL FOR MODIFIED MOTORS								
RC4390	D3.5 Serrated	•$3.50	1 Copper/1 Silver	Normal	Serrated	None	Y	D3.5 Modifieds
COPPER COMPOUND BRUSHES, DUAL FACE FOR LAYDOWN OR NORMAL STOCK MOTORS								
SS2229	Street Spec	$2.99	Copper/Medium	Dual	Smooth	None	Y	Street Spec Stock Super Long Wear



RC4070, RC4391 RC4080, | RC4077, RC4499 RC4087 | RC4444, RC4475 | RC4383, RC4455 RC4380, RC4390 | RC4046, RC4495 | SS2229

COMPOUNDS:
Silver brushes offer the highest performance by producing the most rpm's but require the commutator to be trued more often. Use with higher turn motors in the 14 to 17 turn range and all stock motors. Silver brushes are used mostly for serious racing. **Copper** brushes give excellent performance and long life and are easier on the commutator. Use copper brushes with 6 to 13 turn motors.

TYPE:
Laydown, This is what is used in all Trinity/Epic stock motors. The brush is wider than it is high for greater brush wrap around the commutator. This makes for for more rpm on stock motors. **Normal**, This is what comes on modified motors. The brush is higher than it is wide.
Dual, The street Spec brush is designed to be used in either a standard or laydown brush motor.

FACE:
Serrated, This brush face has small grooves molded into it. Breaks-in instantly, makes lots of power!
Smooth, This brush has a smooth face, takes longer to break-in great if you like to cut your own brushes.

CUT:
"L" Slot, A thin slot cut into the radius improves brush alignment on the commutator, speeds break-in and allows the brush to clean commutator while running.

TERMINALS:
Screw on terminals allow the changing of brushes with just a screw driver. Professional racers prefer to use brushes without terminals and solder their shunts right to the brush hood.

New face radius on Trinity's Laydown stock brushes fit stock motor commutators perfectly for quicker break-in.

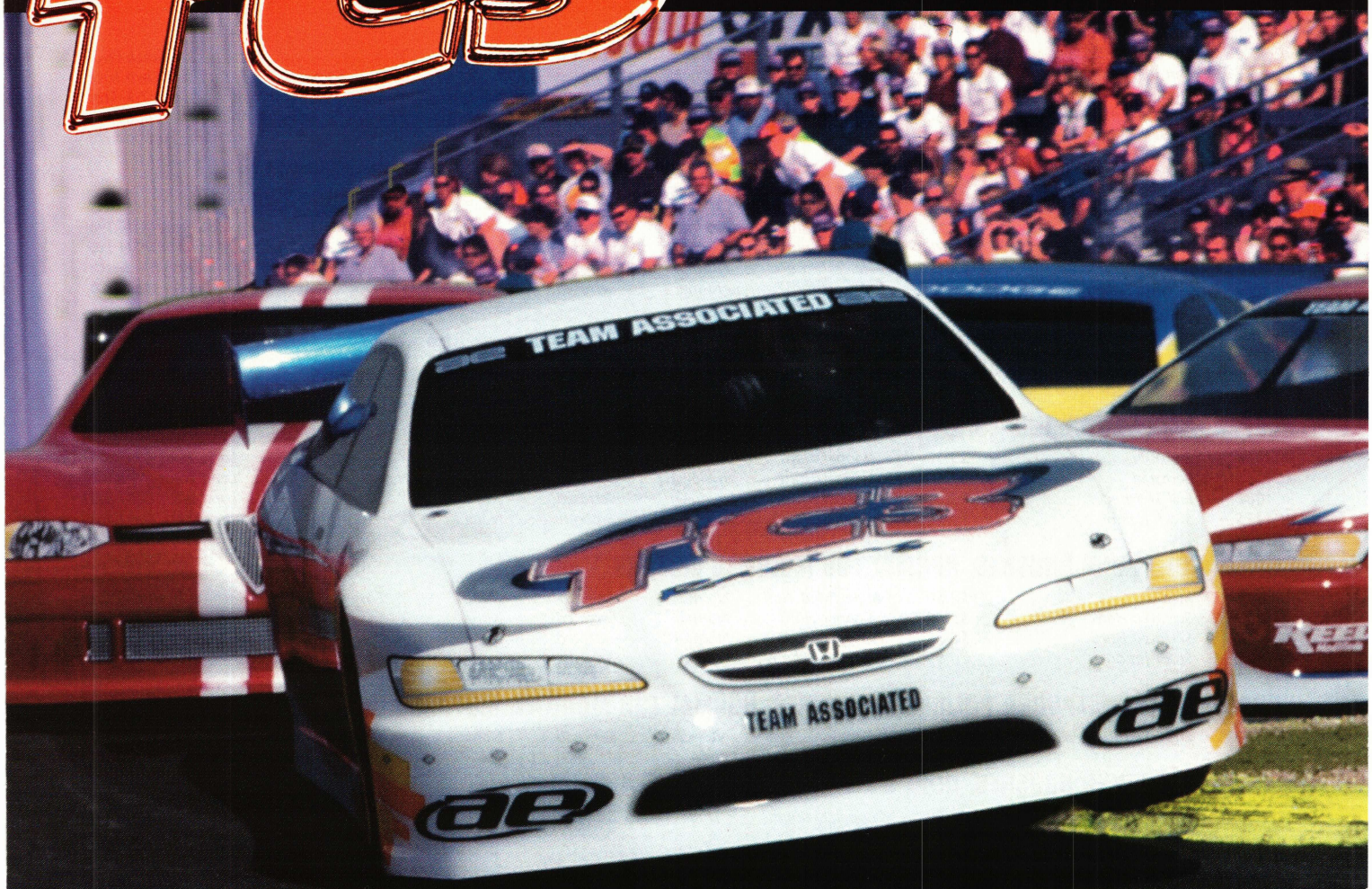
New RC4455 "Touring Serrated" brush provides the perfect combination of high performance and brush life for modified touring car racing. This will be the brush everyone will be using this year!

All brushes are available from Trinity and in stock at your local hobby shop.

TRINITY

36 Meridian Road
Edison, NJ. 08820
732.635.1600
www.teamtrinity.com

TC3 IT'S HERE...



AND TOURING CARS WILL NEVER BE THE SAME AGAIN.

In the beginning, it was known as "Project Roswell." And although we don't claim to have designed the new TC3 with the help of any "alien technology," we did venture into design and manufacturing techniques far beyond where we'd ever gone before.

We started with a clean slate, designing the TC3 from the ground up specifically as a touring car... not a converted 4WD buggy. An all new, computer-optimized shaft drive system proved to be the most efficient, durable, and serviceable drive train possible, and eliminated the design compromises inherent in belt-drive systems. The TC3 uses our race-proven, carbide-ball equipped Stealth differentials and MIP CVD's both front and rear for a smooth transfer of power. ProLine's new spoke design, standard hex-mount wheels with their V-Rage tires enable the TC3 to hook up on most any track.

The TC3 Racer kit features precision stainless-steel sealed ball bearings, a big improvement over the bushings found in many other manufacturer's "budget" kits. MIP composite CVD's are included, as well as our composite-bodied VCS Macro Shocks for smooth, adjustable damping all around. And, you get your choice of three popular ProtoForm sedan bodies: the Honda Accord 4-door, Dodge Stratus, or the Alfa Romeo.

The TC3 Team kit includes "Factory Team" blue titanium turnbuckles, Teflon-sealed ball bearings, blue-anodized aluminum-bodied VCS Macro Shocks, and blue-anodized MIP CVD's. If you want to both go fast and look good, this kit is it!

Built for the serious sedan racer, the new RC10TC3 is simply the most technologically-advanced touring car on the market today. And yes, it *is* rocket science.



TC3 Team Kit

#3030 also includes:

- Factory Team Blue Anodized VCS Shock Bodies
- Factory Team Blue Titanium Turnbuckles
- Blue-Anodized Alloy MIP CVD's
- Factory Team Teflon-Sealed Ball Bearings

RC10 TC3



RACER KIT #3010
Honda Accord



RACER KIT #3011
Dodge Stratus



RACER KIT #3012
Alfa Romeo

Team Associated • 3585 Cadillac Ave. Costa Mesa, CA 92626 • (714) 850-9342
www.teamassociated.com • www.rc10.com

Ad #1059/133

INTRODUCING THE FIRST TOURING CAR THAT'LL INSPIRE THE PHRASE, "PLASTIC IS FANTASTIC!"

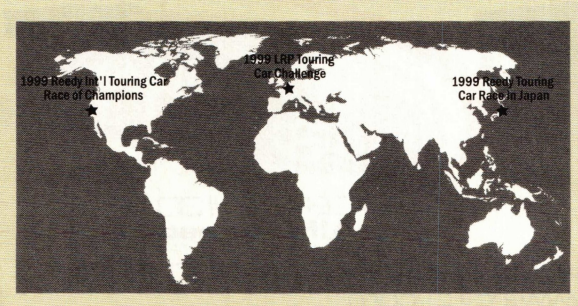
THE ALL-NEW YOKOMO MR-4TC



THE ALL-NEW YOKOMO MR-4TC TOURING CAR.



Yokomo's newest entry is revolutionizing the world of touring cars with its speed and efficiency. Since it's debut at the LRP Touring Car Challenge in Germany, the MR-4TC has proven it's awesome capabilities at race tracks around the world. And recently at the 1999 Reedy International Race of Champions at Ripon R/C Speedway in Ripon, California, Team Yokomo Driver Barry Baker dominated the invitational class with a perfect score of 6 heat wins for the overall win. Teammate Masami Hirosaka finished a close second to complete a 1-2 victory for the MR-4TC.



Race proven around the world!

LRP Touring Car Challenge
3/28/99 Eppelheim, Germany
1st & 2nd

Reedy Touring Car Race in Japan
4/18/99 Yatabe Arena, Japan
1st - 2nd -3rd

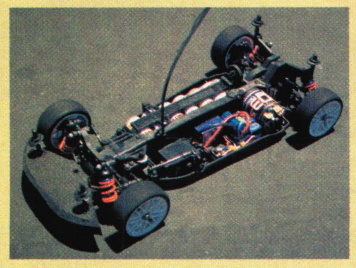
Reedy Int'l Touring Car Race of Champions
5/30/99 Ripon R/C Raceway, CA
1st & 2nd



BARRY 'FABULOUS' BAKER'S REEDY RACE WINNING MR-4TC

Aside from a few hop-ups, Barry's winning MR-4TC is very close to stock. Here's a list of standard equipment found on Barry's car.

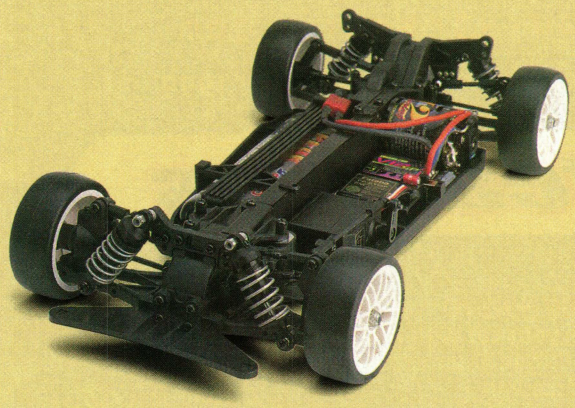
Chassis: MR-4TC
Motor: Trinity D3.5 9x2
Batteries: Trinity Team Edition RC-2000
Speed Controller: LRP IPC V6
Servo: Airtronics 94258
Tires: Yokomo ZR-138M Belted Slicks
Inserts: Yokomo ZR-037F Molded Firm
Hop-ups:
Blue Alum. Threaded Shocks (YS-1SSS-5)
Orange Springs (YS-1450)
Front Low-Friction Belt (ZS-537S)
Rear Low-Friction Belt (ZS-132S)

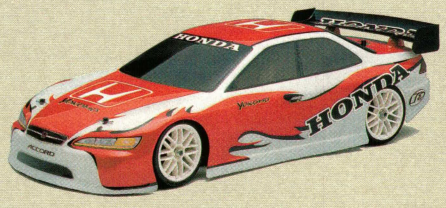


THE ALL-NEW YOKOMO MR-4TC TOURING CAR.

NO TIME TO READ? READ THIS.

LOW CG TWO-BELT 4-WHEEL DRIVE SYSTEM · FRONT AND REAR DOUBLE-WISHBONE SUSPENSION SYSTEM · ACCEPTS PRE-ASSEMBLED & SIDE-BY-SIDE STICK PACK BATTERIES · LIGHTWEIGHT MOLDED COMPOSITE CHASSIS · MOLDED COMPOSITE LONG SUSPENSION ARMS · LIMITED-SLIP FRONT AND REAR BALL DIFFERENTIALS · OIL SHOCKS · COMPLETE SET OF TWENTY PRECISION BALL BEARINGS · TURNBUCKLE UPPER I-ARMS · HIGH EFFICIENCY UNIVERSAL DRIVESHAFTS · ALUMINUM HEAT SINK MOTOR MOUNT · 24MM 8-SPOKE MESH WHEELS · CRASH RESISTANT URETHANE BUMPER · FOR MORE INFORMATION, CALL 949-252-8663.





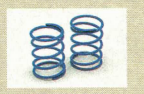
The all-new MR-4TC is available with either the Protoform Honda Accord body or the Andy's Stratus body(shown opposite left). Both kits include window masking, detailed headlight/taillight decals, and Yokomo decals.



Hate the hassle of building side-by-side battery packs?

Yokomo knows that building side-by-side battery packs can be a hassle. That's why we've designed the battery hold-down system on the MR-4TC so you can use stick battery packs as well as side-by-side packs.

TOP FIVE HOP-UPS RECOMMENDED BY THE FACTORY TEAM DRIVERS



YS-1355–1465
TC Tuning Springs



ZS-011E
EZ Wheel Hubs



ZS-630A
Alum. Gear Adapter

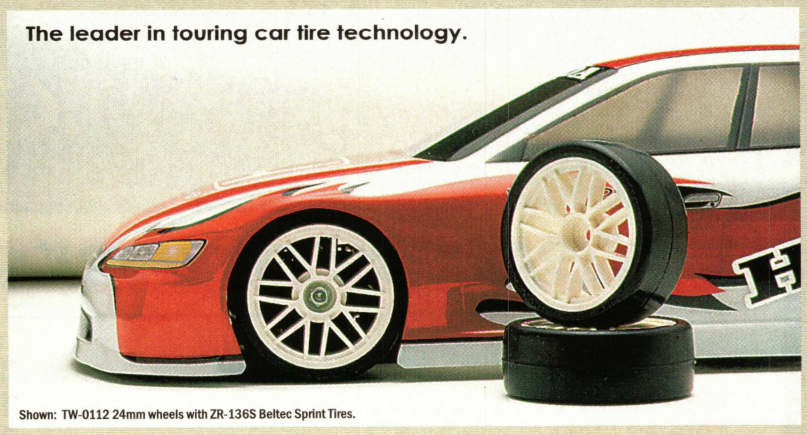


ZS-132S
Low-Friction Rear Belt



ZS-010FH & RH
Hardened Universals

The leader in touring car tire technology.



Shown: TW-0112 24mm wheels with ZR-136S Beltec Sprint Tires.



Part Number: YS-1SSS-5

OPTIONAL BLUE ANODIZED ALUMINUM THREADED SHOCKS

Yokomo's new shocks for the MR-4TC have been designed to help control the viscosity of the oil inside the shock, allowing the shock to provide better dampening. A bleeder screw on the shock cap makes building these beauties a breeze. Collars allow fine adjustments to ride height without the use of shock spacers. So you can adjust your ride height away from the pits. And yes, they're blue.

HIGH PERFORMANCE TIRES

Since the introduction of touring car racing, Yokomo's touring car tires have revolutionized the tire segment. By utilizing racing concept design, Yokomo tires are designed to transfer power efficiently to the ground. Specially formulated compounds and advanced tire designs allow our tires to provide superior traction, longer wear, and improved handling.

PART NO.	NAME
ZR-206S	Sprint Slick, Soft (Non-Belted)
ZR-206M	Sprint Slick, Medium (Non-Belted)
ZR-206F	Sprint Slick, Firm (Non-Belted)
ZR-136S	Beltec Sprint, Soft (Belted)
ZR-137M	Beltec 4, Medium (Belted)
ZR-138M*	Beltec 5, Medium (Belted)

* Same tire used by Team Yokomo to win the 1999 Reedy Touring Car Race of Champions.

TIRE INSERTS

Having the right tire and insert combination is crucial in obtaining the maximum performance out of a tire. Yokomo inserts are available in both the sponge foam and molded foam types. The softer inserts are a good choice when running on low-grip surfaces (like dusty parking lots), while the harder inserts are better suited for high-grip surfaces (such as carpet and treated asphalt).

PART NO.	NAME
ZR-034	24mm Foam Insert, Soft
ZR-034F	24mm Foam Insert, Firm
ZR-034L	24mm Foam Insert, Non-Repulsion
ZR-037S	24mm Molded Insert, Soft
ZR-037M	24mm Molded Insert, Medium
ZR-037F	24mm Molded Insert, Firm
ZR-038M	26mm Molded Insert, Medium
ZR-038F	26mm Molded Insert, Firm

YOKOMO

The Winning Advantage

www.yokomousa.com

contents

www.xtremerc.com
Issue 5.2 October-November 1999

features

LEARN HOW-TO **28**
Tune your car with pistons
Everything you need to know.
by Mike Velez

REVIEW **32**
Tamiya TGX MK.1 Impreza Rally
A new buggy for Y2K and beyond.
by Steve Wang

NEW COLUMN **38**
Xamination
1 question, 5 answers

FEATURE **40**
1999 IFMAR Off-Road World Champs
Rumble in Rauma
by Mike Velez

REVIEW **56**
HPI RS4 MT Baja Bug
Herbie gets dirty!
by James Revilla

X-RATINGS **63-66**
Test Stuff
MIP Tweak Station, Multiplex Servos, Integy Body Hole Punch

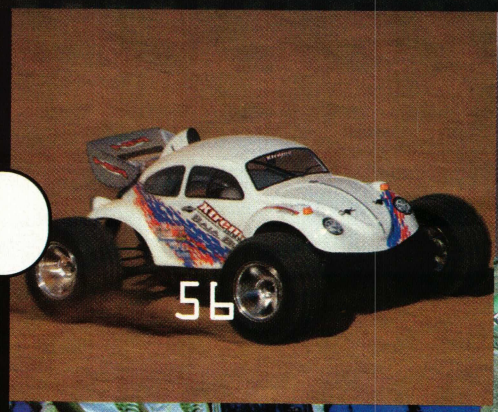
LEARN HOW-TO **68**
Tune your 2-Speed
The ins and outs of 2-speed tuning.
by James Revilla

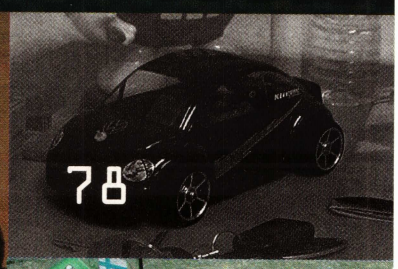
FEATURE **70**
2nd Take, Juggernaut
We rack up the miles on our Jug.
by James Revilla

FEATURE **72**
Championship Winning Cars
Let's take a look under the hood.
by Staff

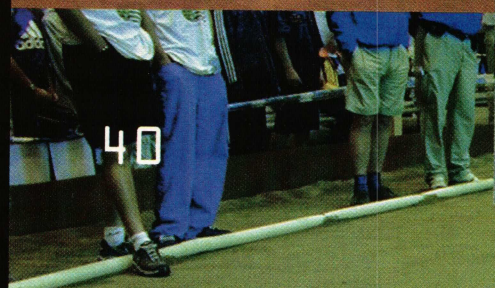
REVIEW **74**
Kawada Alcyon SV-10GT
Full-featured sedan on a budget.
by Steve Wang

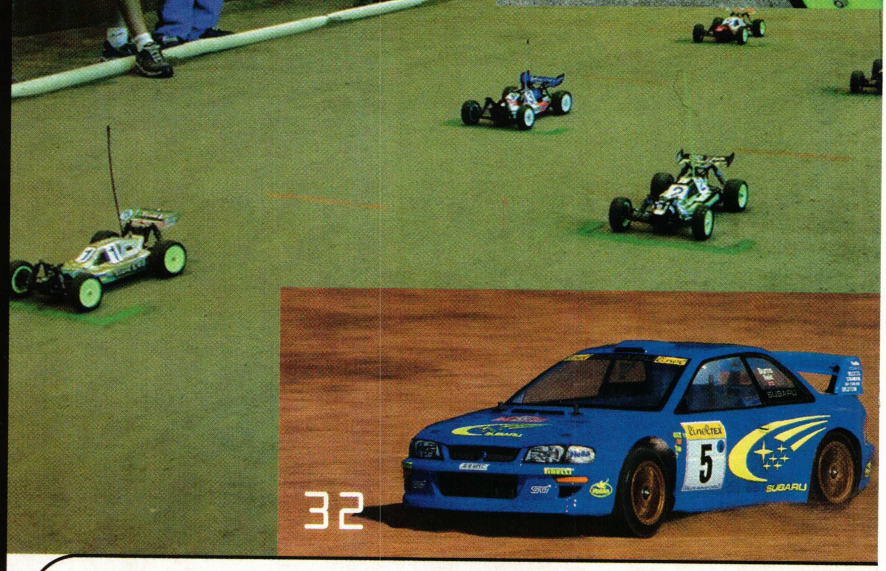
REVIEW **78**
BRP Fun Wons "Da Bug"
Itsy Bitsy Fun!
by James Revilla









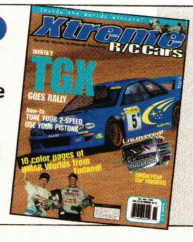


departments

editorial 10
x-mail 12
inside line 17
quick tips 22
starting box 24
racers' rides 82
back issues 85
new stuff 86
subscribe & win 89
profile 90

ATTENTION!

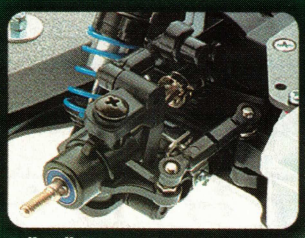
We're the Mob's favorite R/C car magazine. Fogetaboutit!



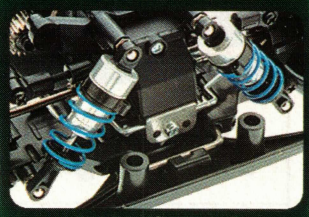
Other stuff in this issue: 2 Bug reviews, drivers score, beautiful Fins, a NEW column that's not half bad, Denise Richards, and lots of potty humor.



"Funny Americans!"

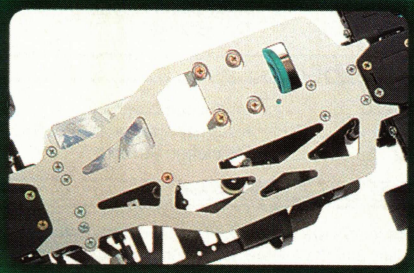


Full Ball Bearing Set

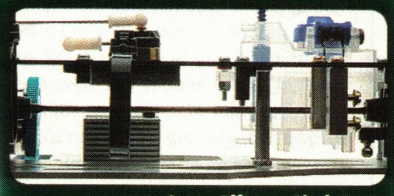


Super Low Friction Aluminum Dampers

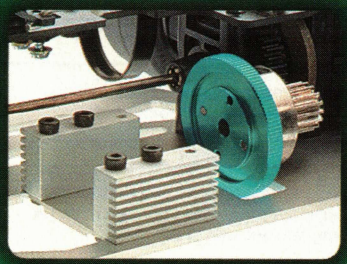
TG10-Mk.1 Pro Racing Chassis 44020



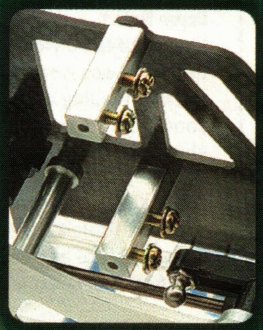
TG10 Lightened Aluminum Racing Chassis



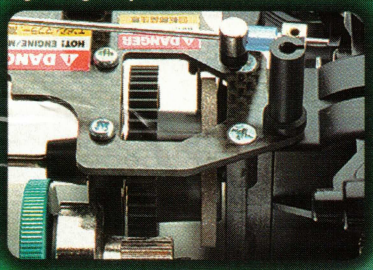
Super Efficient Shaft Drive



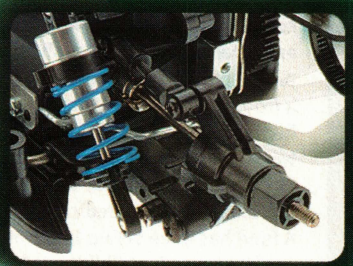
Lightweight Flywheel & Heat Sink Motor Mounts



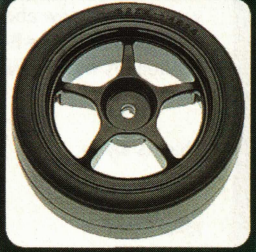
Carbon Fiber Upper Deck



High Performance Disc Brake



Adjustable Suspension



Racing Slick Tires

TAMIYA

Tamiya America, Inc. · 2 Orion · Aliso Viejo · CA 92656 · 1-800-TAMIYA-A · www.tamiya.com

Triumphs And Tragedies

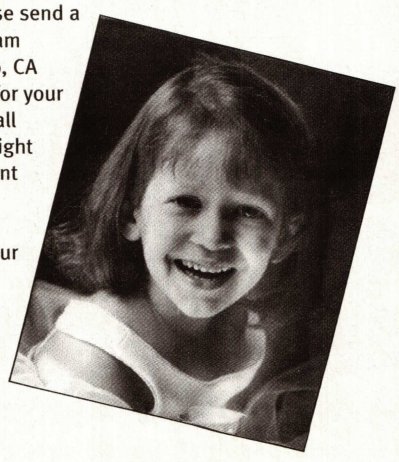
Greetings. This year I was able to travel to Finland to witness my second IFMAR Off-Road World Championship. I had a great time and overall the entire event was a great success. With the exception of just a few, I think I can safely say that everyone that attended had a great time. The venue was nice, the people were friendly, and, for the main events, the grandstands were full. Everything's perfect, right? Wrong. I asked a couple of manufacturers how many cars or how much product they sell to Finland in a year. Both of their answers were about the same, "About as much as three or four successful hobby shops or tracks in the States." The answer frightened me.

Manufacturers spend a lot, I mean a lot of money to get their drivers, spare parts, equipment, etc. to a Worlds race. But the race itself is only witnessed by a couple hundred people at the most that aren't involved in R/C to begin with. We as an industry need to find a way to get these great races in front of more spectators, hopefully to grow our sport. Because the R/C industry is a small industry, relatively speaking, we don't get the major corporate sponsorship that something like motorcross, BMX, skateboarding, or similar recreations/sports can get. There needs to be a way that we can get great races like this year's Worlds in front of more people. Earlier this year I was appointed the Promotions Director of ROAR. It's my job to figure out a way to expose ROAR and R/C racing to more people. Working within a very tight budget, I (we) need to get more exposure for racing and I'm stumped. I need your help. Tell me what you think. Give me some suggestions. E-mail me at mikev@xtremerc.com. For those of you that give me specific input on this topic I'll email you back a time and date that we can discuss things on the Hot Topic forum on Xtreme On-Line. Hope to hear from you soon.

Issue Notes:
IFMAR Off-Road Worlds: Finland was lots of fun. Everyone that made the trek halfway around the world was treated to some of the greatest racing ever. Find out all the dirt on and off the track by reading my article on this year's Worlds in Finland. The article is ten pages long and 7000 words deep (our longest article ever). Don't worry, even though it's a long article it should keep you entertained.

Triple-X Follow up: Last month I promised a follow up with actual racing experience with my new Losi Triple-X. Well thanks to a long trip to Finland and some other things I didn,t get a chance to race as much as I had planned. Look for a 2nd Take on the Triple-X next month with plenty of racing experiences. I promise.

Now to really shift gears here and go personal. Back in September of last year my five-year-old niece and goddaughter was diagnosed with a brain tumor. Surgery removed the tumor, but she needed to undergo months of grueling radiation treatment and chemotherapy. During and after the treatments, she also battled through tough physical therapy since she suffered partial paralysis from the actual surgery. Through all this hard work, pain, and effort she was a trooper. She never complained, never asked why, just went along usually with a smile on her face. Back in May of this year we got the bad news that the cancer had spread and that it would take a miracle to save her. Just days before writing this, little Devin past away. Through her whole ordeal Devin showed great courage and resilience. This issue and every issue of *Xtreme R/C Cars* is dedicated to my little Devin. My family and myself will miss her everyday. A fund has been set up in Devin's honor with 100% of the proceeds going to children's brain cancer research at Children's Hospital Los Angeles. From now until the end of the year, Team Action Publishing will donate one dollar to her fund for every subscription sold. If you'd like to make a tax-deductible donation of any amount, please send a check to the Devin Delaney Hock Foundation, C/O Team Action Publishing, 14175 Telephone Ave Ste. O, Chino, CA 91710. We will return to you a tax-deductible receipt for your donation along with a great big thanks. Sorry to get all sappy on you guys, but I figure I have this forum, I might as well use it. Also, I loved Devin dearly and I just want you guys to know about her. Devin's courage and strength taught me how important it is face life's challenges with courage, strength, and a smile on your face.



Thanks again,

Mike Velez
Publisher/Editor/Racer

100% of your donation goes directly to cancer research, plus it's tax deductible.

THE TEAM

Xtreme R/C Cars

EDITORIAL

Mike Velez	Publisher/Editor
James R. Revilla	Editor
Andrew Hock	Copy Editor
Steve Wang	Editorial Assistant

Contributing Writers: Dan Tirre, Jack Johnson, Nathan Miller, Richard Dee, Steve Wang, Dean Brown, Terrance Raymundo, R.R. Nacomi, Geno You

ART & PHOTOGRAPHY

James Revilla	Art Director
Adam Sauceda	Senior Staff Photographer
Jeffrey K. Shu	Photographer
Kaleido Graphics	Typographer

PRODUCTION

Tim Harrell	Production Director
Jeffrey K. Shu	Advertising Account Executive
Sonya Velez	Circulation Director

CHANGE OF ADDRESS

Five to seven weeks are required. Please send your old and new addresses and the mailing label from your last issue. Send to Subscription Department, *Xtreme R/C Cars*, 14175 Telephone Ave. Ste. O, Chino, CA 91710

SUBSCRIPTIONS, BACK ISSUES, HOBBY STORE SALES INFO

1.888.200.8299 e-mail: xtremerc@xtremerc.com
Our Complete Web Site: www.xtremerc.com

ADVERTISING RATES

Available upon request. Contact Advertising Department, *Xtreme R/C Cars*, 14175 Telephone Ave. Ste. O, Chino, CA 91710; 909.464.1899; fax: 909.464.1710

NATIONAL/INTERNATIONAL NEWSSTAND DISTRIBUTION

Rider Circulation Services, Inc., Stuart Bienstock, Sales Director, 3700 Eagle Rock Blvd., Los Angeles, CA 90065, 323.344.1200

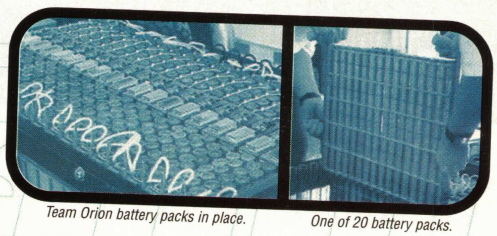
Xtreme R/C Cars is a publication of Team Action Publishing, 14175 Telephone Ave. Ste. O, Chino, CA 91710; phone: 909.464.1899; fax: 909.464.1710; e-mail: xtremerc@xtremerc.com. Subscription rates are $16.99 for 10 issues (one year), $45.99 per year for foreign airmail, $25.99 for Canada and Mexico. All rights reserved. The entire contents are copyright 1999 Team Action R/C Racing Products, and may not be reproduced in any manner in whole or in part without written permission from the publisher. Our lawyers are sharks, so don't even think about it! The views and opinions of the writers and advertisers are their own and do not necessarily reflect those of Team Action Publishing, the publisher or the editorial staff. The publisher assumes no responsibilities for advertising claims, errors and omissions. ***Xtreme R/C Cars*** is proudly produced and printed in the U.S.A. 100% recyclable. Save the planet. Race frequently. Read ***Xtreme R/C Cars***.

We occasionally use material that we believe has been placed in the public domain. Sometimes it is not possible to identify and contact the copyright holder. If you claim ownership of something we have published, we will be pleased to make the correct acknowledgement.

VISIT TEAM ORION ON THE WEB FOR THE LATEST NEWS AND PRODUCTS AT www.team-orion.com

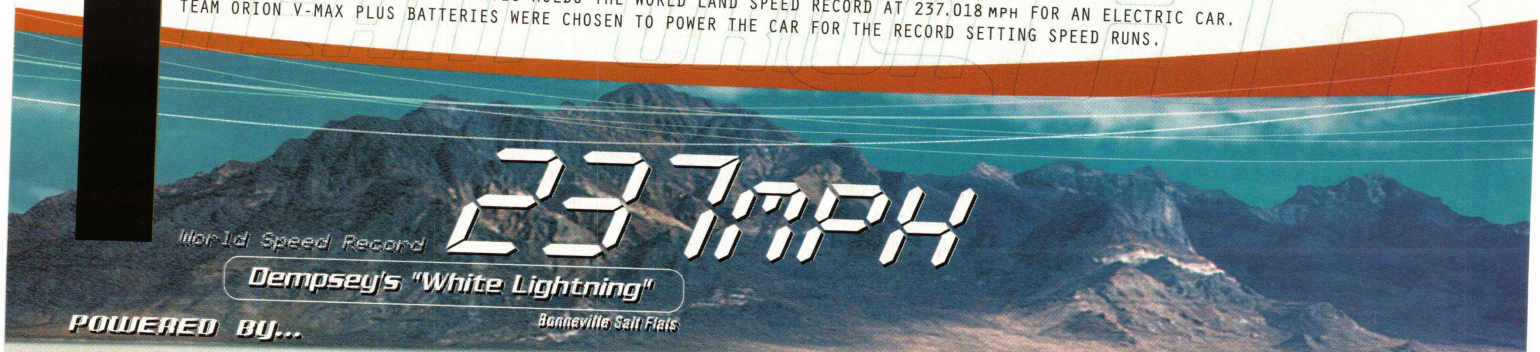
WORLDS FASTEST ELECTRIC CAR

POWERED BY TEAM ORION



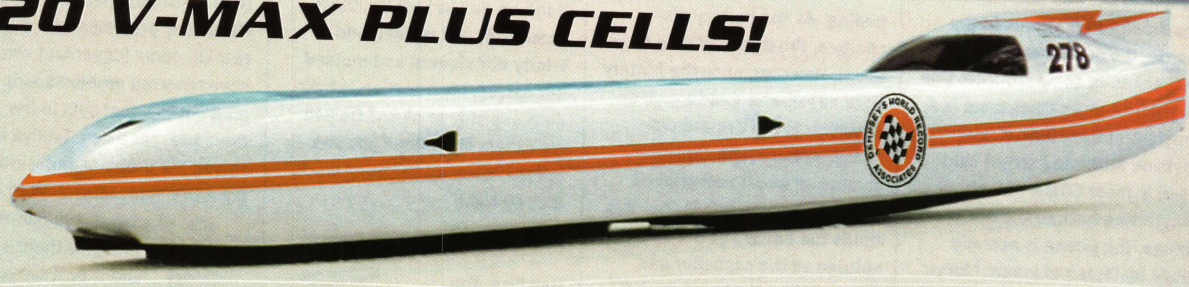
Team Orion battery packs in place. One of 20 battery packs.

DEMPSEY'S WORLD RECORD ASSOCIATES HOLDS THE WORLD LAND SPEED RECORD AT 237.018 MPH FOR AN ELECTRIC CAR. TEAM ORION V-MAX PLUS BATTERIES WERE CHOSEN TO POWER THE CAR FOR THE RECORD SETTING SPEED RUNS.



POWERED BY...

6,120 V-MAX PLUS CELLS!



Check out Dempsey's site @ www.worldrecords.net



NEW!

TOP 3000 SPORT PACKS

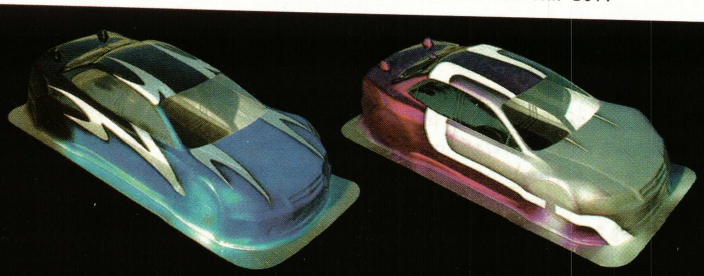
TEAM ORION BRINGS YOU THE LATEST IN BATTERY TECHNOLOGY - THE TOP 3000 SPORT PACKS. THESE "SUPER CAPACITY" NiMH (NICKEL METAL HYDRIDE) CELLS HAVE AN INCREDIBLE 150% GREATER CAPACITY THAN CURRENT RC2000 CELLS! THESE PRE-ASSEMBLED STICK PACKS COME WITH SILICONE WIRES AND A PLUG PRE-INSTALLED. THESE ARE THE HIGHEST CAPACITY STICK PACKS YOU CAN BUY!



AT2606VM3 AT2606HV3
AT2606VS3 AT2606S
AT2606VE3 AT2606M

RC 2000 V-MAX PLUS PACKS

V-MAX PLUS BATTERIES ARE MATCHED USING THE EXCLUSIVE RDS PROCESS, PROVIDING EVENLY MATCHED CELLS FOR CONSISTENT AND POWERFUL PERFORMANCE.



PAINTED BODIES BY THUNDER WESSELS

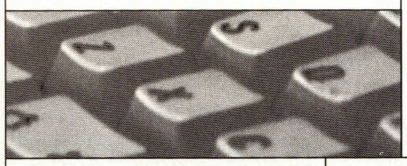
AVAILABLE FROM TEAM ORION COMES THE FIRST BREED OF PAINTED BODIES BY THUNDER WESSELS, "PAINTER OF THE STARS". EACH DESIGN IS CUSTOM PAINTED WITH A UNIQUE MIXTURE OF COLORS AND GLITTER THAT ARE DEFINITE "EYE-CATCHERS" AT THE RACE TRACKS. TO THE LEFT ARE THE FIRST 2 OF 5 DESIGNS AVAILABLE FROM TEAM ORION.

Team ORION
www.team-orion.com

Team Orion, Inc.
15311 Barranca Parkway
Irvine, CA 92618
USA
Tel: 949-864-1720
Fax: 949-864-1722

Rico Neidhart
363 Rue De Bernex
CH-1233, Bernex-Geneva
Switzerland
Tel: 41- 22-757-1528
Fax: 41-22-757-4186

Team Orion, Asia
3-25-36 Takaokanishi Hamamatsu
Shizuoka, 433-8118
Japan
Tel: 81-53-439-9969
Fax: 81-53-439-0844



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

Say What?

I just wanted to compliment you guys for putting out an awesome magazine. I bought my first issue and I'm sure it won't be the last. However, while reading your July-August issue, I noticed a brief section where you mentioned Sprint PCS and the Touchpoint PCS phone. In the article, it said that Qualcomm is the maker. In some respects this might be true as Qualcomm is a provider of the CDMA (Code Division Multiple Access) chip used in most CDMA PCS phones. So, getting back to the ABC's of things, the phone is actually made by Denso of Japan. I know all this because I work for Sprint PCS, and, yes, I do use my Touchpoint to phone-in my entries. (Actually, being that I live in Seattle, I tend to use it more to see if the race is rained out or not!)

OK. Now here is a spy shot of my own. Toward the end of the year, Sprint PCS will be releasing a version of that phone with Digital and Analog (Dual Band) capabilities. On top of that, it will have games, a calendar/scheduler, and the ability to browse web pages via Web-Clipping technology. So now that the secret is out, how about a free year subscription for my roommate and I. We are both starving college students trying to finish engineering school and the only thing that keeps us sane is your mag. PPP (Pretty Pretty Please)
Rick
rmyin@u.washington.edu

Thanks for pointing out that very important bit of information. We'll kick you down a free subscription if you get us a free year of phone service. Sound like a deal? (James just wants a new phone now that his Touchpoint will soon be "old news.")

Quick Tip Letter

I use a simple light bulb discharger. However, I often forget about the bulbs and over discharge my sport packs not good. By placing a 5.4V capacitor between the positive lead of the connector and the light bulb, I have prevented this from happening. As the battery discharges, the light will turn on as usual. However, once the battery pack has discharged to 5.4V or whatever is the desired discharge voltage, the capacitor creates an equal potential circuit. The bottom line is that this holds the battery at the same voltage as the capacitor and allows me to discharge my batteries with no worries of cell reversal and I can store my pack with the bulbs connected and they will stay at 5.4V until the next time I race or feel the need to drive. Please pick this one, I am trying to get a free subscription for myself and my roommate. We are both engineering majors at a University and thanks to this awesome hobby, we don't even have any money for a subscription. Have mercy on us and use our little secret tip.
Sincerely,
Rick
P.S. James "The Thrilla From Manilla,"- we love you man!

Thanks for the tip, Rick. Long time no write. I was just about to set you up with a free subscription when I read your P.S. What's up? How come it's always James this, James that? "You da man James," "we love you man." How come I never get any freakin' love? I'm the one who always answers all these stupid letters (no offense guys, I'm just a little upset here). I'm the one who decides on which letters to publish. You're kissing up to the wrong guy. James can't get you that free subscription you're looking for, but I can. So until you get it straight, as the Soup Nazi would say, "No Free Magazine for You!"
Mike

What Up Your Diff Sleeve?

A couple of issues ago you did a Hook-up on the Losi Double-X (Issue 4.9) and recommend Trinity diff sleeves and molded diff halves. My question is how do those stay in place? Do you glue them on? I hope you can tell me. Keep up the good work.
Rick McNabb
Columbus, OH


hook-up
Hook-Up Your Team Losi Double-X 'CR'

Hey Rick. You don't need to glue the diff sleeves into place. When using Losi XX-4 molded diff halves, the Trinity sleeves should slide right on and hold their position. I have a friend who works at a machine shop. He drilled and tapped his sleeves and diff halves and used a real shallow set screw with some thread-lock to hold them together. All of that work is really unnecessary, but I guess he'll never have to worry about losing a sleeve.

Kudos

I think that *Xtreme* magazine is awesome. You guys got me into R/C cars. I don't know much about the gas-powered R/C cars until I found your magazine. I am waiting for your September issue to come out so I can enjoy another great issue. Thank you for an extremely good magazine.
T.J. Kelly
Galt, california

Is the Juggernaut Broken?

Hi guys, great mag. Have you guys heard about any problems with the new Tamiya Juggernaut?
Jim Newstead
BC Canada

Hi Jim. Although we didn't experience any problems with our test kit, some Juggernaut owners have reported problems stripping out the gear sets in the front and rear axles. Tamiya has solved the problem and is offering a free replacement kit to anyone who owns a Juggernaut. Just give them a call and they'll set you up, 1-800-TAMIYA-A. The kit includes new gears, more bearings, reinforced pieces, etc. Check out James' "Take Two" article in this issue for more info on the upgrade.

No Accounting For Your Hobby Shop's Taste

My local hobby shop quit carrying your magazine because some a-holes didn't like the content!! You can rest assured I will sending in for a subscription to your magazine. Thanks and KEEP UP THE GREAT WORK!!!!
Jon Williams
dalosiman@aol.com

More Kudos

I just picked up a 2-year subscription to your magazine because I think it's the best magazine ever. It whoops major A$$.
Jamison Hurley

We couldn't agree more. Thanks for the subscription.

TTR

EB4

FASTEST CAR IN AMERICA!

Team Thunder Drivers:

Greg Degani
Austin Dvorak
Billy Easton
Brandon Rowland
Richard Saxton



1999 ROAR Off-Road Gas National, Champion
1999 Silver State Nitro Challenge, TQ and Champion



Omega/Picco Super Competition 21
Modified by Edoardo Picco



Fioroni and Nuova Faor Thorsens



Champion Tires & Wheels by GRP

Thunder Tiger TEAM INTERNATIONAL

Distributed Exclusively by Ace Hobby Distributors, Inc. 116 W. 19th ST, Higginsville, MO 64037 (660) 584-7121
www.acehobby.com

Brits Demand Equal Time

Hey, great magazine you guys have going. We (our club) have been reading your mag for two years now, and always find it very useful and informative. Here in South Africa, the on-road race scene is quite big, and getting more and more competitive all the time. We notice that you guys rarely test any of the British cars like the new Predator and Express. How about it? Also some in depth details (like the actual physics) on charging and discharging of NiCd's and the new NiMH's would be much appreciated! Keep up the good work ! Cheers and good racing,
Brendon CLK
brendon.vanrensburg@wtbsa.co.za

Thanks Brendon, It's good to see a reader from way down south check in. We have reviewed both Tenth Technology kits, makers of the Predator, (Issue 2.4) and Schumacher kits in the past (various issues). There hasn't been much new from the U.K. lately and also, since we're a U.S.-based magazine, we generally only review kits that are being imported and sold here in the States. Check out last month's issue, Issue 5.1 for the latest information on charging the new Panasonic Ni-MH batteries.

I Want My TC3!

Hey guys. I love *Xtreme*. It gives me the real R/C dirt I'm looking for and makes me laugh. But one thing I'm not laughing about is my TC3, or lack there of. About six months ago I put a deposit down on one at my LHS (Local Hobby Shop). And here I am, still with no car. What gives? I see pictures of the car in *Xtreme* and other magazines (which suck by the way. Sorry for looking. Don't hold it against me.), and the more pictures I see the more I want the car. It looks awesome. I've called Associated but they won't give me an exact date. Do you know when I'll get it?
Bob Anasi
Ft. Collins, CO

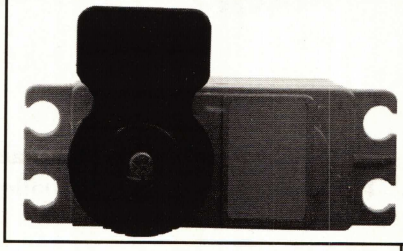
Hi Bob. We have it on good authority that by the time you read this the TC3 has been shipped and is now in hobby shops. You've probably already raced yours by now. Associated ran into a couple of unforeseen obstacles when putting the finishing touches on the TC3. These obstacles undoubtedly had a lot to do with the delay of the release. I'm glad that Associated held the release in favor of taking care of any problems rather than making their customers deal with the problems after the fact. I do understand and share your frustrations. Back in October of last year, we saw and showed off a model that looked about 90% done. You're not the only one who's had their deposits in since early this year. We're scheduled to have a complete 7+ page review of the new TC3 in next month's issue. Don't miss it.

Xtreme Gets Ethnic

Hi! I'm Phillip. I'm an avid fan of the mag. It's very nice to see a fellow "kababayan" (Tagalog for "fellow Filipino") succeed in the R/C world. For the past few months now, I've been trying to hook up with Pinoys who are into R/C. I just arrived here from the Philippines last year and I can't seem to find any race tracks. I've been hunting for the past year now. Thanks!
Phillip
North Hollywood, CA

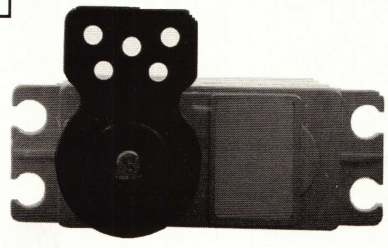
Hey Phillip, it's James. As far as racing goes, what kind of R/C car do you drive? On road? Off road? Sedan? The best place to find a race track is to visit your nearest hobby shop and ask the employees there. They should know where the locals race, or know of some customers who can point you in the right direction. Oh, and there are A LOT of tracks out here in Southern California. It just depends on how far you are willing to drive!

KIMBROUGH Products



SERVO SAVER WITH NO HOLES, DRILL YOUR OWN.
PART # 200 $5.50 EACH

PICTURED VERY CLOSE TO ACTUAL SIZE



SERVO SAVER WITH FIVE HOLES FOR 4/40 THREADED BALL ENDS.
PART # 201 $5.50 EACH

NEW MID SIZE SERVO GEAR SAVER

WITH FEATURES RACERS HAVE ASKED FOR, SUCH AS, COLORED BLACK, AND SMALL ENOUGH TO USE ON A STANDARD SIZE SERVO THAT'S MOUNTED FLAT ON THE CHASSIS, WITH ADAPTOR INSERTS THAT FIT MOST SERVOS, AND THE SPRING TENSION OF OUR LARGE SERVO SAVER .

R/C Industry Affiliate

Visit us at www.kimbrough-products.com
1322 BELL Ave. • UNIT 1-C • Tustin, CA 92780 • USA

THE DRIVING FORCE

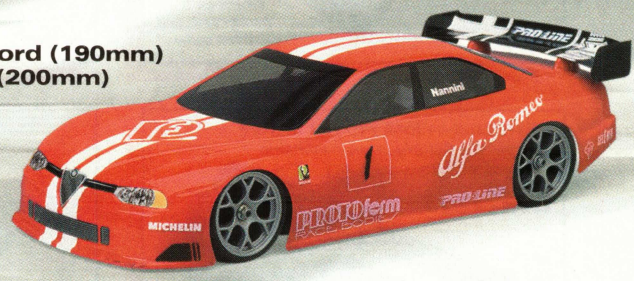
All PROTOform Race Bodies come with window masks, decals, wing and mounting hardware



1421 Honda Accord (190mm)
1425 Honda Accord (200mm)

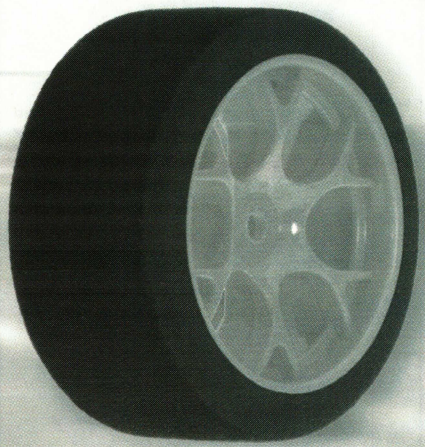


1424 Ford Focus WRC (200mm)
1426 Ford Focus WRC (190mm)



1419 Alfa Romeo 156 (190mm)

PROTOform

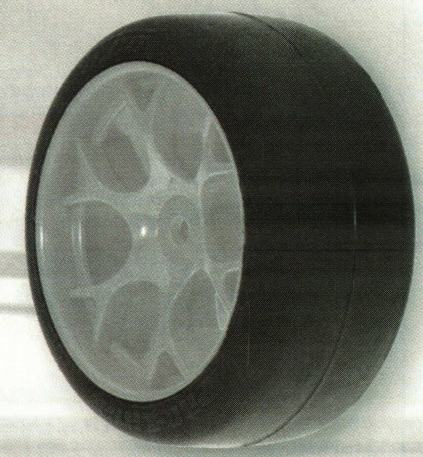


Don't settle for anything but the best when it comes to your car. You've spent the time, money, and made the effort. Now get the best quality, performance and competitive advantage you can buy. ***Pro-Line/JACO*** *1.9" foam tires for your sedan are mounted and trued on silver warlock wheels and ready to race.*

Options: *#2152 Blue (firm) 26mm; #2153 Green (medium) 26mm; #2154 Pink (med-soft) low wear 26mm; #2155 Purple (med-firm) low wear 26mm; #2156 White (medium) low wear 26mm; #2157 Red (firm) low wear 26mm.*

Also available are the long lasting, performance shattering, ***Pro-Line/JACO*** *pre-assembled sedan tires. These tires come ready to mount onto your kit, all assembly and gluing were handled at the factory. These tires last 500% (5 times) longer than standard sedan tires and cost only 50% more. Do the math, you'll be satisfied with their advanced performance.*

Options: *#2991 Yellow (soft pre-assembled sedan tires (1-pair); #2992 Green (medium) pre-assembled sedan tires (1-pair).*



PRO-LINE

JACO

P.O. Box 456 Beaumont, CA 92223 909.849.9781 fax 909.849.2968
Visit us on the web @ www.pro-lineracing.com

RACERS EDGE

Get the Edge and Crush the Competition!

Exclusively Distributed by HRP
4099 West 5415 South, Kearns Utah 84118
Dealer Inquiries Welcome 1-800-622-7223
All prices listed are suggested retail prices
Call your local hobby shop for more information.

Diff Building Board
The new Racer's Edge Diff Building Board makes diff assembly and adjustment easy!
$9.95



Works for Losi, Associated, and most sedans!

RE7030

NEW! Sure Seal Shock O-Rings
Pure silicone o-rings fits Associated, Losi, Traxxas, and most metric sedan shocks



RE1350 ***$2.25 / 8 pieces***

Tunnel Design Car Stands
Tunnel design car stands made to fit all cars including Losi and Associated models. Available in neon blue, neon green, neon orange, neon pink, smoke, and violet.



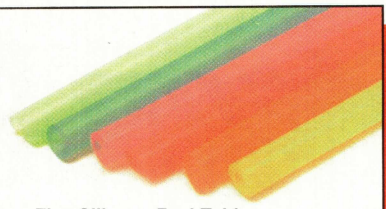
RE037B-RE037V ***$10.50 each***

NEW! Channellock Pro Nut Drivers
Our new Pro Nut Drivers are available in seven sizes!
$5.99 ea.
$24.99 set of 7



Limited Lifetime Warranty!

RE2490-RE2499



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

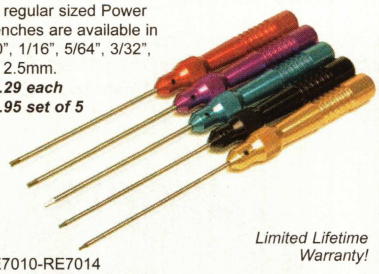
RE3500-RE3505 ***$2.00 / 2 feet***

Losi Standard and Lightweight Motor Plates
Install the same motor plate that won the Worlds on your Losi car or truck! Available in blue and purple.



RE3063B & RE3063P standard ***$10.29 standard***
RE9920B & RE9920P lightened ***$13.95 lightweight***

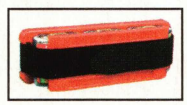
Power Wrenches
Our regular sized Power Wrenches are available in .050", 1/16", 5/64", 3/32", and 2.5mm.
$10.29 each
$44.95 set of 5



Limited Lifetime Warranty!

RE7010-RE7014

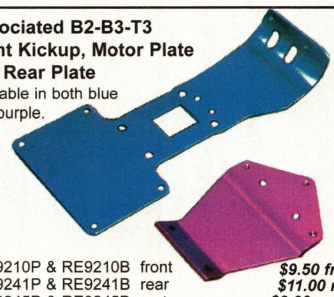
NEW! Battery Building Vise
Easiest way to solder your new battery packs. Velcro strap holds cells in place.





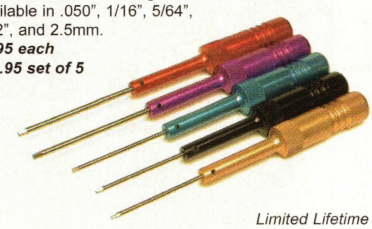
RE3011 $11.99 retail

Associated B2-B3-T3 Front Kickup, Motor Plate and Rear Plate
Available in both blue and purple.



RE9210P & RE9210B front ***$9.50 front***
RE9241P & RE9241B rear ***$11.00 rear***
RE9245P & RE9245B motor ***$8.00 motor***

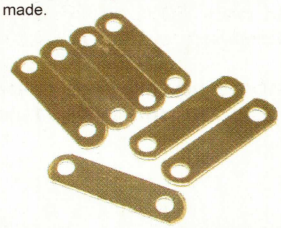
NEW! Mini Power Wrenches
Same features as our regular Power Wrenches Available in .050", 1/16", 5/64", 3/32", and 2.5mm.
$7.95 each
$36.95 set of 5



Limited Lifetime Warranty!

RE7000-RE7005

NEW Sterling Silver Battery Bars
Lowest resistance & voltage loss of any bar made.



RE5999 ***$7.99 / 7 pieces***

Losi XX-XXT Front and Rear Brace Kit
Brace yourself for this one. Racer's Edge offers high quality, lightweight, anodized aluminum tranny and front bulkhead braces. Available in blue and purple.



RE7025B & RE7025P front ***$6.25 each***
RE7026B & RE7026P rear
RE7027B & RE7027P combo ***$10.99 front and rear***

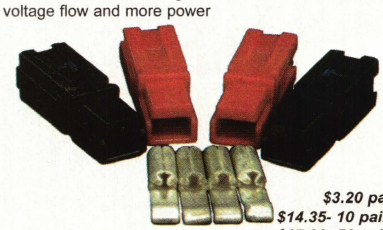
Finger Drill Bits
Finger drill bits for drilling pistons are what all of the team drivers use to get the edge. Available from #54 to #59.



$1.75 each
$8.50 set of Six

RE7054-RE7060

Sermos Power Poles
Lowers resistance for higher voltage flow and more power



$3.20 pair
$14.35- 10 pairs
$67.80- 50 pairs

REPP2-REPP50

COMING SOON

More new exciting items from Racers Edge!

ORION/PEAK TOP MOTOR UNVEILED

The Wait Is Over!



You're looking at a final production TOP motor. The TOP motor is the first ground-up new motor in years. The motor was co-developed by Peak and Team Orion. The new motor will be available in either a chrome version, available from Team Orion, or as a black can version, available from Peak. The new motor will also be sold directly to OEM motor builders who wish to use the new motor as a teardown for their own winds. So far the results of the new motor have been impressive to say the least. At the recent IFMAR World Championship, Team Orion and Peak managed to get eight TOP modifieds in the 2W and 4W A-mains combined. That's 40% of the field. Not bad for a newcomer. Since we just got final production pieces in, expect a complete X-rating on the new motor in next month's issue of *Xtreme R/C Cars*. Here's a quick overview of the new motor's features.



The Armature

The armature of the TOP motor is very standard and features a full length stack for maximum torque. Both Orion and Peak will be pattern winding and epoxy balancing their motors for a smooth power band and consistency between winds. The web area of the armature that the motor winds are wrapped around is straight to allow for a larger variety of possible motor winds.



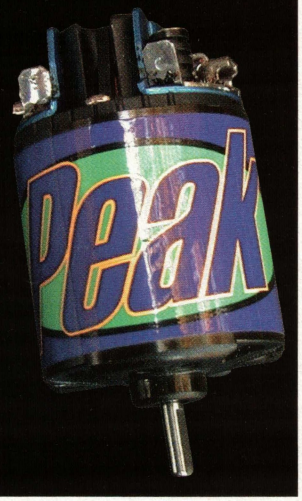
The Can

The can of the new TOP motor features enlarged cooling vents on the mounting face of the can. The vents on the mounting face are designed to work along with the vents on the sides of the can and in the endbell to promote maximum air flow through the motor and to keep it running cool. The thickness of the can rings in at 1.4mm thick. This is the thickness is as thick as anything out there. The thickness of the can helps to increase the magnetic field. Speaking of magnets, the TOP comes with the strongest, latest, heat-resistant wet-magnets available in the industry. TOP calls them their G9 magnets.

The Endbell

The endbell on the new motor has some pretty nice features. The most noticeable is the "surface mount" capacitor system. The endbell of the motor features two small channels where small surface mounted capacitors are snapped into place. The motor looks pretty clean; you don't need to worry about soldering capacitors or dealing with broken ones. A very nice feature indeed. The endbell itself is molded from a composite material and should withstand heat and impact well. The endbell features large cooling heat sinks. The Team Orion version (Chrome Modified) comes with purple anodized heat sinks to match the grey endbell, while the Peak version (Aurora) comes complete with blue anodized heatsinks to match the black endbell and can. Both versions have a clean, complete look to them. Also featured on the endbell is a brush dampening system with a longer-than-average dampener. This helps to keep brush chatter to a minimum. Another cool and unique feature to the TOP modified's endbell are the color coded brush heatsinks – red on the positive end and black on the negative. You'll be able to quickly and easily identify polarity without a magnifying glass.



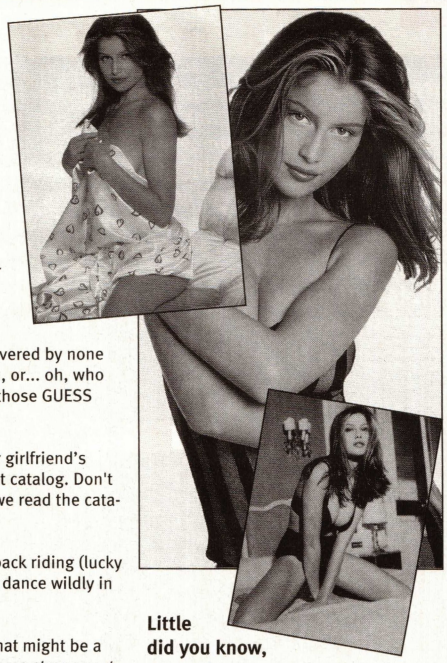


Xtreme the Mob's Favorite?

Ever heard of the hit HBO television show The Sopranos? It was nominated for a countless number of Emmies this year. Well recently we were contacted by the directors of the Sopranos, and they'd like to use the September 1999 Issue of *Xtreme* as a prop in an up coming episode. Since this show's filled with foul language, sex, and violence, we were flabbergasted at the honor to say the least. How the copy of *Xtreme* will be used we don't yet know. We're hoping a dead fish gets wrapped in a copy. Or just before some good fella gets whacked with an ice pick, he'll send away for a subscription. As soon as we know the air date of our episode, we'll let you know in print or on our website.

babe of the month

Laetitia Casta



At 5'8" with long dark-blonde hair and ocean blue eyes, 21-year-old French hottie, Laetitia Casta, has such drop-dead gorgeous looks that she might unknowingly be contributing to the global warming problem. Not that we're complaining, since being warmed up by Laetitia is all good to us.

HOW SHE WAS DISCOVERED: Laetitia was discovered at the tender (and illegal) age of 15 by a photographer who was taking pictures of women sunbathing on a beach (perv). She was sunbathing with her family,

FIRST MODELLING JOB: The above pictures were discovered by none other than Paul Marciano (George's brother, or cousin, or... oh, who cares!), and soon she signed as the main squeeze in those GUESS ads you see everywhere.

EASIEST PLACE TO FIND A PICTURE OF HER: Go to your girlfriend's house and snag her copy of the latest Victoria's Secret catalog. Don't get paranoid about your manhood if you get caught, we read the catalog too.

HOW SHE KEEPS IN SHAPE: Laetitia likes to go horseback riding (lucky horse, and occasionally likes to turn up the radio and dance wildly in front of her bedroom mirror (lucky mirror).

HOW TO SCORE WITH HER: Laetitia lives in Paris, so that might be a problem for the *Xtreme R/C* staff. Besides, if you by some strange act of God meet her, and you try to lay your lines on her and get too frisky, she'll take you down with a Judo chop or two. She's a brown belt.

Little did you know, Soccer is only the second most popular thing in France.

WHY WE PICKED HER AS BABE OF THE MONTH: This one should be self-explanatory, judging by the photos above. Also, her favorite quote is, "If there is someone knocking at my door, I will open it." Get in line, guys!

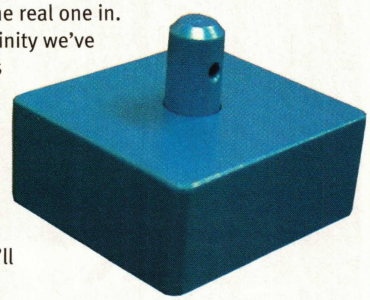


Triple-XT?

You knew it had to be in the works. Team Losi is working on a new Triple-X Truck, no name yet. The new truck will share the same basic platform as the Triple-X buggy but will feature new suspension arms, shocks, shock towers, and new suspension geometry. No word yet on exactly when the new kit will be available but we're sure it will hit the streets in time for the holiday season.

It's A Fake!!!

That's right, it's a fake. But you want it anyway. Trinity now makes a Kinwald Blue Fake Transponder. The fake transponder is the same weight and size as a real transponder. The fake transponder is perfect for setting up your car or truck for that big race. You can position the fake transponder in your car or truck so that you won't have any surprises when it's time to put the real one in. Also out of Trinity we've heard rumors of a new D4 modified motor. As soon as we get confirmation or more info we'll pass it along.



LRP Goes Hydride

LRP's Quadra charger will soon be offered in the States and will feature a way to safely charge the new Nickel Metal Hydride batteries hitting the streets. The charger is available in Europe and around the world in a 220V version, but is waiting UL approval on the 110V version for sale here in the States. The Quadra is a simple to use charger designed for AC/DC use by beginners to advanced racers. A LCD version is also in the works.



NO XTREME IN CHICAGO!!!

Say it ain't so. It ain't so. *Xtreme R/C Cars* Publisher/Editor Mike Velez and his wife Sonya are expecting their first child this October. Not being able to commit to the entire Hobby Show schedule we've decided to not exhibit at the show this year as we have in year's past. But don't fear, we'll have complete coverage of the year's biggest show complete with tons of color photos and pages of all the new products set for next year.

SUPER NITRO

HPI RACING | SUPER NITRO RS4



NITRO STAR 15FE ENGINE

Super NITRO RS4

GO BIG!

THE SUPER NITRO IS 20% BIGGER THAN OUR 1/10 NITRO RS4 KIT.

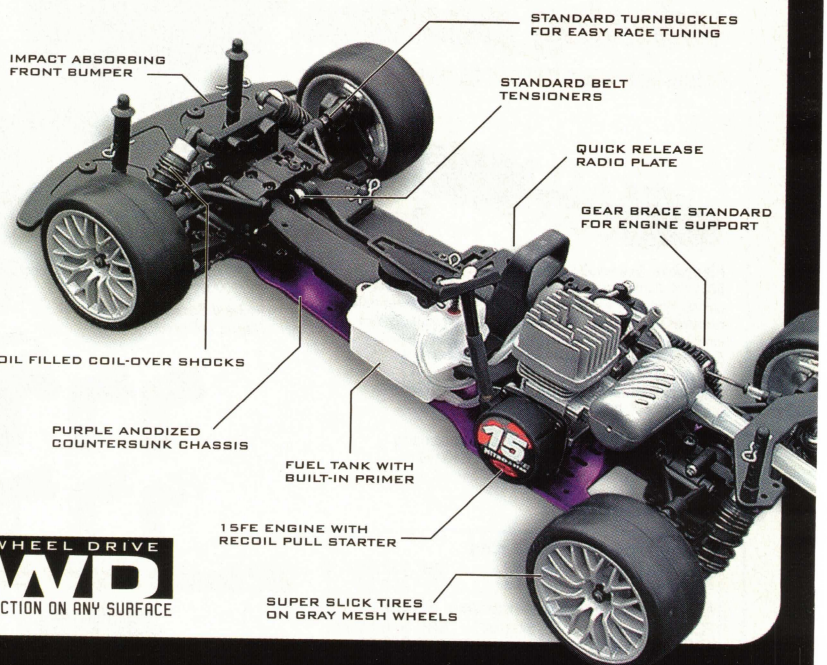
The Super Nitro RS4 kit is now available with the new **Corvette C5-R** body. The full-size 600hp Corvette C5-R debuted at the grueling 1999 Rolex 24 at Daytona. Our new kit replicates the real car with two huge decal sheets and complete painting & decal instructions. Inside, every Super Nitro RS4 kit comes with a powerful 15FE engine, turnbuckles, 22 ball bearings, Racing Slick tires and a purple anodized countersunk chassis. The larger size of the Super Nitro RS4 makes it stable at high speeds and capable of soaking up bumpy parking lot surfaces. Go big!

Other available Super Nitro RS4 kits: Dodge Viper GTS-R *(#481)*, Ford F-150 *(#482)*, Alfa Romeo 156 *(#483)* and the Lamborghini Diablo GT *(#485)*.



CORVETTE C5-R

#486 SUPER NITRO RS4 KIT WITH CORVETTE C5-R BODY



AVAILABLE SUPER NITRO RS4 OPTION PARTS

#1905 Nitro Star Pro 12R SC
#A966 Super Nitro RS4 Super Chassis 7075S
#73002 Front Shock Tower (Woven Graphite)
#73003 Rear Shock Tower (Woven Graphite)
#73004 Upper Deck (Woven Graphite)
#3035 - 3038 Mesh Wheels 57x35mm (White/Black/Chrome/Gray)
#4591 Racing Slick Belted Tires 57x35mm/2.2" (D30-40)
#4592 Racing Slick Belted Tires 57x35mm/2.2" (C10-30)
#4690 - 4692 Inner Foams 57x35mm (Medium/Firm/Low bounce)
#4695/#4697 Pro Tire Foam Strips 57x35mm/2.2" 4pcs (Firm/Soft)



2 HUGE DECAL SHEETS AND WINDOW LINES ARE INCLUDED!



COMPLETE SET OF 22 BALL BEARINGS

FOUR WHEEL DRIVE
4WD
MAXIMUM TRACTION ON ANY SURFACE

HPI RACING USA
15321 BARRANCA PARKWAY IRVINE, CALIFORNIA 92618
TEL: 949.753.1099 | FAX: 949.753.1098 | WWW.HPIRACING.COM

New Buggy From Kyosho?

Earlier this year we reported the rumor that Kyosho would be getting into the competitive off-road market with a new buggy and truck. Well it looks like that rumor has panned out. At the recent IFMAR Worlds, we spotted this new Kyosho buggy prototype. The Kyosho representative at the race was extremely tight-lipped about the car and wouldn't even let loose with a name. We managed to get these photos, but were unable at the time to get body-off shots. The new kit looks similar to an Associated B3 for the most part, but has some similarities to Losi's Triple-X. The most glaring resemblance is a large bulkhead cowling up front. We're sure a truck version of the new chassis will be seen soon. As soon as we get more information on this possibly new car we'll be sure to share it.





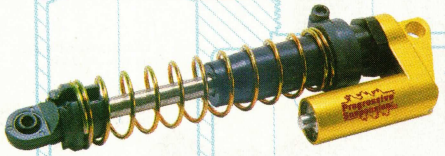
HPI Goes BMW

HPI's newest sedan body is a highly detailed 3-Series sedan. The new body features detailed body lines and contours along with a complete sticker set. Expect to see this new body in stores by the time we go to press.



"...Progressive's Piggyback Reservoirs are part of my winning package."

Richard Saxton '98 & '99 ROAR Gas National Champion.





Richard Saxton with mechanic Regan LeBlanc

Now available in six different colors!



Piggyback Reservoirs are machined from 6061-T6 aluminum, polished and anodized in six great colors. Featuring a unique closed cell foam insert for volume compensation, these reservoirs increase oil capacity and eliminate oil aeration. This results in more consistent performance during long races and fewer rebuilds.

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

EDC-2 Shock Kits complete four position damping adjustable shocks including Piggyback Reservoirs. Suggested retail. 76.50 pr.

See table for applications.

Piggyback Reservoir Kits

PBR-1001	Set of 2	SRP $32.50
PBR-1002	Set of 4	SRP $62.50

EDC-2 Piggyback Reservoir Shocks

EDC-2001	4" Associated™	SRP $76.50 pr.
EDC-2002	3.75" Associated™	SRP $76.50 pr.
EDC-2003	3.5" Associated™	SRP $76.50 pr.
EDC-2004	3" Associated™	SRP $76.50 pr.
EDC-2010	4" Losi™	SRP $76.50 pr.
EDC-2011	3.5" Losi™	SRP $76.50 pr.
EDC-2012	3" Losi™	SRP $76.50 pr.

Please indicate reservoir color choice when ordering.

EDC Reservoir Shocks & Reservoir Kits

Progressive Suspension USA

Progressive Suspension USA, Inc.,
11129 Ave. G Hesperia, CA 92345
760-948-4012 • Fax 760-948-4307
Web site: progressivesuspension.com •
E mail: info@progressivesuspension.com

Factory GT

We can't yet confirm, but have it on good word that Team Associated is working on a Factory Team Blue RC10GT similar to the one pictured on their ad that runs here in *Xtreme* and in other magazines. Over the past six years, the GT has evolved quite a bit. This new kit would be the first time the GT would get new packaging and a new moniker. The new kit would include Factory Team blue chassis, blue chassis pieces, blue inline axles, blue screws, blue titanium turnbuckles, blue manifold, blue pipe, blue ball studs, and so on. We hope to get confirmation in the next month. Check the website for that later this month. I see it now, a "Blue" Masami World edition B3. Just an idea.



how smart is your servo?

MULTIPLEX®

our digital servos have it all!

- Three times the holding power of "normal" servos!
- Faster response time!
- Less deadband!
- Tunable performance!
- Built-in failsafe position!
- Better heat range!
- Longer-lasting performance!
- No servo fade!
- Can be used with ANY brand of receiver!
- COOL color!



torque!

PROFI mc/V2
Adios, so-called "torque" servos! Multiplex has the REAL power!

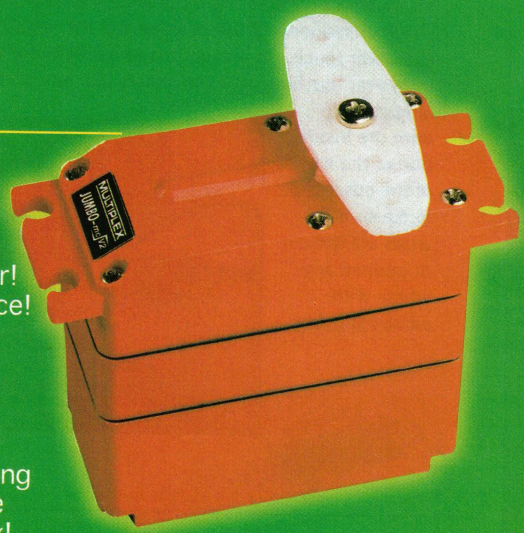
speed

PROFI mc/V2 Speed
When speed and power matter! 1/8-scale on- or off-road, PROFI Speed is FASTER on short inputs than "non-thinking" servos! Lock-to-lock: 0.09 second!



strength!

JUMBO
Forget costly twin-servo installations—use a single JUMBO to steer your 1/4- 1/5-scale car! 297 in./oz. of torque at a low price!



stopping power!

POWER mc/V2
135 in./oz. of torque to bring your speeding 1/5-scale to a screeching halt! Don't take chances with wimpy servos—go Multiplex!

dealers of the month!

- Dry Creek Hobbies, TX (903) 883-4060
- King R/C, NC (336) 983-3969
- Robin's Hobby, CA (818) 240-2093

check the specs!

	Profi 3BB*	Micro Speed	Micro mc/V2	Profi Speed	Profi mc/V2	Power	Jumbo
Speed	0.16	0.06	0.15	0.09	0.12	0.19	0.20
Torque (in./oz.)	60	42	56	62	75	135	297
Holding Power (in./oz.)	180	165	126	186	225	405	891
Price	$60.11	$99.95	$99.95	$99.95	$99.95	$135.50	$159.95

* Profi 3BB is NOT digital or programmable
All mc/V2 servos listed have two ball bearings and metal gears
Power mc/V2 and Jumbo mc/V2 can be run on six cells. All other mc/V2 servos must NOT be run on six cells

Multiplex USA, 14751 Calvert St., Van Nuys, CA 91411 (818) 785-2401; fax (818) 785-3946
Visit us on the world wide web at www.MultiplexRC.com

quick tips

If you've got a quick tip, we want it. If we use it we'll kick you down a free one year subscription to the best magazine in the world, (no not Maxim!) *Xtreme R/C Cars*. Free subscription offer to U.S. Residents only.

Send all Quick Tips to: Xtreme Quick Tips
14175 Telephone Ave, Suite "O," Chino, CA 91710
or send via e-mail to: xtremerc@xtremerc.com

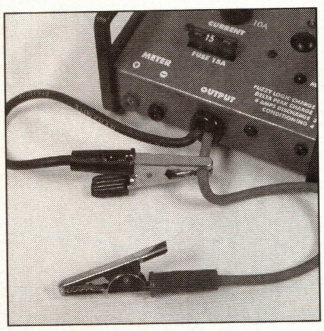
Rear Toe Check

For those of you with adjustable rear toe, here's a pretty accurate way of measuring the rear toe-in/out. Have your car perpendicular to the table and perferably have the two rear tires both touching the table. Then simply measure it like you would measure camber.



Short Stop

Many of you use alligator clips to charge your batteries, however we also know the deadly (and expensive) consequence if the positive and the negative clips ever touch. To prevent the two alligator clips from ever touching, you can simply clip one of the alligator clip onto the insulation of the wire of the other clip. Make sure the wires are not cut or opened anywhere with wires exposing.



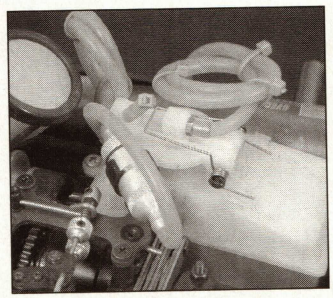
Two Nitro Racer Tips

NItro car and truck owners, here's a couple tips for you:



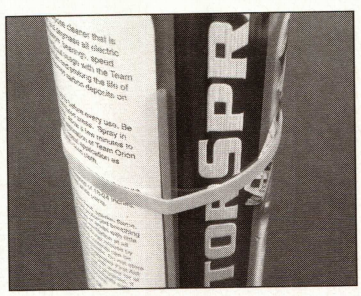
-To accurately gauge your engine's compression pick up a compression gauge like this one shown from Dynamite. A compression gauge will let you track wear, know when it's time for a rebuild, and help you should you make any modifications to your engine's internals.

-After you finish a gallon of fuel, it might be a good idea to replace the fuel lines on your nitro burner. It should also be a routine that you check your fuel lines after every race to make sure there are no leaks anywhere. An unusual amount of fuel on the chassis after running or shorter run times are two obvious signs of leaking fuel line.



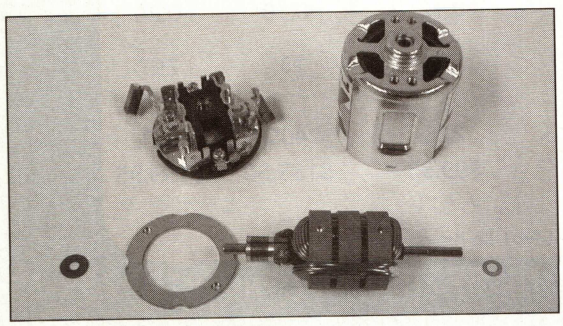
Don't Lose Your Tube

One thing that we really hate to loose and is always looking for is that little tube that comes with the motor spray. Solution: Put a tight rubber band around the can. This will hold the tube against the can, and the two will always be kept together. You can also do the same with your bottle of tire glue and a needle.



Motor Order

The next time you disassemble your modified or rebuildable stock motor for maintenance, remember how the washer and shims were lined up and in what order. Line up the washer and shims the same way on your work bench so when you're ready to reassemble your motor, the shims and washers will go back in their correct places.



Another Use for Electric Tape

This tip came from my good friend Bill Martinez from HPI Racing. Due to the ultra soft compound of the touring car tires today, sometimes they have difficulty staying in perfectly round shape. This might prevent certain sections of the tire to adhere to the rim during gluing. Here's what you can do to ensure a super bond: right after you apply the glue all around, take a strip of electrical tape the circumference of the tire and tape it around the tire. The good thing with electrical tape is that they are stretchy and can allow a tight grip around the tire.





O.S. ENGINES® NITRO TO GO™ Combo

DuraTrax® Red Alert™ FREE!

Retail Value $8.99

Buy any O.S. Buggy engine and get a quart of DuraTrax Red Alert FREE!

For a limited time, when you buy any of the following O.S. Buggy engines, you'll get more than just easy starts and dependable power. You'll also receive a fuel proven to top many other fuels in speed and rpm, and it runs cooler than its competitor.

Red Alert Fuel is included with any buggy engine– an $8.99 Retail Value– yours absolutely FREE!

- .10 FP-B
- .10 FP-BX
- .12 CV
- .12 CV-X
- .12 LD
- .12 LD-X
- .15 LD-X
- .15 CV
- .15 CV-X
- .15 RX
- .21 RG
- .21 RG (P)
- .21 RG-X (P)
- .21 RZ
- .21 SE-B
- .21 SE-R

Available only while supplies last!

Built for speed and endurance.

O.S. brings over a half-century of manufacturing expertise to these rugged buggy engines! Easy starts and consistent, dependable power delivery are among the many characteristics that make them modelers' favorites–whether for brutal competition or for running wild in your own backyard. See the difference O.S. power and performance will make in your buggy!



.12 CV

Features of O.S. Buggy Engines:

- ✔ All buggy engines available for 1/10 and 1/8 scale models.
- ✔ Include glow plugs and air cleaners (except .21 SE).
- ✔ All include heat sink and 2-year warranty.

Supplies are limited. Offer good only in the U.S. and Canada from August 1, 1999 through October 31, 1999, or while supplies last. The Free quart of Red Alert is available with all O.S. Buggy engines from participating dealers. This is not a rebate offer and is not retroactive. You will receive your Free Red Alert at the point of sale. Get complete details in store.

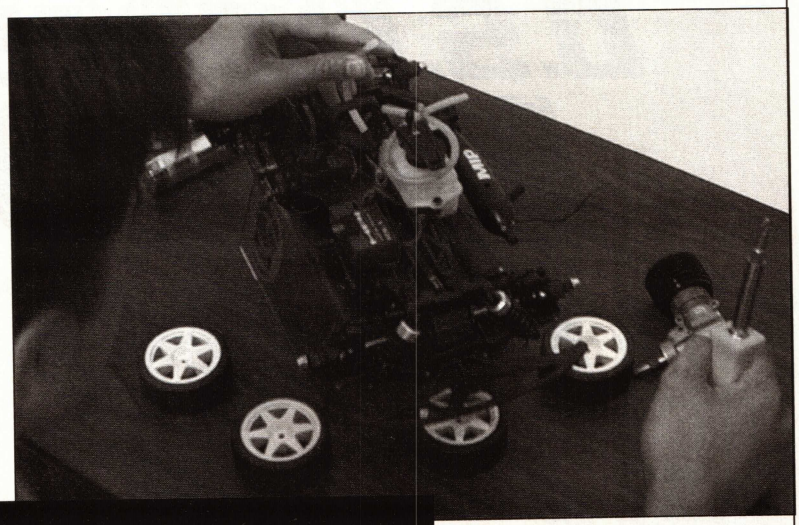
Distributed Exclusively Through
GREAT PLANES MODEL DISTRIBUTORS COMPANY
P.O. BOX CHAMPAIGN, IL 61826-9021

www.osengines.com

For the location of the dealer nearest you, call 1-800-682-8948 and mention code number 2329V.

© Copyright 1999 – 3071209

Simple Maintenance For Beginners



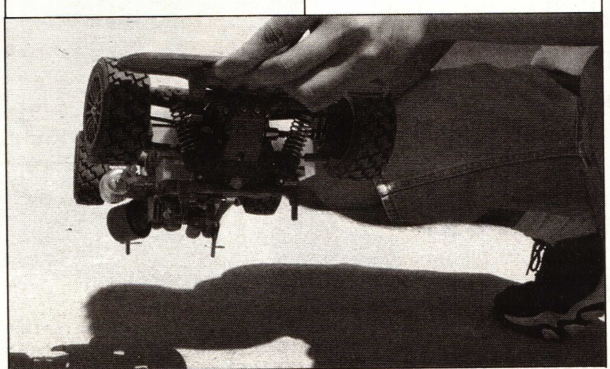
Learn how to keep it clean!

by Nathan Miller

One thing that many beginners never consider before getting into this hobby is the fact that while these little cars are fun, they also require a fair amount of work. In some cases, this problem stems from newbies who buy ready-to-run (RTR) kits. While these kits offer a fast, convenient, and complete solution to getting started out, RTRs can be confused with "toy" R/Cs that require no maintenance other than battery changes. Also, there is something lost when you don't have to build that first kit – the valuable experience of learning the ins and outs of a kit. If you build a car, you are much more familiar with how it works than just by looking casually at the pictures and illustrations in the instruction manual.

Another problem with beginners is many use the instruction manual (hopefully) to build their car, and then forget the manual exists, throw it away, or lose it. If they would hold onto and study that valuable book, they would realize that just about every manufacturer includes a helpful section in the back of the manual on how to maintain and set up their kit.

If you are one of these individuals, here's tip numero uno for this article: get another manual. I don't care how, if you order one or download one from the Internet, get one, and make a copy of it for safe keeping. You'll thank me for this when it comes time to get replacement parts. You're much more likely to get the right part at the hobby shop if you know the part's number, instead of asking for a "couple of those little ball thingees." Asking for parts like this may not give the clerk enough info to get you what you need, and will almost definitely get you an eye-roll.



The first step to cleaning any R/C vehicle is to remove the body, turn the chassis upside down, and shake out all the dirt and pebbles out. If you didn't install any electronic component securely, it will ALSO fall out!

Regular Maintenance

These are the little things that should be done after every time you have your car out. I run at least one of my cars daily, and I practice all of these steps religiously. Trust me, a little work after every run is easier than a lot of work later.

De-debris

First, pull the body off. Shake out any loose debris that might be in the chassis. Use a large paintbrush (the kind you would use to paint your house) to dust the crud off the car. Compressed air works well for this, too. If the car is really filthy, carefully wipe everything off with a damp, but not dripping wet, cloth. This also applies to the body.

Clean Shoes

Time to clean the tires. If you run an off-roader, clean the treads with an old toothbrush or wire brush, using a little soapy water. Don't submerge the tires, though, because the foam inserts will take days to dry out. Give the tires a shot of traction compound, like those offered by Associated and Trinity, and put them in a resealable plastic bag. This will keep them sticky.

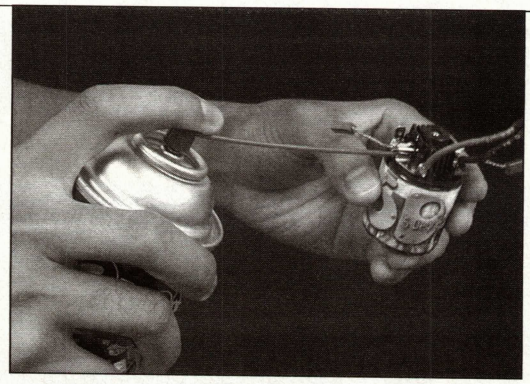
Touring car drivers have it easy when it comes to tire care. Trinity offers a complete cleaning/conditioning system especially for sticky sedan rubber that is great for keeping tires clean and sticky. Regular bearing oil is a good substitute for cleaning tires. Just wipe 'em with the the some oil on a towel and then clean them off with another clean towel. As with the off road tires, spray your sedan tires with conditioner and seal them up.

Foam tires are the easiest of all. Simply clean them with a little traction compound (available at your local hobby shop) and seal them in a bag. Put a little traction compound in the bag to help keep the foams fresh.

Oil Change

Time to take care of your power plant. If you run an electric motor, pull it out of the car. Remove the brushes form their hoods and inspect them first. If they are seriously damaged – broken or cracked – this will be obvious. Spray them with some motor cleaner and inspect the end of the

brush that makes contact with the commutator. If the brushes have a blue tint to them, they have been overheated and will need to be replaced. (This is also a good sign to drop your pinion gear a few teeth.) Next, flush the motor with motor cleaner. Spray until all the gunk is gone and the spray coming out of the motor is clean.



What good is a high-performance chassis without a clean motor? Motor spray does wonders for getting all of the gunk from inside the motor can out. The result is a clean, high-performance motor can!

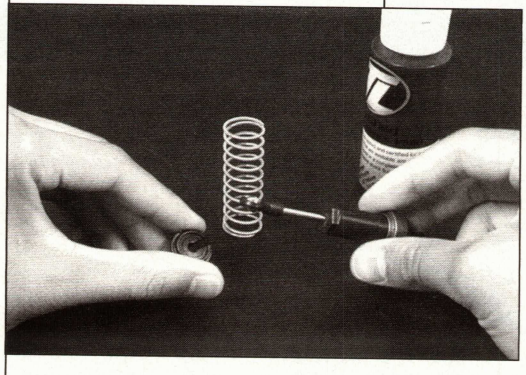
Grab the motor's shaft (stop laughing) and give it a spin; it should spin freely if everything is clean. Also try to wiggle the shaft around, especially if your motor uses bushings. If there is too much slop, then the bushings are shot. Time for a new motor, or a new can if you run rebuildables. Look into the endbell of the motor at the comm, it should be shiny. If it is scored or pitted, it's time to either replace the motor, or give it a few passes on a motor lathe. Odds are your local hobby shop has one, and if they don't one of your R/C buddies might. A trip to the lathe might be able to save the motor's performance, if the pitting isn't too severe. If it is...you guessed it, time to open the wallet and grab a new one.

Many RTR nitro-powered kits are available, and these little fire breathers have their own regimen. To start, make sure ALL the fuel is out of the motor, tank, and lines. This is vital, as nitro fuel draws moisture, which causes rust, which in turn can kill a nitro mill. Next, remove the glow plug and air cleaner. Open the throttle, and place a few drops of an after run oil down the carb and glow plug hole. Turn the motor over by hand to get these drops to all parts of the engines. If you can't find after run oil, many people I've talked to swear by Marvel Mystery Oil, and this is readily available at any hardware store. Clean and replace the air cleaner and the glow plug, and make sure all the lines are sealed against moisture.

Inspector 12

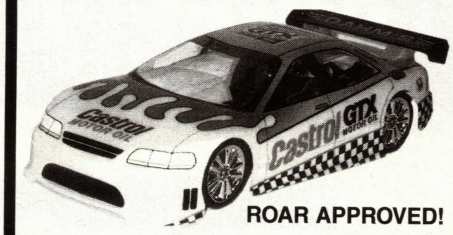
Now the chassis and suspension. Look for the obvious things first, like broken or cracked suspension parts, bulkheads, bent tie rods and shock shafts, and loose screws. Bent tie rods, can be straightened, but this will weaken them. Replace them with titanium tie rods if you can. Yeah, they cost more now, but are stronger than stock steel, and most are guaranteed for life. Work the suspension. It should move freely, but not sloppily. If the suspension is sloppy, Trinity makes a shim kit that will help tighten things up, but eventually these parts will have to be replaced. If the suspension feels too tight, you may have a bent hinge pin.

Pay attention to your shocks. If they are leaking, it's time for a rebuild. Give the steering a good look over. Worn ball studs and ball cups can lead to sloppy handling. These are parts that will also occasionally need to be swapped out for new components. If you can swing titanium ball studs, grab them. Expensive? Yes, but like the tie rods, they're almost impossible to wear out or destroy. At the very least, I highly recommend RPM's molded ball cups, especially



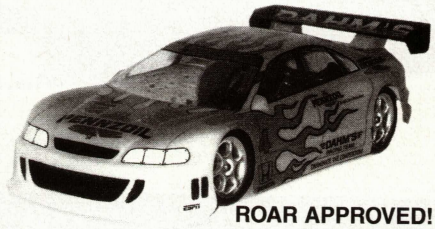
Checking shocks for leaks is as easy as taking them off the vehicle and inspecting them. Look for early signs of leakage, such as dirt collecting around the shaft area or the top cap.

DAHM'S
RACING BODIES



ROAR APPROVED!

NEW! ACCORD HDF SEDAN (190MM)
Fits Associated, Losi, HPI & Tamiya. D308



ROAR APPROVED!

NEW! ACCORD HDF SEDAN (200MM)
Fits 200MM Cars Like HPI Nitro RS4. D283

NEW! ACCORD HDF SEDAN (230MM)
Fits 230MM Cars Gas Cars- Serpent, Pico D282



SPITFIRE STD™ And Over 20 Other Dahm's Truck Bodies fit Tamiya Wild Dagger. D225 Light .030 Lexan, D226 Strong .040 Lexan



NEW! SLAMMER MGT™ Fits RC10GT & HPI RS4 MT D276 Light & D277 Strong

NEW! SLAMMER XT™ Fits Team Losi NXT & GTX. D288 Light & D289 Strong



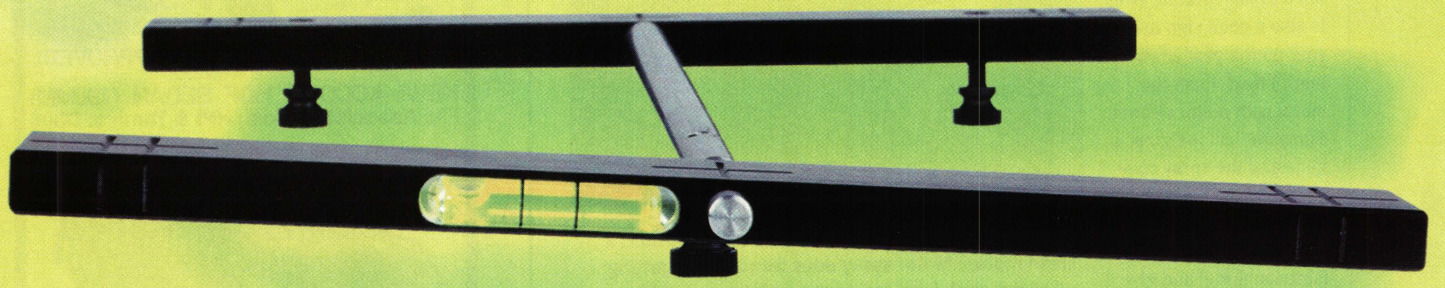
NEW! WILDFIRE™ Fits Kyosho MP6
High Performance 8th Scale Dune Buggy Body
D290 Light .030 Lexan - D291 Strong Lexan -
D292 Strong .040 GE Lexan With Extreme Wing

CALL FOR NEW 1999 FREE CATALOG!!!

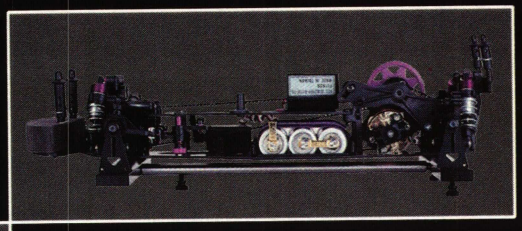
DAHM'S RACING BODIES, DEPT. X
P.O. BOX 360, COTATI, CALIFORNIA 94931 USA
PHONE: 707-792-1316 FAX: 707-792-0137

www.dahms-intl.com

MIP Tweak Station™

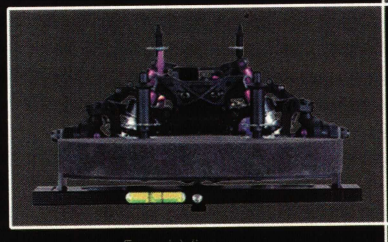


- MIP has developed the ultimate tool for setting the chassis tweak on 1/10th scale vehicles. The Tweak Station™ is incredibly accurate, easy to use, compact, and affordable.



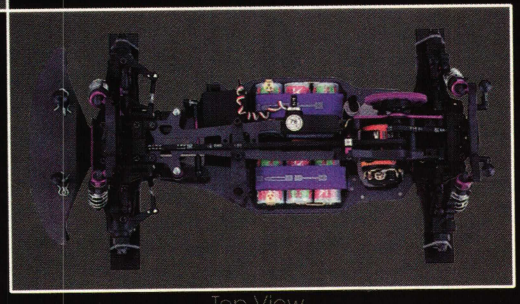
Side View

- #9020 MIP Tweak Station™



Front View

- Super sensitive leveling vial for precise suspension tuning.
- Completely adjustable, simple to level out on any flat surface.
- Precision manufactured of the highest quality alloy materials.
- Flat surfaces are precision ground to ensure accuracy.



Top View

MIP Thorp Hex Drivers:
The world famous MIP Thorp Hex Driver wrenches are the best the R/C industry has ever seen.



# 9000	.050 Hex Driver	# 9006	1/8" Hex Driver
9001	1/16" Hex Driver	9007	1.5mm Hex Driver
9002	5/64" Hex Driver	9008	2.0mm Hex Driver
9003	3/32" Hex Driver	9009	2.5mm Hex Driver
9004	3/32" Ball End Hex Driver	9010	2.5mm Ball End Hex Driver
9005	7/64" Hex Driver	9011	3.0mm Hex Driver

MIP
MIP
MIP

Race With US

www.miponline.com

Moore's Ideal Products • 830 W. Golden Grove Way • Covina, CA 91722 • 626.339.9008

©1999MIP





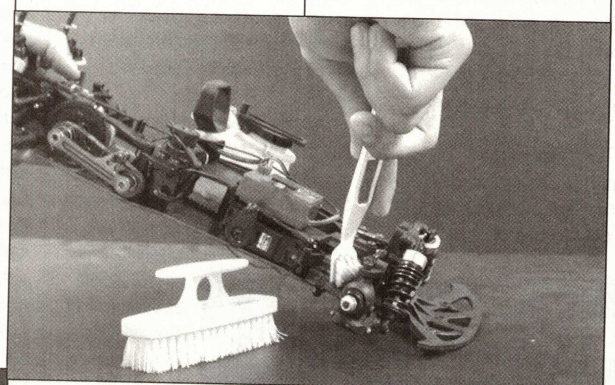
The beginning of the end is when you throw away your instruction manuals. Always keep them in a safe place; you never know when you'll forget how to rebuild the tranny. It is also the best reference for any part numbers you might need.

to off-roaders. They are very tough, and are available for just about every make of car out there.

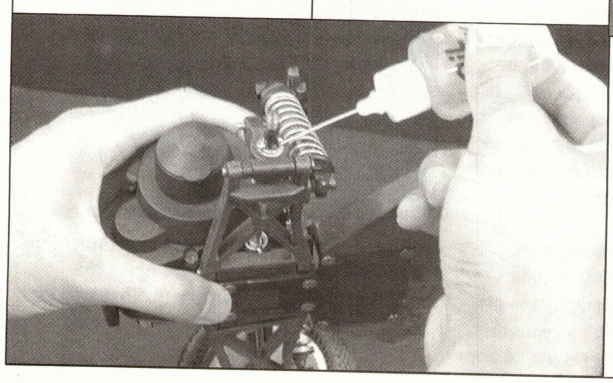
Shhhhh, Did You Hear That?

The drive train. There are a wide variety out there, from belt drives to gearboxes. With such diversity, I can only give some general tips. Follow the instructions to the letter when it comes to building the drive train properly. Take no shortcuts. Listening will tell you a lot about the drive train's health. If you hear anything unusual (grinding, whining, etc.), stop the car immediately and look for damage. It is possible to improve the gear diff's performance by packing the diff with a stiff grease, such as Lithium-based grease. I know this deviates from most instructions, but this secret has been around for years, and it really helps. Keep spare parts around. A tranny or belt can go bad suddenly, even with proper care. For direct drive cars, keep a lot of diff rings and balls handy, as these parts are exposed to wear-causing dust and grime. Last, don't forget to check the diff and clutch settings. These can change as parts break in and wear.

This little steps may seem like a lot, but over time they will become habit if you practice them regularly. More in-depth maintenance is necessary, though. Every once in a while, you should give your car a complete tear down. This will depend on how often you run your car, and on what kind of environment you run it. Personally, my carpet oval cars are torn down at the mid point of the season, and at the end. My bashers that get run constantly get this treatment once a month, or sooner. While the car is completely torn down, inspect and clean everything, including the electronics. They get dirty, too! Check for frayed wires, worn connectors, and cracked casings. Use common sense and practice good maintenance to keep your ride running its best!



Brushes of all shapes and sizes are good to have. Most of the time a quick swipe with a brush will remove any dust that finds its way into various components of your car.



Friction is the enemy of critical components such as gears, shocks, axles, etc. Whenever you clean your chassis, always check if these parts are well lubricated. If not, a shot of diff grease or bearing oil will ensure trouble-free operation.

Don't be lazy and douse your R/C car with motor spray; it just gets messy.



Tuning Your Car's Suspension with Pistons

by Mike Velez

Take the time and get to the finish line first.

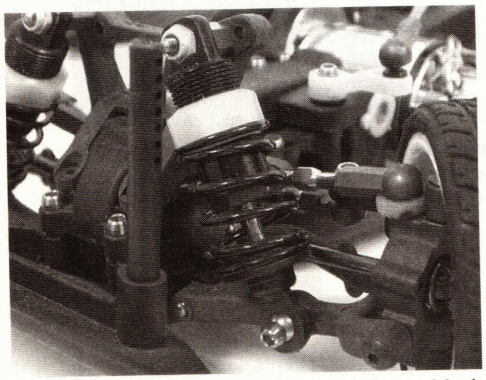
When it comes to R/C cars for the most part tinkering with different setups and trying new ideas out is pretty fun. It's like a little science project. You see what you need from your car. You have an idea on what to change to achieve the desired outcome. You make that change to your car's setup. Go out onto the track and see if your adjustment work. All fun an good right? Well one tuning item on most cars that I typically hate to adjust is shock pistons. Changing pistons is a messy, oily situation I try to avoid at all costs. But sometimes making an piston adjustment is the only way to achieve your performance goal. With this article I'll try to make your life a little easier the next time a piston adjustment is your prescription for higher performance.

FIRST THINGS FIRST

What makes one piston different from another? Surface area. It's all about the surface area. A piston with a greater surface area will move slower when it's in a shock than one with less surface area. With shock pistons surface area is variable by the number and or size of holes a piston contains. The larger or greater number of holes the less surface area. The smaller or fewer number of holes the more surface area.

When making adjustments to your car's suspension via different pistons the most noticeable area of change will be how the car's suspension reacts to quick, sharp movements – such as landing off a jump or a large rut. When a shock is compressed the term "pack" can be used to describe the movement. Pack is a term used to describe how much resistance a shock has when it experiences the sharp quick movements described above.

Another area of change that will be affected when pistons are changed is "static damping." Static damping can be described as the resistance a shock has when it is compressed and extended slowly. This will alter how the car feels when you're going through turns. When it comes to tuning pistons for a sedan, this is the area of performance any changes will effect. For the most part static damping is changed by changing the shock oil viscosity and is altered only slightly when changing a shocks pistons.



With touring cars piston adjustment is less critical than with an off-road car. Changing shock oil weight will have more of a performance effect.

GETTING STARTED

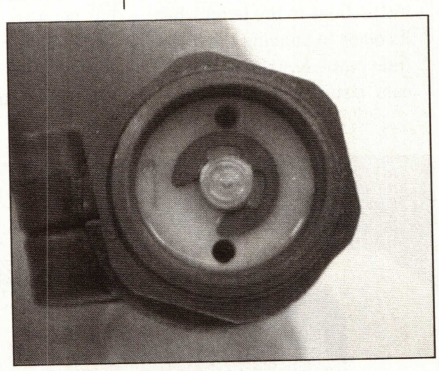
When it comes to changing any area of your car's suspension it's important to always start at your car's instruction manual's basic setup. Whether it's off-road or on-road, car manufacturers go to great lengths to come up with a setup that is overall neutral and will work on most track types.

Off-Road

If the track that you're running on is smoother than most track what is described in the car's manual try a smaller holed piston. This change will make give the car less chassis roll on those sharp turns and give you enough pack when it comes time to take whatever jumps are on the track. If the track is heavily rutted or has more large jumps than a typical track or one described in your car's manual try a piston with larger holes. You'll loose some performance on sharp turns thanks to more chassis roll, but your car or truck's suspension will be able to react quicker to the ruts and jumps.

Touring Cars

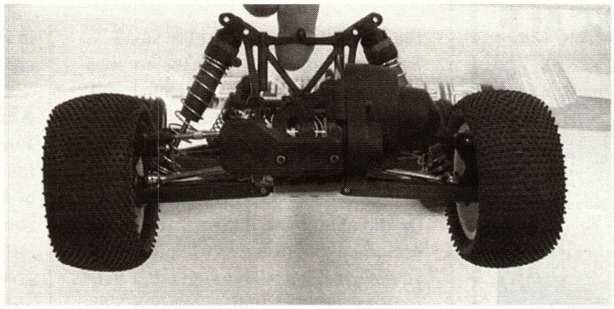
When it comes to changing the pistons on your touring car you're hopefully not tuning for any big jumps. Although you maybe making adjustments for bumpy track sections or track in general. If this is the case a shock piston change maybe in order. Otherwise the best shock option to change would be the oil. If you're in fact tuning for a rough track go with a piston with more or larger holes than the pistons suggested in the instruction manual. This change will make the car more controllable over the bumpy stuff. The down side will be slightly more body roll in the turns. If the track is very smooth and you can get a way with it give smaller holed pistons a try. The car will feel tighter around the corners and more like a pan car. But, remember, changing the pistons has less of an effect on static damping than changing the oil for instance. For Touring Cars most shock adjustments should be made by changing the oil viscosity. That's a whole nother article.



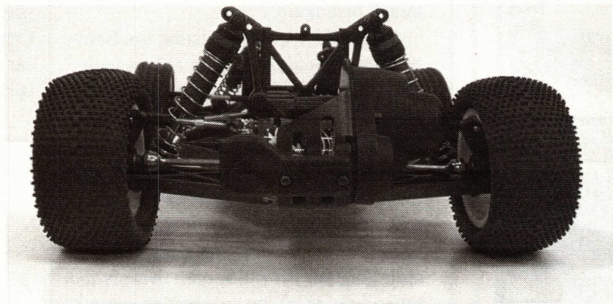
When replacing pistons with size indication numbers make sure that you place the marking side of the piston up. That way you can identify which pistons are installed

WHAT TO CHANGE AND WHEN

You've run your car and want to try a different piston. Before you go off and start making a ton of adjustments, know what to change. Don't change the oil and the pistons at the same time, change only the shock pistons. Use the same oil as you had before. If you make a piston change, run it on the track and feel that you made a move in the right direction then try changing just the oil weight with the new piston to get the desired effect. When making piston changes to an off-road car change only the front or rear at a time. It will take longer, but often times the front and rear suspensions will not use the same pistons or require the same amount of pack or static damping. With a Touring car you can change both front and rear at the same time, but be prepared to back track in search of that killer setup.



Bench test your off-road car by lifting each end 4-6 inches above your work table and dropping it.



When the rear of the car is dropped it should drop slightly below ride height, then rise to ride height.

BEFORE YOU HIT THE TRACK

Off-Road

Once you're shock pistons have been changed you need to test things out first. Clear an area on your work bench. With the front end of the car on the table lift the rear 4-6 inches high. Drop the rear end. You should notice the chassis dip slightly past the desired ride height and then return. If the chassis ends up hitting the table you need to go with a slightly heavier oil or split the difference with the piston change you just made. If the opposite happens, the chassis doesn't go past the ride height and return you might have too much pack. In this case go with either a slightly lighter oil or split the difference with the piston change you just made. Once you're happy with the rear end off your car perform the same procedure described above to the front of the car or truck. Make the same adjustments if necessary. Once you're happy with the front and rear ends independently it's time to drop the whole car from 4 to 6 inches. Watch the vehicle land from table level. The entire suspension should compress at very close to the same rate on both the front and rear suspension. If the rear compresses and returns faster than the front, and seems to be slightly springier, you should change to a piston with a smaller hole in the rear. If the front suspension compresses and returns faster than the rear, then the front piston should be changed with a smaller hole piston.

Touring Cars

With a touring car you should perform the same process described above for off-road cars but only from a height of 1 inch. This whole process is much less critical with an touring car than it is with an off-road car or truck. If you see that you need to make a change try the car on the track first before making the change. The most important bench test to perform on your touring car after making a piston or oil change is to re-tweak the chassis (Issue 3.5).

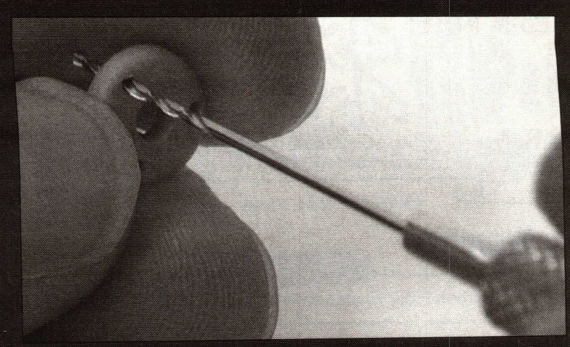
Once last note before you get your get on the track. Make a record of any changes you made to the car's suspension. Whether it was a piston change or an oil change know what you did that way you'll have a quick reference of where you're starting from the next time you need to make a change.

ON THE TRACK

All this book work is all well and good, but if it doesn't work on the track you've still got a ways to go. Now that you've made your changes try it out. For your off-roader pay attention to how

Tuning Pistons: Drilling

When you see the setup for some guy who one a big race nine times out of ten you'll see notes on the pistons. The pistons might have been drilled with a #57 piston on one hole or two and so on. Using a small drill bit you can tune a piston to those in between sizes you can't buy off the shelf. Racer's Edge sells a complete drill bit kit for $8.50. Generally stick with the off the shelf piston sizes before you start drilling. If you want to try an piston size in between what you can buy then whip out the bits.



Making Changes

You've run your car, know what you need, and have decided to go ahead and make the change to your car's suspension. Now what do you do?

Step One
Remove your shocks from your car.

Step Two
Open your shocks and empty out the shock oil.

Step Three
Remove the piston from the shock shaft. Sometimes this can be done without completely disassembling the shock.

Step Four
Replace the original piston with the new one you're trying out. If the piston has some type of marking indicating it's damping value make sure that marking is face upwards so that you can immediately see it when you open the shocks in the future. (I.e. Associated shocks have a number scribed onto one side of their pistons. This number should always be facing the shock cap.)

Step Five
Fill and bleed the shocks (Issue 5.0) with the same oil you used before.

Step Six
Replace the shocks onto your car's chassis.

NEW ERA MODELS

http://www.NEMScaleCars.com



1/4 SCALE



Made In The USA

Inflatable Tires: Front 2.0" wide by 8.5" high
Rear 3.5" wide by 9.0" high

Introductory Price $995.00





1/10th "CLOD" Chrome Moly Steel Welded Chassis. Proper 4 Link susp., Steering Up Front on Gear Case. Chassis starting at $119.95

1/4 SCALE FEATURES: Heli arc welded 4130 Chrome Moly Tubular Steel Frame Camlock Disc Brakes Ventilated * Coil over Suspension w/H.D. New Era Shocks *Precision Ball Bearings * 23cc to 80cc Gas Powered Engines Recoil Starter, Centrifugal Clutch * Spun Aluminum or Nylon Wheels

Other Models Available

Grand National (Classic & Speedway versions), ½ Scale Go-Kart, Sports Cars, Super Modified, Indy Car, '32 Ford Hot Rod, Monster Truck, 1/5 Sedans Off-Road / Sport Truck, Drag Funny Car, Top Fuel Dragster & Pro Stock

P.O. Box 7378, Nashua, NH 03060-7378 (603) 888-4453

FAX 603-888-8645 Dealer Inquiries Invited

learn how-to

the rear suspension reacts to small holes and ruts. If the suspension doesn't seem to be compressing much you have too much pack. If this is the case replace the rear pistons with ones using smaller holes. Or enlarge one hole at a time using a finger drill (see sidebar). On the other hand if the car seems to be bottoming out over every jump and rut you might not have enough pack. In this case you need to change to pistons with smaller or fewer openings. If you make any changes be sure to perform the bench test again.

When it comes to adjusting the front end you should be looking at how your car handles the jumps. If the car or truck jumps with the nose down the front shocks probably don't have enough pack, go with smaller holed pistons. If the car jumps nose up one of two things may be happening: 1) the chassis could be bottoming out and springing up _ in which case there is too little pack; or, 2) the suspension arms aren't moving much, causing the front end to pop up – in which case there is too much pack in the front suspension. Which ever the case, increase or decrease the pack like I've showed you so far. Again, if you make any changes to the front perform the bench test again.

KEEP AT IT

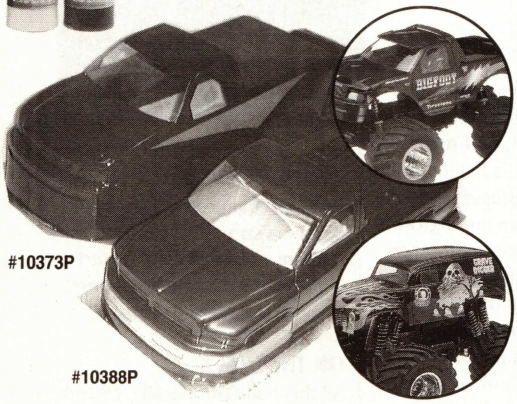
Tuning your car's suspension with pistons is not easy. It requires lots of time and effort. You probably won't get what you're looking for with the first change. But keep at it. Sometimes pistons can give you the effect that no other tuning aid on your car can deliver. As you have more experience with pistons and write down changes and effects in a journal you'll get a better understanding of things and find tuning this area of your car much easier as time goes by. Good Luck.

America's Choice!

PARMA PSE

Painted Truck Bodies...





#10373P

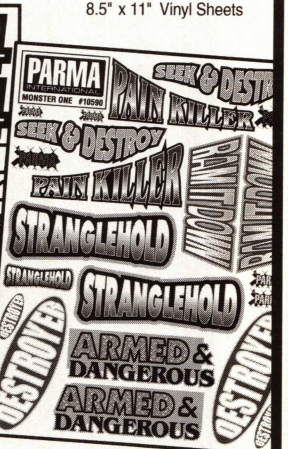
#10388P



#10591

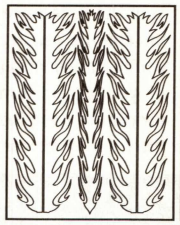


#10664 6" x 8" Sheets

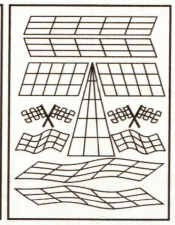


#10590

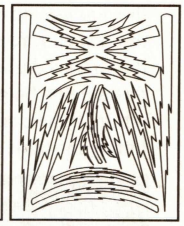
New 1/10 Paint Masks



#10667



#10797



#10801

8.5" x 11" Vinyl Sheets

New Decals

Looks Real!

#10800 Carbon Fiber Vinyl Decal - 8.5" x 11"

Send $2 for Catalog.

#10199P 1/10 Bigfoot® F-150 Painted Body & Decal - 8"/204mm Wide

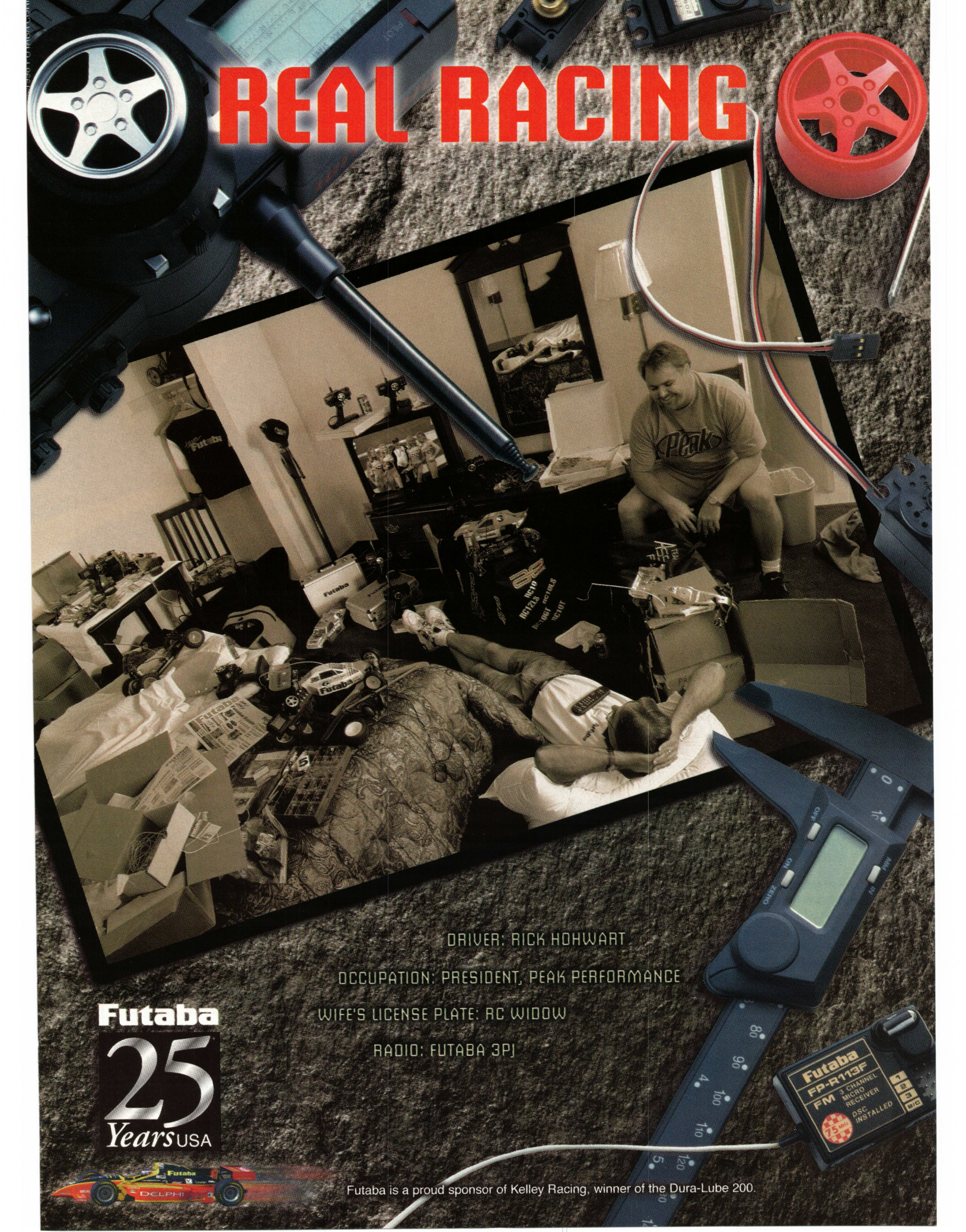
#10310P 1/10 Grave Digger® Painted Body & Decal - 6.75"/172mm Wide

#10373P 1/10 '97 Ford F-150 Body Custom Painted - Direct Fit for Traxxas Stampede

#10388P 1/10 '94 Dodge Ram 2 Tone Painted Body - 7.25"/185mm Wide

Parma International, Inc. *13927 Progress Parkway • North Royalton, Ohio 44133 440 237-8650 8-4:30 EST*

www.parmapse.com


REAL RACING
DRIVER: RICK HOHWART
OCCUPATION: PRESIDENT, PEAK PERFORMANCE
WIFE'S LICENSE PLATE: RC WIDOW
RADIO: FUTABA 3PJ
Futaba
25 Years USA
Futaba
FP-R113F
FM 3 CHANNEL MICRO RECEIVER
DSC INSTALLED
Futaba is a proud sponsor of Kelley Racing, winner of the Dura-Lube 200.

Tamiya Impreza TGX WRC '99

Home is both the street and the Outback

by Steve Wang



The term "Go Big" might seem like a new concept to some when it comes to sedans, but the truth is big sedans have been around for years. Tamiya was one of the first, if not THE first pioneer in the idea of "bigger is better" with the TGX line of super-sized cars. Over the years, the TGX chassis has proven time and time again its reliability and performance. Tamiya has also fitted a number of beautiful bodies on the beast through out the years, everything from DTM touring cars to LeMans super cars. The latest outfit to find its way on the TGX: The Subaru Impreza WRC '99 rally car.

FEATURES

Chassis

The TGX Subaru Impreza uses a beefy 2.5mm thick aluminum chassis which should withstand quite a bit of abuse. Right under the suspension arm at each end, the chassis is actually angled downward to prevent the dog-bones from falling out due to too much down travel from the suspension. The TGX chassis does not have an upper plate, instead using an aluminum rod down the center of the chassis for strength. This in combination with the thick aluminum chassis provides a very solid structure with minimal flex.

The radio tray (or what Tamiya calls the mechanism box) is also connected to the front and rear bulkheads as well as the main chassis for even more strength. The unique thing about the mechanism box is that all of your electronics are in or mounted on it. This includes not just the

VITAL INFO

Tamiya America, Inc.
2 Orion
Aliso Viejo, CA 92656
1.800.TAMIYA-A
www.tamiya.com

THE HITS

- Very user friendly engine.
- Easy to assemble and perfect fitting parts.
- Highly-detailed body.
- It's loud and it's big, what more can you possibly want?

THE MISSES

- The kit's air filter falls off easily.
- Rock hard kit tires.
- It's loud...only a miss if you have non-R/C appreciative neighbors.

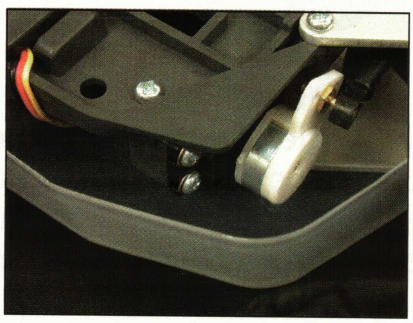
THE LAST WORD

If you're looking for some super sized fun, take a good look at the Tamiya TGX Mk.1 Subaru Impreza WRC '99. It's large size and dual off and on-road abilities should be loads of fun.

We first tested Tamiya's TGX Opel Calibra kit in Issue 1.7.

receiver and the receiver battery but the steering and throttle servo as well. The best part is you can easily remove the mechanism box out of the car and service your electronics.

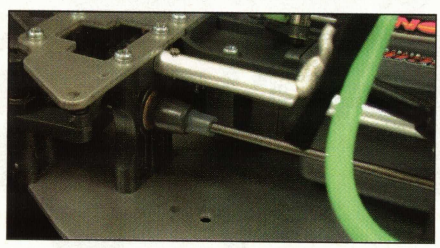
The layout of the TGX's chassis puts the engine and fuel tank at one side and the mechanism box at the other, which should work out to be pretty well balanced. At each end of the car are huge molded bumpers that are designed to absorb some major punishment. The rear bumper also doubles as an outlet for the exhaust tube.



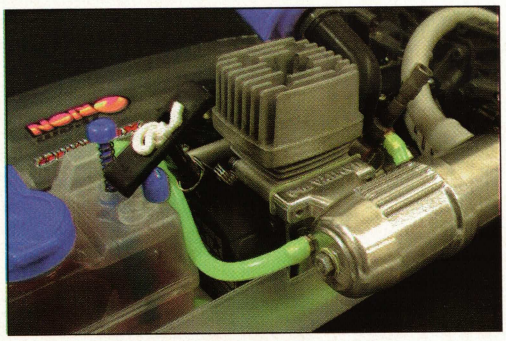
I used a Hitec HS-925MG servo to control the steering chores on the TGX Subaru.

Drive Train and Transmission

The TGX Impreza's drive train utilizes a center drive shaft setup. The power from the engine goes to the clutch bell which turns the spur gear. The center shaft is harnessed to the spur gear which transfers power to the front and rear gear diffs through a pair of bevel pinions. The TGX uses some very heavy duty metal gears, so it should provide you with some long use and durability. Although the majority of the kit uses metal bushings, Tamiya did opt to use ball bearings to support the front and rear diff outdrives. Transferring the power from the diff to the ground at each end is done through a pair of dogbones and drive cups. One thing I noticed was the material used for diff housings is different from the material used on the rest of the car. The material used on the diff housings is stiffer and harder which will help keep drive train meshed correctly and should do away with any unwanted flex in the transmission. Another nice feature of the gearbox is that both the spur and clutch bell are sealed, preventing any dirt or debris getting jammed inside.



The TGX transfers its power to all four wheels through a steel shaft that runs down the centerline of the chassis.



The TGX is powered by Tamiya's own FS15-LT .15 recoil engine. I had problems keeping the kit air filter on the carb since it didn't fit quite tight.

Suspension

The TGX Impreza uses huge suspension pieces. All the A-arms, steering knuckles, shock towers, front and rear hub carriers are all super sized, [Editor's note: Well duh! It's an 1/8-scale car, Steve.] One potential problem that I do see is the upper arm tie-rods, which are tiny compared to the rest of the suspension components. In an event of a bad crash, these upper arms might bend, especially since the rest of the suspension probably won't give much. Something has got to give and it'll most likely be these upper arm tie-rods. We'll see what happens during testing.

To handle the rough terrain ahead for the TGX Impreza, a molded, long travel oil-filled shock is fitted at each corner of the car. Although they are made of plastic, the shocks are very well constructed with double O-ring seal at the bottom of the shock and rubber oil seal on the top. The kit chrome springs are a bit hard and might give the car a bouncy ride. On the TGX's suspension, you only have one location for the upper shock mount, but you have two different lower shock mounting positions for the front and three for the rear. This should provide enough adjustment for you to dial in the car to your liking.

Steering

The TGX Impreza uses a bushing-supported dual bellcrank steering setup that you'll find on just about any car today. The steering arms are mounted into part of the front bulkhead instead on individual posts. Like the upper arm tie-rods, the steering linkage's just look so delicate and this might be another weak spot on this super-sized monster.

Engine

The TGX Impreza is powered by a .15 size Tamiya FS-15LT glow engine. The engine comes complete with a recoil starter for easy starting, ball bearing clutch bell, large air filter, and a Tamiya TM-3 muffler. All this horsepower is fueled by an 80cc fuel tank. One thing I noticed was how heavy the flywheel is, this can be both a good thing and a bad thing. Its heavy weight should make the power band smooth and controllable; the downside is slower acceleration.

Assembly Lines

1. Step 4, remember to install the black O-rings in the drive cup and make sure they are seated properly. Also in step 11.

2. Step 18, make sure the propeller shaft guide's inside notch (Part # B3) lines up with the slot on the front and rear propeller joint.

3. Step 19, make sure for the rear damper you are using the longer bottom shock mount (Part #V2) and for the front damper (Step 25) use the shorter one (Part #V1)

4. Step 27, don't for get to screw in the starter rope holder when you screw on the muffler.

5. You might want to use a tie-strap to secure the air cleaner to the carb. My particular kit's air filter had a very loose fit on the carb.

SOME PEOPLE LIKE US FOR OUR BODIES...

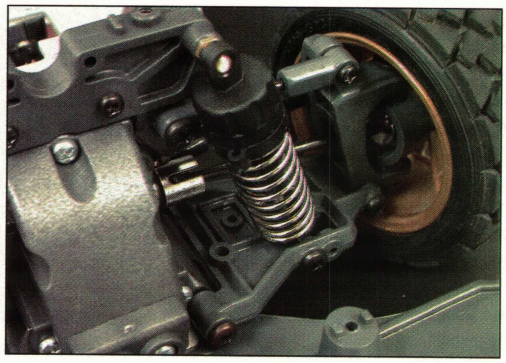




We don't mind if you check out the sexy new bodies we've created for the Associated B3 buggy and T3 truck—people just notice a great looking body! For example, you've noticed these new ***"Speed Series"*** bodies from Deans (*and so will everybody else!*). You saw the innovative number plate on the buggy (*no more numbers on the windows!*). The realistic design of the truck, and its advanced aerodynamics got your attention (*we didn't even show you the trick tabbed spoiler!*). ***Get speed*** - get ***"Speed Series".***

deans®

7628 Jackson St., Paramount, CA 90723 (562) 634-9401 phone, (562) 634-9403 fax, deansco.earthlink.net



Front suspension on the TGX is comprised of Tamiya's oil-filled molded shocks which performed quite well.

More Features

The kit comes with a highly detailed Subaru Impreza in the 1999 World Rally Championship scheme. The kit also comes with a separate wing and a large under-cowl to block out as much unwanted debris as possible. Like many body manufacturers today, the Impreza body has a clear plastic sheet on the outside of the body to protect against any overspray; just remember to remove it before you start applying the decals! Speaking of decals, the Impreza came with two sheets of detailed decals. I would suggest setting aside a hour or so for this task alone. You definitely won't want to rush through this part. Finally, to match the Impreza rally car, the kit came with a set of large Z block-pattern rally tires on a set of molded gold molded mesh wheels.

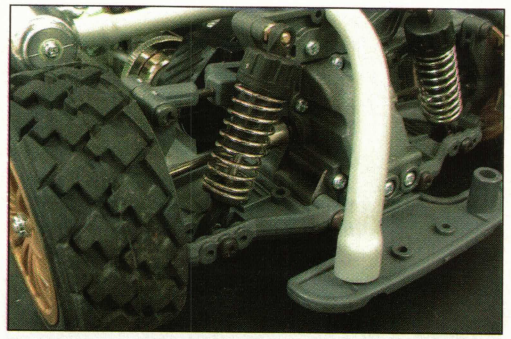
TESTING

Test Equipment

I used my favorite new toy, a Hitec Lynx 3D radio to control the beast. The Lynx 3D has been just awesome in the past few months of use, and never once have I experienced a radio glitch. I used the new heavy duty, all metal gear, ball bearing Hitec HS-925MG high speed servo for the throttle and braking chores, and a Hitec HS-525MG metal gear servo for steering. At the pump went for the hi-octane Monster Horsepower fuel from Trinity in the 20% grade.

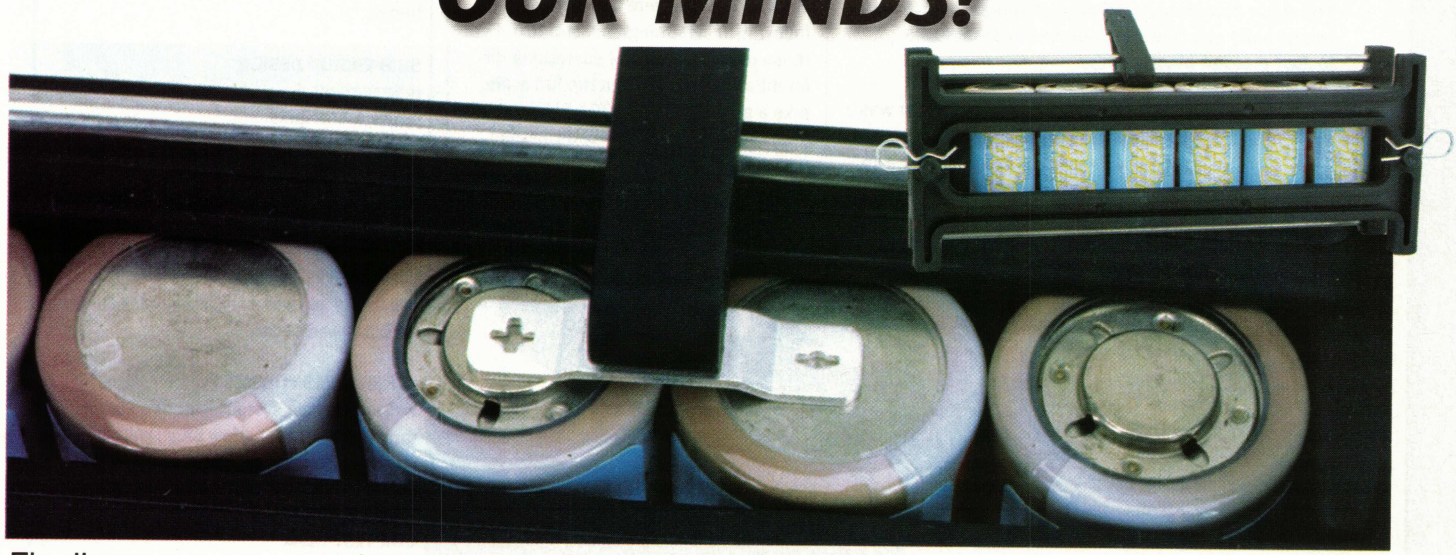
Test Drive

Before I began testing the TGX Impreza, I spent an afternoon breaking in the FS-15LT engine. I ran through four tanks of the Trinity 20% fuel at a very rich setting while keeping the engine cool in a well-ventilated area. The maiden run of TGX Impreza took place at a large parking lot not far from my house. The FS-15LT engine was really easy to work with – a tug or two on the pull-start and the engine fired right up. I leaned the engine out a little bit more from the break-in setting to 2 1/4 turns out. I started with the car at low speeds, making final checks to the trim settings, and then I grabbed a handful of throttle. The Impreza had decent acceleration (not



The rear end also uses Tamiya's oil-filled molded shocks. A nice feature is the silicone exhaust tube that channels oily exhaust out the rear bumper instead of of along the outside of your body.

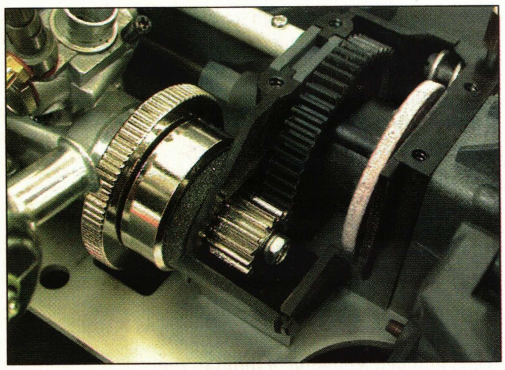
OTHERS LIKE US FOR OUR MINDS!



Finally, an easy way to build a pack. The revolutionary new ***"Speed Jig"*** makes pack building a one man (*or woman!*) job. The innovative bar clamp, holds the battery bar in place during soldering (*patent pending*). Building a pack couldn't be easier or quicker. ***Get speed*** - get the ***"Speed Jig"***.

7628 Jackson St., Paramount, CA 90723 (562) 634-9401 phone, (562) 634-9403 fax, deansco.earthlink.net

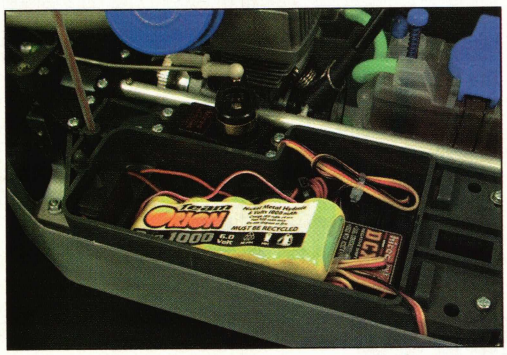
deans®



A molded plastic gear cover keeps the clutch bell and spur gear nice and smooth (and dirt-free too!).

necessarily mind blowing) but the top speed from the FS-15LT engine was very good. In fact, it was quite intimidating watching and controlling a vehicle of this size at such high speeds.

At low speeds, the car turned in very well and remained stable even with the rock-hard rally tires on the pavement.



The radio box protects all of your valuable (and very important!) electronic equipment underneath a locked molded plastic cover.

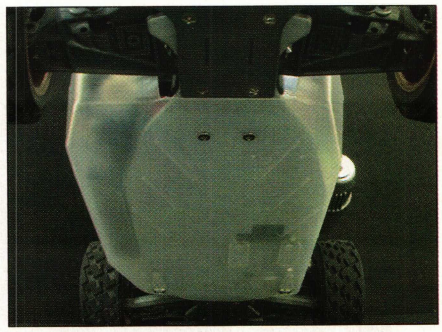
However, at higher speeds the car was a bit darty and sensitive to quick steering inputs. One word of caution: after a 10 minutes or so of actual running time, be aware that the muffler is very HOT! Trust me. As always, I learn things the hard and painful way, so be careful!

The next test run was conducted in my backyard where I've enjoyed running all of my previous rally cars. The surface varies from rough pavement, short grass, smooth concrete and a patch of loose dirt that is perfect for rally cars. I raised the rear ride height a little bit with the spring pre-load spacers for the upcoming off-road terrain.

Again, the FS-15LT engine fired right up and I was off and running. The Impreza handled great on the grass and the rough pavement, however I think a set of slightly softer springs might help the car's overall handling. In kit formation the car seemed to bounce around a bit with the kit-stock chrome springs. A set of softer compound rally tires would also be of good use with the TGX. On the concrete and the loose dirt, the car was slightly loose and required a good combination of steer and countersteer, just like its full-sized counter part. Going over jumps and obstacles the Impreza is no off-road buggy, but it did manage to keep all four wheels facing downward through most of my testing. After a few rough tumbles I checked the car out for some damage, thankfully there was none to report. Sometime during my run the air-filter came loose and rested in the body. A tie-strap is definitely needed to hold the filter in place.

Conclusion

I enjoyed testing the Subaru Impreza very much. It provided non-stop fun with its durability and easy-to-start FS-15LT engine. My fear of the weak upper-arm and steering linkages were forgotten by the time I was carving up my backyard. There were no signs of breakage or bending whatsoever anywhere on the chassis. The Impreza was very easy to build; everything fit perfectly together (read: no hand fitting was necessary!). The instructions were also very easy to follow with clear diagrams and text. For those of you looking for something different and ranks high on the fun scale, take a good look at the TGX Rally Subaru Impreza, its off- and on-road capabilities don't disappoint.



This Lexan underbody shields the TGX chassis from dust, dirt and grime when you hit the real off-road rally tracks.



THE SPECIFICS

ITEM INFO
Part #44019 (TGX mk.1 TS with Subaru Impreza WRC '99 body), MSRP: $534, Street estimate: $300-$325.

CHASSIS TYPE
2.5mm thick aluminum chassis with upper aluminum strengthening rod.

WHEELS AND TIRES
Hard compound rally "Z" block pattern tires with foam inserts, gold mesh wheels.

TRANSMISSION TYPE
Center shaft drive 4WD, metal bushings, conical gear differentials, and metal dog-bones.

SUSPENSION DESIGN
Independent, lower A-arms with adjustable upper A-arm links.

SUSPENSION DAMPENING
Plastic coil-over, oil-filled shocks with dual O-ring seals and upper rubber bladder.

VEHICLE TYPE
1/8-scale, gas-powered, mid/rear engine, 4WD on-road sedan.

OTHER ITEMS YOU NEED
2 channel radio system, steering servo, throttle servo, fuel, glow plug ignitor, receiver battery pack, paint for the lexan body, tools and glue for the tires.

OUR TEST GEAR
Hitec Lynx 3D radio, Hitec HS-925MG (throttle), Hitec HS-525MG (Steering), Trinity Monster Horsepower 20% R/C fuel, Thunder Tiger glow plug igniter. Orion 5-cell receiver pack.

MAIN COMPETITION
HPI Super Nitro RS4 and Kyosho Super Ten.



Dynamite Performance

Ultra Start and Ultra Start for Inline Starter Boxes

Straight and Curved Lexan and Tire Truing Scissors

RedSeal Bearings

Pro Hex and Pro Nut Drivers

Turbo Flow Fuel Filter

Lightning Line Fuel Tubing

Ultra-Glow Glow Plug Igniter

Turbo Fueler Fuel Bottle

QuickStick CA Tire Glue

Engine Tuning Screwdriver

Model Engine Compression Gauge

Power Packs 5-Cell NiCad Battery Packs

McCoy Power Plugs

Turbo Flow Air Filters

Blue Thunder Car Fuel

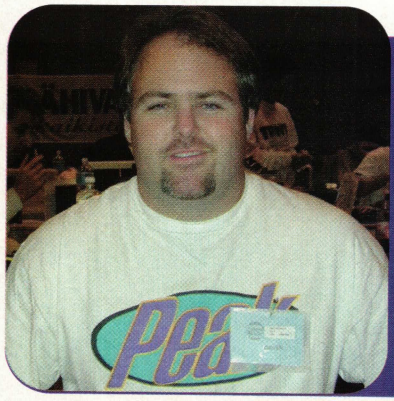
Magnum Force 2 Motor Spray

Easy Body Reamer

Dynamite products are exclusively distributed by Horizon Hobby Distributors, Inc.,
4105 Fieldstone Road, Champaign, IL 61822 (217) 355-9511 www.horizonhobby.com
Lead photo provided by Air Age Publishing, Inc

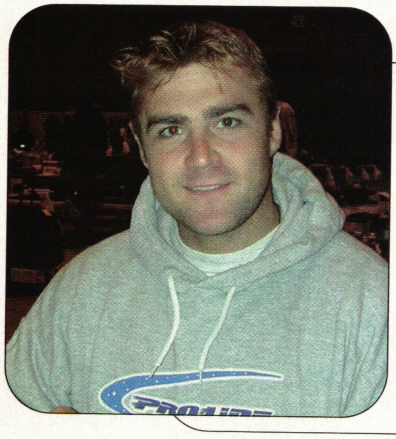
ONE QUESTION... FIVE ANSWERS.

What do you like most and least about coming to an international race like this year's Worlds in Finland?



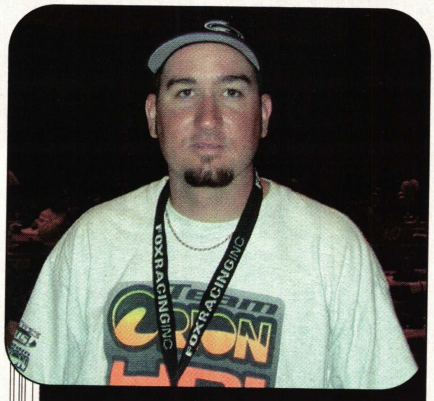
Rick Hohwart:

I think the main thing, and it's really exclusive to the Worlds, is the way the race is run. The race is structured so that there's no room for error. Everything's on a time schedule; the practice is set up in a way so that everyone gets the same amount of practice. We know exactly what's going on. It's a fair playing field. It's nice to come to a race that's not like a club race. Sometimes you go to a Nationals, and it feels just like a club race with 350 people. Come to a race like the Worlds and you know that it's special and it's important. As far as what I don't like, well, there isn't anything I really don't like about a race like this one except having to leave work. Since I run a business we have to leave what every we're doing and go to a big race and spend a week on it. And usually a big race like this is at least ten days.



Craig Drescher:

I like the whole hype if it. You know that there's going to be some good, close racing. But you never truly know what to expect. It is nice to come to a race and know exactly what to expect. But the excitement of not knowing is good, too. I like that part of it. Preparation can become a real drag. You never know if you've got everything right. You generally find that your car gets better towards the end of the event, which is often too late.



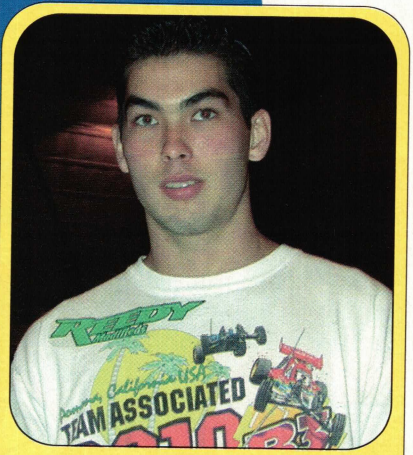
Richard Saxton:

I enjoy seeing my friends and everybody who's associated with the program, seeing some good racing, and hopefully doing okay. Electric isn't really my specialty, but I'm going to try my hardest and whatever happens happens. If this were the gas Worlds I think I'd be a little bit more serious. The only thing I don't like about big races like this is having to take time off of work. Otherwise there is nothing I don't like about a race like this. I have a good time, get to see my friends, and I love driving.

Chad Phillips:

This is actually my first big international race so getting to travel is a lot of fun for me. Racing in another country is really cool. It's a real privilege to be able to come here. Not too many people get to do what I'm doing. It's nice to see another culture. There isn't much I don't like about the race, like I said I'm just happy to be here. I'm not doing as well as I'd like to be. Actually, I don't care for the food too much; I've been sticking to McDonalds.





Lloyd Dassonville:

I like having fun before the racing starts, going out with my friends. Here the chicks are gorgeous! The only thing I won't like is if I don't do well. I'm in the A-main and it's only my first Worlds. So far this has been one of the most fun races I've been to.

Got a question for any particular pros or industry insiders? Let us know, we'll do the asking. email your question to:

xamination@xtremerc.com

If we use you're question we'll hook you up with a free *Xtreme* T-shirt money can't buy!

Possible questions for next month: Who's a hack? Has Dunbar ever stolen your woman?


Mercedes Benz CLK-GTR

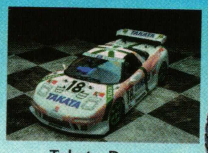

Toyota Corolla WRC


Peugot 406 STW


Subaru Imreza WRC


Dodge Ram Truck


Mitsubishi Lancer Evolution WRC


Takata Dome Mugen NSX

PRIME 12

1/10 SCALE GAS POWERED 4WD RACING CAR

- Chassis is 90% assembled
- Powerful VX-12 engine included
- Shaft driven 4-wheel drive
- Front and rear gear differentials
- Double wishbone suspension
- Oil-filled adjustable dampers
- Stiff and stron 2mm chassis


VXR12 Engines


K0605 Full Ball Bearing Set

PRIME 12

power system, suspension system, drivetrain system options


K0102/1 Aluminum RR Arm


K0102/2 Aluminum FR Arm


K0404 Anodized Chassis
K0405 Foam Bumper


K0105/1 Aluminum RR Upright


K0104/1 Aluminum FR Knuckle


K0901 Tuned Pipe w/Hardware


Non-Pull Start Engines Only!
K0711 Engine Mount 16mm
K0710 Lightened Flywheel (34)


For All Pull Start Engines
K0709 Engine Mount 20mm
K0708 Lightened Flywheel (40)


K0230 Two-Speed Transmission


K0103/1 Aluminum FR Carrier


K0107/1 Aluminum Spur Mount


For Front And Rear!
K0216 Universal Driveshafts

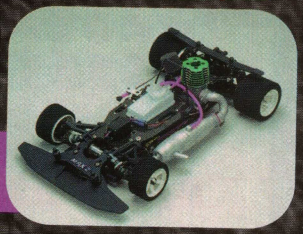
MUGEN SEIKI Racing

ALSO AVAILABLE

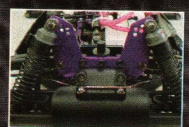
- On-Road Cars
- Off-Road Buggy
- Accessories



MBX-4
1/8 Scale Competition Off-Road Buggy

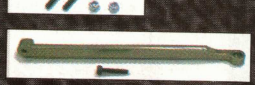


NEW! MRX2
1/8 Scale On-Road Car


Option FR tower MBX-4


Option Shocks MBX-4


Option Braces for MBX-4




Option R tower MBX-4


Inline Fuel Filter


Starter Box

MUGEN SEIKI® Racing

Mugen Seiki Racing Ltd.
17971 Sky Park Circle, Suite G
Irvine, CA 92614
Phone: 949-475-9505 Fax: 949-475-9511
http://www.mugenseiki.com
e-mail: support@mugenracing.com

'99 IFMAR Off-Road World Championship

Sponsored by: Team Associated, Reedy, Pro-Line, Yokomo, and Team Orion

by Mike Velez



Every two years the best off-road drivers in the world assemble in one location to do battle. This year's championship was hosted by EFRA, one of the five international organizations that makes up IFMAR. The location was Finland, the large Scandinavian country famous for cellular phones and Santa Claus. As you're about to read, this year's event was filled with everything you'd expect at a race of this caliber – plenty of exciting racing, new products, controversy, gorgeous women, and excitement off of the track. This year's race is one you won't soon forget.

THE VENUE

This year's IFMAR Off-Road Worlds was held in the small town of Rauma, Finland. Rauma is about 150 miles west/northwest of Finland's capital city of Helsinki. Rauma is an older town that sees a fair amount of tourism in the summer. The town has an "old town" section complete with buildings built in the late eighteenth and early nineteenth centuries. Some of the cobblestone roads that could be found are really a neat thing to see. Rauma also has a new town section complete with modern shopping centers, large buildings, and even a McDonalds. Surprisingly enough, the town also has its fair share of night clubs or Discotheques as they refer to them in Europe.

The race was held inside of an indoor soccer hall called Umihalli. The hall itself is part of a sports complex adjacent to other similar halls and a hockey rink. (Hockey's big in Finland.) The hall itself is huge. It was built in the early 80's. Besides soccer, the hall is also used for Finnish baseball, golf, track and field, concerts, and exhibitions. The track was situated near the center of the hall in front a large bleacher section and to the side of the pit area. Everyone was supplied with pit tables and benches. A small cafeteria was also located in the arena. The event was hosted by the Rauma Sports Car Club which includes three hundred members and also participates in rally and circuit racing.

GETTING THERE

My journey to Rauma, Finland began on Sunday August 1st at 9:00pm. That's when I boarded a British Airways 747 in Los Angeles in route to London's Heathrow airport. About ten and a half hours and two bad meals later, I touched down in the land of Craig Drescher and David Spashett. With little time to spare I managed to board a Finnair flight from Heathrow to Helsinki. It took another three hours to get to Helsinki. By this time it was about 11:00pm Monday evening local time. With no more flights to the small town of Pori that evening, I laid over at a local airport. The next morning it was time to get up bright and early and board a small twin-engine prop plane to the town of

VITAL INFO

Hosted by: Rauma Sports Car Club
Location: Rauma, Finland
When: August 2nd-8th
Sponsored by: Associated, Reedy, Pro-Line, Yokomo, Orion.

THE HITS

- Beautiful purpose-built track.
- Beautiful purpose-built women.
- Best drivers in the world.
- Some of the best racing ever witnessed.

THE MISSES

- The food sucked.
- Lots of travel to get there.
- Some controversy toward the end.

THE LAST WORD

It took a while to get there but it was worth it. The race drew lots of local spectators. They weren't disappointed the 2nd leg of the 4WD main will go down in the history books. The racing action in 2WD was equally spectacular.

Mike lost $40 bucks or 200 Marks at the one-sided black jack table.

THE TRACK



Dirt for the race track was hauled into the hall just for this event. The track was laid out before the event, and diagrams of the track were available to all drivers. However no one was allowed onto the track with their cars until the first day of practice. This guaranteed no home track advantage to any of the drivers. The track had a slightly different layout for 2WD and 4WD. For both classes, the track shared the same obstacles. A few turns just after the long straightaway, there was a small double jump that most drivers had no problem clearing. A few turns and a short straight later, a large four-and-a-half foot jump sat directly in front of the drivers, stand. On the landing side of that large jump was a quick, sharp, right-hand turn. Then down the track a ways was a small table top jump not more than six inches tall. After that small jump, drivers were lead to a killer triple jump that continually took its toll in both 4WD and 2WD. After landing the triple, drivers were met by a mogul section as they turned onto the long straightaway section as they completed a lap. The track wore nicely considering how many cars had been on the track. The track surface only slightly blue grooved and remained fairly consistent throughout the entire event. When the track was constructed the track designer predicted the 175 meter (XXXfoot) long track would allow for a 26-second TQ lap time. That track designer had it together because in 2WD a 26-second lap was the mark to achieve. By the final day of 4WD the end of the straightaway had deteriorated to the point where it was becoming an obstacle. Unfortunately it was right under the fastest line on the track. Drivers had to go through the rough section and hope for the best.



4WD

The four-wheel drivers had a few feet to build up speed before hitting the triple jump. The very fast drivers could clear the jump as a triple 90% of the time. If drivers were off the pace they would have to single jump and then double jump the next two to make it onto the straight.

2WD

For the 2WD race, the track was arranged slightly differently. The section leading up to the triple jump was shortened and the turn at the end of the straightaway was more sweeping. Because of the shorter run at the triple, drivers were forced to single the first jump and then double the second jump to make it to the straight.

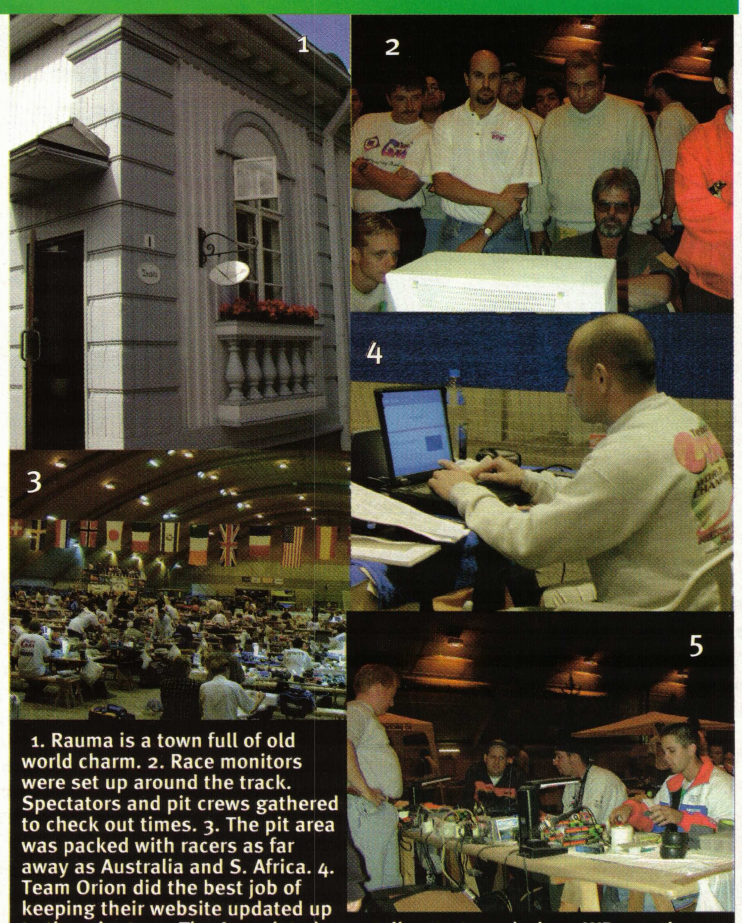
Pori that's about 45 miles just north of Rauma, my final destination. After a bumpy and turbulent flight in what seemed like a crop duster, I landed in Pori, Finland. After a quick taxi ride to the Pori bus station I was on board a bus bound to my final destination. The bus ride to Rauma was a little odd. The bus was nice and new and all but the bus driver seemed to double as the UPS, mail, and grocery delivery driver. On the way the bus driver stopped to deliver groceries to a small market, deliver a large package to a local business, and pick up the mail. After an hour of making all these small stops I was finally in Rauma and headed to the track. After traveling for 31 hours and being in transit for 16 of those, I was pretty exhausted once I finally got to my second off-road world championship.

FINLAND

Prior to going to Finland the only thing I really new about the country was that it is next to Russia, and is the home of F1 champ Mika Hakkinen and hockey stars Jari Kurri, and Teemu Selanne.

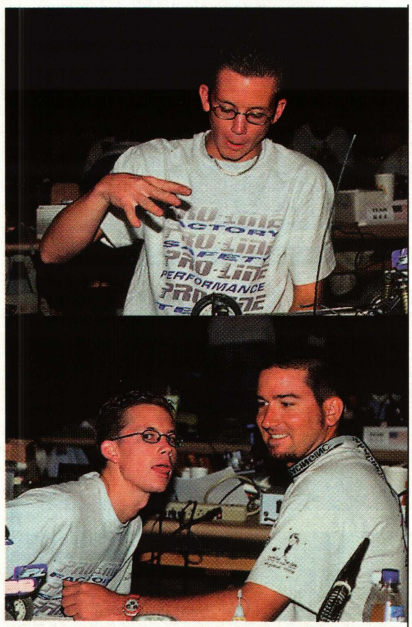
Landing in the Helsinki (HEL) airport was pretty cool. Even though it was eleven o'clock at night and everything was closed I thought I was in a giant Ikea Furniture Store. Everything was very neat, clean, and modern looking. When I got to the airport hotel I was spending the night in I was amazed at the size of the room. It was about the size of small car, or at least it seemed that way. Everything in the room was packed in with little room to spare. The first night I grabbed a bite to eat in the hotel restaurant. It was my first look at a Finnish menu. I was a little shocked at first. Items like reindeer and horse weren't my idea of fine cuisine, but, hey, I was in a different land and experiencing a different culture; that was fun. Overall, I think most of the racers travelling from the States were in agreement with me that the food sucked. That was evidenced by the number of runs that were made to the local McDonalds morning, noon, and night.

While traveling through Finland and staying in Rauma I found that the country is very



1. Rauma is a town full of old world charm. 2. Race monitors were set up around the track. Spectators and pit crews gathered to check out times. 3. The pit area was packed with racers as far away as Australia and S. Africa. 4. Team Orion did the best job of keeping their website updated up to the minute. 5. The Associated crew talks strategy during 4WD practice.

Xtreme On-Line was updated daily throughout this year's Worlds.



The many faces of the Squirrel. **Above Top:** The Squirrel breaks through to his hip-hop roots. The Squirrel's debut single will be called "My cheekz are packed with nutz mutha F'er!" **Above:** Seeing the potential of his hip-hop status, the Squirrel makes a pass at a possible groupie.

beautiful. The landscape is covered with dense green forests and open fields. In the winter though almost the entire country freezes over with snow and ice. The landscape wasn't the only beautiful thing in Finland. Anyone that's been there would agree that most of the Finnish women are gorgeous! The ratio of good looking women to ugly ones is probably about 5:3 which isn't bad. The people in Finland for the most part are very nice and helpful. Most of them speak English so asking for directions or help wasn't difficult. During the summer months, the area of Finland I was in receives about 17 hours of sunlight. In the evening, it didn't get dark until about eleven o'clock at night. This was a bit strange to say the least. Thanks to the long days it seemed like I went everyday on limited sleep. Like many European countries, bicycles are a very popular form of transportation. At the local grocery store, bikes outnumbered cars. After leaving a dance club one night with some racers we got a laugh at all the bikes parked outside. Could you imagine meeting some hottie, having a few drinks then pedaling her over to your place on your handle bars? Overall going and staying in Finland was pretty cool. Like I said, the land is pretty, the women are hot, the people are nice; the only thing I could do without is the food. I'm not sure I'd go on a vacation to Finland. I think I'd prefer somewhere more tropical. But if business or a race ever brought me back to Finland, I'd definitely look forward to it.

Race Format

The IFMAR Worlds uses a strict unique race format that makes it like no other race in the world. Before the event begins the track is closed for at least two days before. During that time at least 60% of the track layout is changed. This is so that there is no unfair home track advantage. Once the track is opened we move on to day one.

Day One

The track is open for ten rounds of controlled practice. Each round has ten heats with fifteen cars in each heat. This is the first chance for drivers to find out which tires are working and make adjustments to their setups.

Day Two

This is the Qualifying day. There are actual five rounds of qualifying held on this day. The first round is called a practice round and does not count although transponders are used. There is no heat juggling, each driver stays in their original heat throughout practice. To keep things fair each round begins with a different heat number. So round three might begin with round 7 and end with round 6.

Day Three

This is the Finals day. Before finals begin one last round of qualifying is run. After that last round the mains are set up. After the mains are set there is one round of practice mains. This is to make sure there are no frequency conflicts and everyone can get a chance to see what everyone else is up to. After this practice main rounds the real fun begins with the final mains.

The three day format is the same for 4WD and 2WD.

Extreme Results From RRP.

Richard Saxton Chooses Precision Components From Robinson!

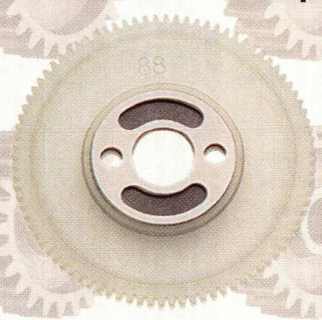


1998 World Cup and National Champion Richard Saxton: *"I only care about performance, and that's why I run Robinson Racing gears and slipper clutches exclusively."*

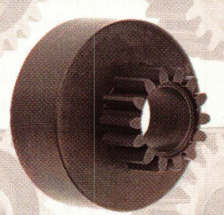
— Richard Saxton



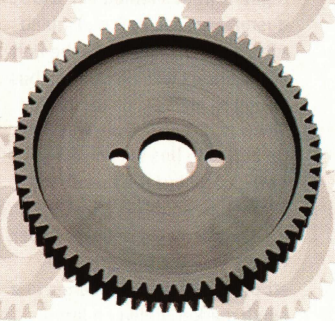
Absolute Series Pinions: *Available In 48P in 16T thru 28T sizes. Super hard, lightened and cut unmatched precision. Great with any spur, but with an Absolute spur, even on-off noise is gone! RRP 1416 - RRP 1428.*



Absolute Series Spurs: *Available in 48P in 80T thru 91T, this is the quietest spur you can buy! RRP 1780 - RRP 1791.*



RC10 GT Clutch Bells: *Precision machined one-at-a-time from a single piece of steel and then hardened. Fits ALL Associated and MIP shoes. (New 14T) RRP 2214 - RRP 2224.*

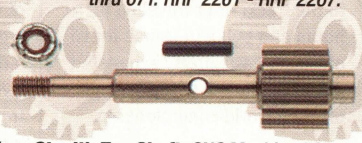


RC10 GT Gas Spurs: *Super tough and precision machined from heat-resistant plastic mesh flawlessly with our Clutch Bells. 32P in 61T thru 67T. RRP 2261 - RRP 2267.*

Associated Blue Lightened Slipper Kit:



The rear plate is hard anodized to reduce wear and the front plate is color treated. The front plate is designed to hold the slipper pad forcing the pad to slip on the rear plate. When pad shows sign of wear just flip it over for a new surface. Metal parts are CNC machined for a flawless fit. RRP 1515.



Titanium Stealth Top Shaft: *CNC Machined from a single piece of titanium, this super hard, super light top shaft will fit any Stealth transmission. No serious racer should do without this part. RRP 1512.*

"Turn to Robinson Racing when compromise is out of the question."

ROBINSON RACING PRODUCTS · 4968 Meadow View Drive · Mariposa, CA 95338
Voice 209.966.2465 · Fax 209.966.5937 · www.robinsonracing.com

4WD
Practice

The first day that cars were allowed on the track was the day used for 4WD practice. Drivers had their first chance to see what tires were hooking up, what type of gearing would get them around the track the quickest, and who could clear the dreaded triple jump. Racers timed their teammates cars to see who was on the quickest pace. Both Brian Kinwald and Jukka Steenari seemed to be the fastest on the track the first day.

Qualifying

Four of the five rounds of 4WD qualifying took place on Wednesday. Before the first actual round of qualifying, Masami Hirosaka turned the fastest times seen, but a bout of bad luck struck him with broken cars in the first two actual founds of qualifying. Masami could qualify no higher than the eighth spot in the B-main. By the fourth round the "Finnish Flash" Jukka Steenari had sewn up the TQ spot by wining three of the first qualifying rounds. Brian Kinwald had won the round that Jukka had not and backed it up with two more top ten runs. Former 4WD champ Mark Pavidis used the fifth and final round to assure a top three starting position. Mark won the fifth and final round going into the mains on Thursday. Another Fin, Teemu Leino managed to break the top five in 4WD. Teemu was also the fourth and final driver to turn twelve laps during 4WD qualifying. The rest of the A-main in 4WD was as follows; Scott Brown, Mark Francis, Teppo Kauppinen, Brian Dunbar, Jimmy Jacobson, and Matt Francis.

4WD
A-MAIN

Leg One

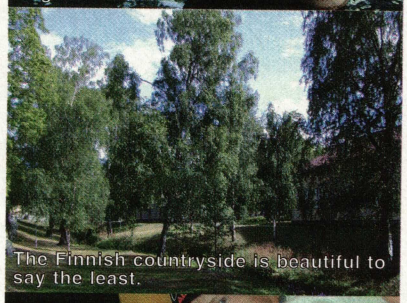
At the start of the race second qualifier, Kinwald got a bit of a holeshot off of the line but TQ Steenari capitalized on his forward starting position. At the first turn it was Steenari in the lead followed closely by Kinwald and Pavidis. Overall, the start of the race was very clean. Still within the first lap Kinwald made a mistake and flipped going over the large triple jump. This mistake sent him to fourth place with Pavidis moving into second and Leino taking over third. After three laps, Kinwald pulled his car off of the track. It had appeared that something had broken on his car. With Kinwald off the

Race Notes

- Chad Phillips figured out how to fix the TV's at the host hotel so that Pay Per View flicks were on the house.
- On the second and fifth floors of the Hotel Cumulus, almost every door was open to get a nice cross breeze going. Hotels in Finland are sans A/C.
- Thanks to free Pay Per View and lots of open doors and windows, the sounds of hotel porn could be heard throughout the city.



Three women were turned to stone when they caught a glimpse of Scott Hughes naked.



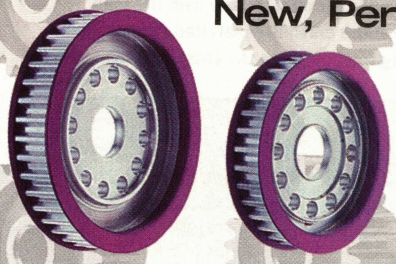
The Finnish countryside is beautiful to say the least.



Jukka removed his TOP Orion Chrome motor for tech inspection.

Extreme Performance For You.

New, Performance Accessories For Your Racing Machines!



HPI RS4 Diff Pulleys: *Precision machined, hard anodized aluminum diff pulleys. RRP 1539 fits HPI Nitro sedans. RRP 1528 fits HPI electric sedans.*



RC10GT Diff Gear: *Hard anodized, precision machined aluminum diff gear. RRP 1513.*



RS4 Nitro 32 Pitch Conversion Kit: *The slightly finer (than stock) pitch allows for more gear ratios. All components are precision machined for smooth and efficient performance. 17T hardened bell is precision cut from solid stock. RRP 1536.*

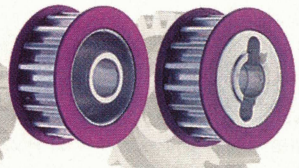


1998 ROAR On-Road National Champ John McIntosh:
"Robinson Racing Products give me a definite competitive edge – that's why I run them."

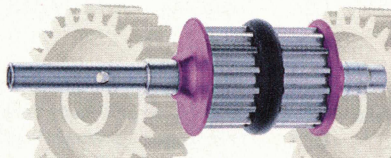
— John R. McIntosh II



HPI SuperLite™ Purple Aluminum Sedan Pinions: *They're lightened, hard coated and precision cut. Available in 48P in 16T thru 28T, and 64P in 24T thru 38T. RRP 30XX (48P) and RRP 31XX (64P).* ***Only $5.25.***



HPI RS4 Nitro Small Drive Pulleys: *Precision machined and hard anodized aluminum drive pulleys. RRP 1538.*



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

"For over a decade, Robinson Racing has brought you, the racer, the highest performing gears and accessories available for RC racing."

ROBINSON RACING PRODUCTS · 4968 Meadow View Drive · Mariposa, CA 95338
Voice 209.966.2465 · Fax 209.966.5937 · www.robinsonracing.com

RRP ROBINSON RACING PRODUCTS

Talking With A Winner

Xtreme: So how does it feel to be the World Champ?
Jukka: I don't think I know yet. It hasn't yet hit me yet.

Xtreme: Now that you're the champ, do you think you'll have to bear increased expectation at future races?
Jukka: Naturally I think that will be the case, not from myself though. I'm not going to place any more pressure on myself.

Xtreme: How did you prepare for the race?
Jukka: The actually preparation for this race started when I went over to the States for a three-week practice session. I went over for the Reedy Touring car race and then practiced at So Cal Raceway in Huntington Beach, CA for the next two weeks. The week before the actual race, I did some testing on a concrete surface.

Xtreme: Do you think having this year's Worlds held in your native country was an advantage for you?
Jukka: I think I had a slight advantage mainly because the American guys had to deal with the time difference. That's something that really stresses me when I race over in the U.S.A. Not being tired at a major race like this is a good thing.



Xtreme: After the first day of practice how did you feel about your chances?
Jukka: I was pretty confident. At that time I actually felt that Brian Kinwald was faster than me, but I was doing some testing so I wasn't too worried about that.

Xtreme: What were your feelings before the mains?
Jukka: I've learned that being TQ really, really helps you. I think it's a major thing at this kind of a race. I've raced these guys lots before so I kind of know their driving style. I was pretty confident.

Xtreme: In the first leg of the A-main you seemed to generate a pretty good lead. Did you relax after a while?
Jukka: I did a little. After I had a comfortable lead I tried to single and double the triple jump that had been giving everyone problems. That was the first time ever I had tried to single double it and I messed it up. After that I thought, "Oh no. I'm not going to do that again!" and just tripled it after that.

Xtreme: In the second leg you had your hands full. Did you have strategy? Were you hoping for Jacobson to make a mistake? Were you going to make an aggressive move?
Jukka: In that kind of situation you just go for it and hope that something is going to happen. When you're so close to somebody, you just have to go for it and hope that he makes a mistake. As soon as I saw that Jimmy didn't make the triple, I thought the straightaway would be the spot to make my move. So I really took the line to the straightaway as best I could. When somebody gives you a chance like that you've just got to take it.

Xtreme: Were there any spots on the track that you were very comfortable with? Spots that if you had to make an aggressive move you could?
Jukka: Not particularly. The track was really open, but the fast lines were very tight. If you went outside of the fastest line the track got dusty. I just had to hope the other guys would make mistakes.

Xtreme: Congratulations again Jukka on the big win. Good Luck in 2WD.
Jukka: Thanks!

track, the number seven car of Kauppinen moved up into the fourth spot and then battled with fellow Fin Leino for third. While this battle was going on, Steenari was far out in the lead with Pavidis in second. On about the tenth lap, Pavidis misjudged the triple jump and put his car on its lid. With a comfortable lead, Steenari relaxed a bit and took the triple jump as a single-double. But, this didn't work too well for him. His car landed the double upside down. Fortunately for him, he had such a lead that this mistaket didn't affect his finishing position. Just before the final lap, Mark Francis broke forcing him to pull his car from the track. On the eighth lap of the race, Jimmy Jacobson moved up two positions from sixth to fourth. When the final buzzer sounded Steenari had won the first round with Pavidis finishing in second followed by Kauppinen.

Leg Two

At the start of the race, Steenari punched it and took the lead going through the first turn. Pavidis tucked in behind Steenari and grabbed onto second place with Kinwald right behind Pavidis. The driver with the best brake at the start was Jacobson. Starting from the ninth position on the grid, he managed to move into the fourth spot before the first lap was complete. During the second lap Steenari and Pavidis tangled, the crowed erupted but it looked to be just a racing incident with neither at fault. During the third lap of the race, both Pavidis and Steenari missed the landing on the large triple jump. This allowed Kinwald to take over the lead. After the crash Steenari had difficulty getting traction since the crash had caused

4WD

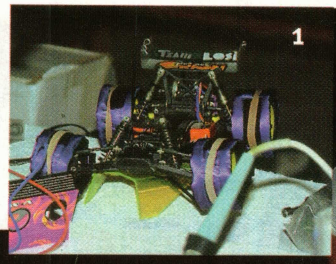
Finish	Qualified	Driver	Country	Chassis	Motor	Battery	ESC	Receiver	Servo
1	1	Jukka Steenari	Finland	Losi XX4	TOP Orion 9x2	Orion V-Max	Novak Cyclone	Novak XXL	Sanwa EGR-ZR
2	9	Jimmy Jacobson	USA	Losi XX4	TOP Orion 9x2	Orion V-Max	Novak Cyclone	Novak XXL	Airtronics 257
3	2	Brian Kinwald	USA	Losi XX4	Trinity D3.5 10x2	Trinity VIS Extra	Novak Cyclone	Futaba R113F	Airtronics 452
4	4	Teemu Leino	Finland	Schum.CAT	TOP Orion 9x2	Orion V-Max	LRP V7.1	LRP Phaser	Sanwa EGR-ZR
5	7	Teepo Kauppinen	Finland	Losi XX4	TOP Orion 9x2	Orion V-Max	Novak Cyclone	Futaba R113F	Futaba 9450
6	6	Mark Francis	USA	Losi XX4	Trinity D3.5 10x2	Trinity VIS Extra	Novak Cyclone	Air. 92827	Air 157
7	3	Mark Pavidis	USA	Yokomo MX-4	Reedy Tri-Sonic 10x4	Reedy Zappers	LRP V7.1	LRP Phaser	Air 252
8	5	Scott Brown	USA	Losi XX4	Trinity D3.5 10x2	Trinity VIS Extra	Novak Cyclone	JR Racing R200	JR Racing Z4750
9	8	Brian Dunbar	USA	Losi XX4	GM EV03 10x3	GM Racing VIS	GM Racing V12	GM Racing R598	Air 257
10	10	Matt Francis	USA	Losi XX4	Trinity D3.5 10x2	Trinity VIS Extra	LRP V 7.1	LRP Phaser	Air 257

2WD

Finish	Qualified	Driver	Country	Chassis	Motor	Battery	ESC	Receiver	Servo
1	3	Masami Hirosaka	Japan	Associated B3	Reedy Sonic2 9x2	Yokomo	GM Racing V12	KO ProPo	KO PS-200 FET
2	1	Mark Pavidis	USA	Associated B3	Reedy Sonic2 10x3	Reedy Zappers	LRP V7.1	LRP Phaser	Air 452
3	2	Brian Kinwald	USA	Losi Triple-X	Trinity D3.5 11x2	Trinity VIS Extra	Novak Cyclone	Novak XXL	Air 452
4	6	Billy Easton	USA	Associated B3	Reedy Sonic2 10x3	Reedy Zappers	LRP V7.1	LRP Phaser	Air 452
5	9	Jukka Steenari	Finland	Losi Triple-X	TOP Orion 12x2	Orion V-Max	Novak Cyclone	Novak XXL	Sanwa ERG-ZR
6	5	Rick Hohwart	USA	Losi Triple-X	TOP Peak 12x4	Peak Power-Flo	Novak Cyclone	Futaba R113F	Futaba 9450
7	4	Jason Ruona	USA	Associated B3	Reedy Sonic2 10x4	Reedy Zappers	LRP V7.1	LRP Phaser	Air 257
8	10	Jouko Termonen	Finland	Associated B3	TOP Peak 10x3	GM Racing VIS	Tekin G12	Sanwa	Air 151
9	7	Lloyd Dassonville	USA	Associated B3	Reedy Sonic 2 10x2	Reedy Zappers	LRP V7.1	Air 92837	Air 257
10	8	Teemu Leino	Finland	Schumacher	TOP Orion 10x2	Orion V-Max	LRP V7.1	LRP Phaser	Sanwa ERG-ZR

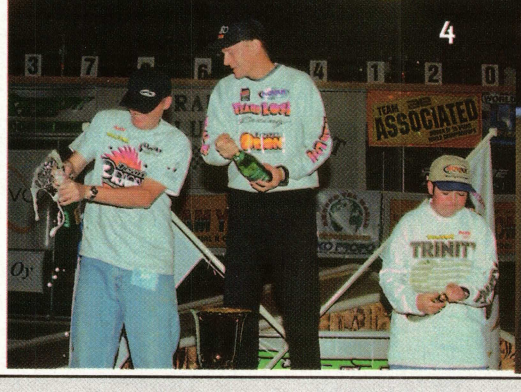
The MTV commercial starring the "Jukka Brothers" aired frequently in Finland on MTVE.

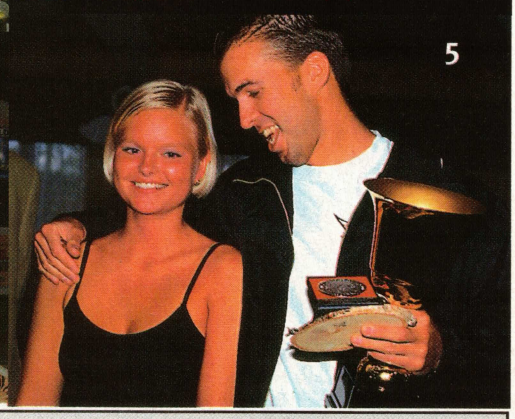
him to get into the loose dirt that had accumulated outside of the racing line. Once Steenari had regained control, he was in second place just behind Kinwald. During the crash on the triple, Pavidis unfortunately broke his MX-4 and was out of the race. On the fifth lap and a little over two minutes into the race, Kauppinen broke his XX-4 and was out. Around the same time Jacobson moved into second place when Steenari got loose over a jump. At about the same time the track took its toll on another driver. Dunbar managed to crack his car up and finished the race as a spectator. The race leaders remained the same until the eighth lap when Jacobson got past Kinwald after Kinwald made a costly mistake and mis-managed getting over the killer triple jump. With just a few laps to go, first time World Championship qualifier Jacobson was in the lead with his XX-4. For the next four laps, Jacobson drove strapped just to stay ahead of Orion teammate Steenari. Steenari was hard charging and in the eleventh and final lap, Jacobson fell prey to the triple jump that had devastated so many drivers before him. He flipped on the landing jump and got turned over. This gave Steenari all the space he needed to catch up. With the two drivers neck and neck, Jacobson couldn't keep the tires from spinning and breaking loose on the difficult mogul section just past the triple jump. In front of his home crowd with only a few feet to go, Steenari slid past Jacobson in a drag race down the back straight-away to move into the lead and bring home the World Championship for Finland. When Steenari passed, Jacobson the crowd erupted in cheers. When the











1. It might have been the difference. Jukka used Trinity tire warmers before each A-main leg. He was the only one using them. 2. Team Orion owner Phillipe Neidhart proudly show of the new TOP Orion Chrome Modified motor Jukka used to win 4WD. 3. Despite the frowns, the top three drivers were all proud of their placement. 4. Jimmy Jacobson didn't win the race on the track, but he did win the race to spray the champagne first.
5. Despite not making the main, Matt Francis was very happy with his B-Main trophy.

Radio	Charger	Front Tires	Rear Tires	Foam (F/R)	Gearing	Body
Sanwa M8	NovMil/Orion Pro	Losi Tapper Yellow	Losi Taper Pin Yellowlow	Trinity Da Bomb 2	17/86	Losi Hot Weather
Airtronics M8	Novak Millenium	Losi Tapper Yellow	Losi Taper Yellow	Trinity Da Bomb 2	17/86	Losi Hot Weather
Airtronics M8	Novak Millenium	Losi Taper Yellow	Losi Taper Yellow	Trinity Da Bomb 2	19/86	Stock
Sanwa M8	Orion D67	Pro-Line Hole-Shot M3	Pro-Line Hole-Shot M3	Pro-Line	17/86	Stock
Futaba 3PJ	Orion D67	Losi Taper Yellow	Losi Taper Yellow	Trinity Da Bomb 2	17/84	Stock
Airtronics 3PS	Novak Millenium	Losi Taper Pin Yellow	Losi Taper Pin Yellow	Trinity Da Bomb 2	19/84	Stock
Air M8	Novak Millenium	Pro-Line HoleShot M3	Pro-Line HoleShot M3	Pro-Line White	18/84	Stock
JR Racing R-1	Novak Millenium	Losi Taper Pin Yellow	Losi Taper Pin Yellow	Trinity Da Bomb 2	18/84	Losi Hot Weather
Air M8	GM VIS Comander	Losi Taper Pin Yellow	Losi Taper Pin Yellow	Trinity Da Bomb 2	18/84	Stock
Air M8	LRP Quadra	Losi Taper Pin Yellow	Losi Taper Pin Yellow	Trinity Da Bomb 2	20/86	Stock

Radio	Charger	Front Tires	Rear Tires	Foam (F/R)	Gearing	Body
KO Esprit Vantage	Yokomo PC-001	Pro-Line Radius Rib M3	Pro-Line Hole Shot M3	Pro-Line (gray/white)	16/81	Pro-Line Deja Vu
Air M8	Novak Millenium	Pro-Line Radius Rib M3	Pro-Line Square Fuzzies M3	Pro-Line (gray/white)	18/81	Pro-Line Deja Tu
Air M8	Comp. Elec T30	Losi Wide Body Red	Pro-Line Square Fuzzies M3	Trinity Da Bomb 2	20/78	Stock
Air M8	Tekin 112A	Pro-Line Radius Rib M3	Pro-Line Square Fuzzies M3	Pro-Line (gray/white)	19/81	Pro-Line Deja Tu
Sanwa M8	NovMill/Orion Pro	Pro-Line Radius Rib M3	Losi X-2000 Yellow	Trinity Da Bomb 2	22/76	Stock
Futaba 3PJ	Novak Millenium	Losi Wide Body Red	Pro-Line Hole Shot M3	Losi Firm	22/82	Stock
Air M8	Novak Millenium	Pro-Line Radius Rib M3	Pro-Line Full Radius Rib M3	Pro-Line (gray/white)	19/81	Pro-Line Deja Tu
KO Mars EX1	Unknown	Pro-Line Radius Rib M3	Pro-Line Hole Shot M3	Pro-Line (gray/white)	20/81	Stock
Air M8	Novak Millenium	Pro-Line Radius Rib M3	Pro-Line Hole Shot M3	Pro-Line (gray/white)	19/83	Pro-Line Deja Vu
Sanwa M8	Orion	Pro-Line Radius Rib M3	Pro-Line Hole Shot M3	Pro-Line (gray/white)	17/92	Stock

Mike picked up an official Jukka Brothers paddle while in Pori.

TOTAL XXX

1999 ROAR Modified Off-Road Nationa





A7372S, Team Losi Silver Compound Tires
Advantage: Ultra High Traction!

2wd Modified Final Results!

	Driver	Motor	Car	Battery	Front Tires	Rear Tires	Foam Insert
1	Brian Kinwald-TQ	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity
2	Matt Francis	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity
3	Billy Easton	Reedy	B3	Reedy	TL Silver Wide	TL Silver Taper	Proline
4	Chad Phillips	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity
5	Greg Hodapp	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity
6	Rich Hohwart	Peak	XXX	Peak	TL Silver Wide	TL Silver Taper	Proline
7	Todd Hodge	GM	XXX	GM	TL Silver Wide	TL Silver Taper	Trinity
8	Travis Amezcua	Orion	XXX	Orion	TL Silver Wide	TL Silver Taper	Proline
9	Jason Corl	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity
10	Mark Francis	Trinity	XXX	Trinity	TL Silver Wide	TL Silver Taper	Trinity

Brian Kinw

TK1521, "Bomb One" Ultra Firm Rear Inserts
Advantage: More precise handling on blue grooved tracks with slicks!

Truck Modified Final Results!

	Driver	Motor	Car	Battery	Front Tires	Rear Tires	Foam Insert
1	Brian Kinwald-TQ	Trinity	XXT	Trinity	TL Silver Taper	TL Silver Taper	Trinity
2	Greg Hodapp	Trinity	XXT	Trinity	TL Silver Taper	TL Silver Taper	Trinity
3	Matt Francis	Trinity	XXT	Trinity	TL Silver Direct	TL Silver Taper	Trinity
4	Sohrab Tavakoli	Orion	XXT	Orion	Proline	TL Silver Taper	Proline
5	Billy Easton	Reedy	T3	Reedy	TL Silver 8-Rib	TL Silver Taper	Proline
6	Rich Hohwart	Peak	XXT	Peak	TL Silver 8-Rib	TL Silver Taper	Proline
7	Travis Amezcua	Orion	XXT	Orion	TL Silver Taper	TL Silver Taper	Proline
8	Mark Francis	Trinity	XXT	Trinity	TL Silver 8-Rib	TL Silver Taper	Trinity
9	Chad Bradley	Reedy	T3	Reedy	Proline	TL Silver Taper	Proline
10	Scott Brown	Trinity	XXT	Trinity	TL Silver Taper	TL Silver Taper	Trinity



Team Kinwald "Bomb" Triple Stage Inserts
Advantage: Makes tuning your car to the track easier!

4wd Modified Final Results!

	Driver	Motor	Car	Battery	Front Tires	Rear Tires	Foam Insert
1	Brian Kinwald-TQ	Trinity	XX4	Trinity	TL Silver Taper	TL Silver Taper	Trinity
2	Greg Hodapp	Trinity	XX4	Trinity	TL Silver Taper	TL Silver Taper	Trinity
3	Scott Brown	Trinity	XX4	Trinity	TL Silver Taper	TL Silver Taper	Trinity
4	Mark Francis	Trinity	XX4	Trinity	TL Silver Taper	TL Silver Taper	Trinity
5	Jordon Musser	GM	XX4	GM	TL Silver Taper	TL Silver Taper	Proline
6	Travis Amezcua	Orion	XX4	Orion	TL Silver Taper	TL Silver Taper	Proline
7	Todd Hodge	GM	XX4	GM	TL Silver Wide	TL Silver Taper	Trinity
8	Brian Dunbar	GM	XX4	GM	TL Silver Taper	TL Silver Taper	Trinity
9	Rich Hohwart	Peak	XX4	Peak	TL Silver Block	TL Silver Taper	Proline
10	Mark Pavidis	Reedy	Yokomo	Reedy	Proline	Proline	Proline



TL2001A, Team Trinity/Losi Wrecking Crew
Greg Hodapp, Brian Kinwald, Matt Francis
Advantage: Guaranteed to wreck the competitions weekend!

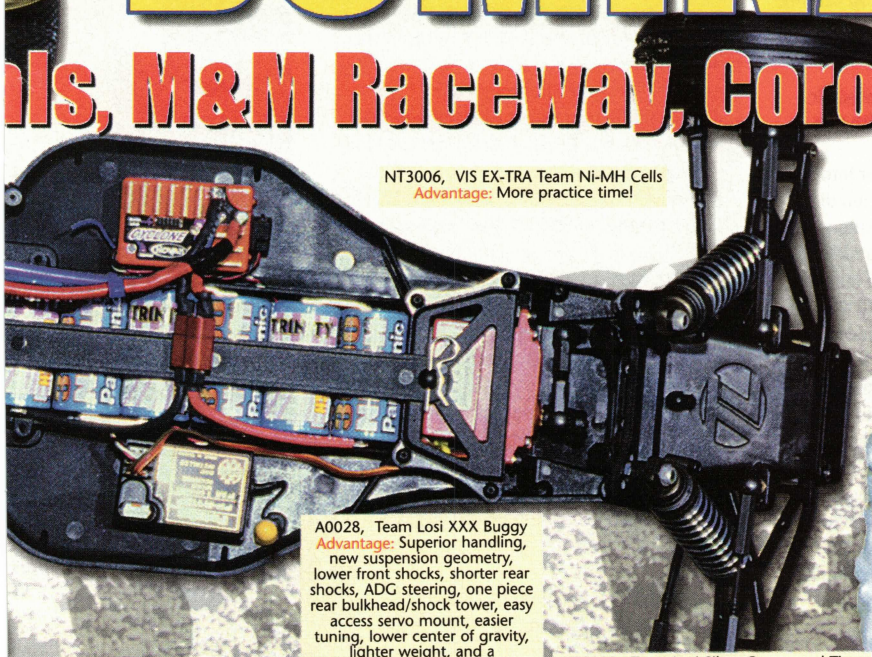
PARENTAL ADVISORY

EQUIPMENT SO FAST THE COMPETITION

visit us on the world wide web: www.tea

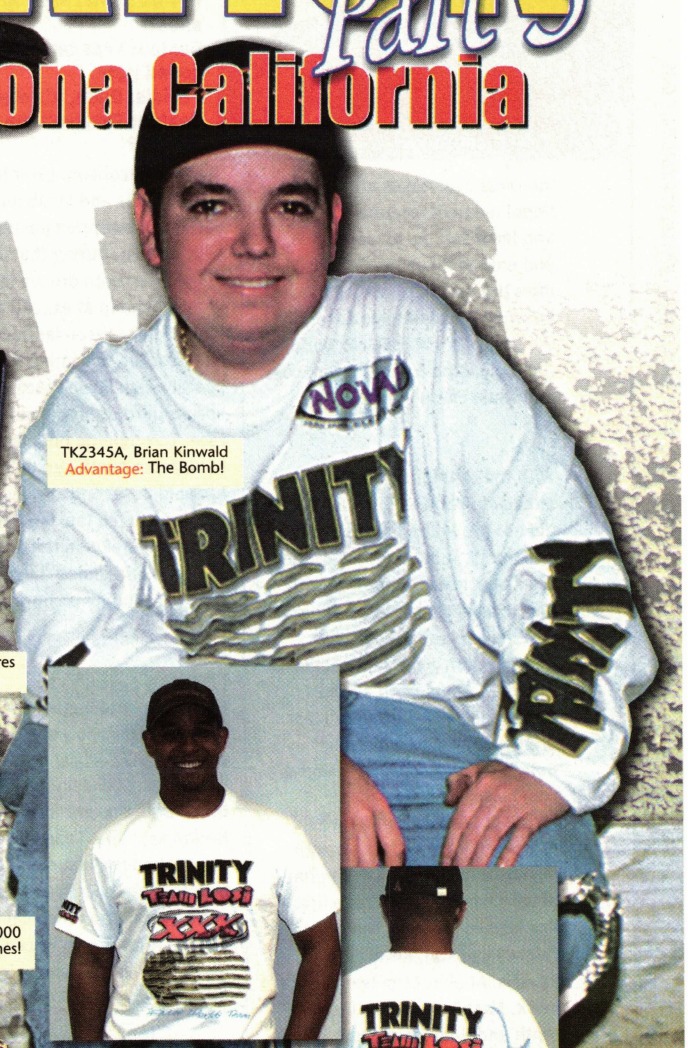
DOMINATION Part 3

ls, M&M Raceway, Corona California



NT3006, VIS EX-TRA Team Ni-MH Cells
Advantage: More practice time!

A0028, Team Losi XXX Buggy
Advantage: Superior handling, new suspension geometry, lower front shocks, shorter rear shocks, ADG steering, one piece rear bulkhead/shock tower, easy access servo mount, easier tuning, lower center of gravity, lighter weight, and a proven winner!

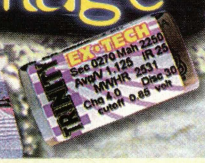


TK2345A, Brian Kinwald
Advantage: The Bomb!

A7201S, Team Losi Silver Compound Tires
Advantage: Perfect steering!

ald's Unfair Advantage





VXT2006, VIS EX-TRA Team Sanyo RC2000
Advantage: More voltage, longer run times!

Official Team Trinity/Losi Worlds Shirt
RC9747, Large
RC9748, X-Large
RC9749, XX-Large
RC9756, XXX-Large
Advantage: Lets you look like part of the team, makes you irresistible to women!

RC6683, Zip Free Traction
Advantage: Softens off-road tires for more traction!



D35213, 13 T Double D3.5 Modified Motor
Advantage: Awesome horsepower!





TK3504, Team Kinwald Multi Stage Insert Glue
Advantage: Glues multi stage inner liners together for more precise handling!

OULD LOVE TO SEE IT BANNED!

losi.com, www.teamtrinity.com

TRINITY
TEAM LOSI
Racing



Saxton and Pavidis chat:
Saxton: I think you should lean it out.
Pavidis: What?
Saxton: It sounds like it's not on the pipe when you come around the corners.
Pavidis: What are you talking about?
Saxton: Your car, it doesn't sound right.
Pavidis: Dude, it's electric.
Saxton: This isn't the gas Worlds?

race was over it was a very emotional moment for both Steenari and Jacobson. As disappointed and emotional as Jacobson was after the race, he was satisfied knowing his teammate secured the first ever 4WD IFMAR World Championship for both Team Losi and Team Orion motors.

Leg 3

With the championship title already in hand for him, Steenari did not run in the final leg of the A-Main. With Steenari out of the running, Kinwald enjoyed the holeshot as the first car on the grid. Pavidis tangled up with Kinwald during the turn section of the track. The mix up allowed Jacobson to move into the lead briefly with Leino in second. Before the first lap was finished, Leino took the lead from Jacobson. At this point Kinwald recovered from his mix up with Pavidis and was back in the running in third place. For the first five laps of the race, the order was Leino, Jacobson, Kinwald, and Pavidis. At about the two minute mark, Matt Francis was in the tenth and final racing spot. To lighten up the moment a bit Matt, whether it was on purpose or not, did a cross-up on the large jump just in front of the drivers, stand. By turning his front wheels from lock-to-lock his car did kind of a Super Cross-style aerial display. At the three minute mark Jacobson got mixed up and flipped over. Both Kinwald and Pavidis rocketed past Jacobson. Later into the race, Pavidis and Jacobson did battle and swapped positions for a little while. During the ninth lap of the race, both drivers landed the triple jump at exactly the same time, but Jacobson landed on the inside of the upcoming turn. This positioning allowed Jacobson to secure third until the end of the race. Through the final laps of the race, Leino continued to lead with Kinwald in second and Jacobson in third. On the last lap Pavidis made a mistake on the small double jump and ended finishing in the final running position.

2WD

Practice

Friday morning began 2WD practice. Expectations were high for everyone. Team Losi drivers were hot, coming off a dominating exhibition at the recent ROAR Modified Nationals, while Team Associated drivers had the luxury of knowing how to tune their B3s to any type of track condition they came across. After the practice day, there were lots of smiles in the Associated camp.

Qualifying

On Saturday, four rounds of qualifying were held. Things looked very good for the Associated drivers. Their cars were turning fast times as early as the first round. Most of the Losi drivers had problems early on. It wasn't until Matt Francis and Brian Dunbar departed from the setup most of the Losi drivers were experimenting with, that the Losi drivers became faster. On the last round of qualifying Matt Francis turned his best time so far trying to get into the A-main. Despite having the fastest single lap time of the event, it wasn't enough to get Matt into the main. He missed the show by one point. When the dust settled, six of the top ten drivers were driving B3's. Going in to the A-main, the top ten drivers were as follow in order; Mark Pavidis, Brian

Race Notes

- American racer Derek Furutani had the best looking paint job in 4WD.
- The 2WD track layout was 16 meters shorter than the track layout used for 4WD.
- At one night club in particular racers could play black jack, although the rules were in the dealers favor (at least more so than they are in Vegas). The dealer would collect on pushes.

Important Parts In The Pits

Pro-Line



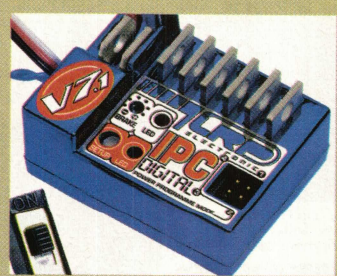
Tim Clark and the crew from Pro-Line came equipped with lots of new goodies just for this race. In fact, one of their new products was instrumental in Masami's 2WD win. The new piece of hardware that had the biggest impact on the event from Pro-Line was their Rounded Radius Rib front tires. The tires are just slightly wider than the original Radius Ribs. The major difference with these tires is the slightly rounded inside edges on the ribs. The tires exhibit similar drive characteristics to tires that have been broken in for a couple of rounds.

There was some controversy surrounding these new tires. Pro-Line tried to keep these tires for just Pro-Line sponsored drivers. Somehow a couple of drivers that didn't have permission to use the tires managed to get a pair (nice way of saying stole). Pro-Line threatened to confiscate the tires (nice way of saying "we'll slice them in to itsy bitsy pieces") if they found them being used on the track and the problem was solved. But don't let that keep you from trying them out. Expect to see these new tires on the market very soon.



Another new tire from Pro-Line at this year's race was the "Slasher" rear. The Slasher features same size spikes as the Super Square but has a tread design that spaces the spikes differently on the center radius than on the side radii. The tread pattern is designed to give different forward bite and side bite characteristics.

LRP



All of the LRP sponsored drivers were decked out with a new IPC Digital V7.1 ESC featuring new software and some hardware improvements. The new software is designed to provide more consistent braking and better drag brake characteristics. The ESC's FETs are also updated to provide a very, very small improvement in on-resistance. We expect that the V7.1 will be replacing the V6 in the months to come. Another interesting gadget coming from the LRP camp is the Phaser Shielded receiver. Although it's been in the works for some time, the Phaser will soon be imported into the States for the first time. The Phaser is shielded for interference reduction and works with any radio manufacturers crystals. LRP will offer crystals cut specifically for the Phaser.

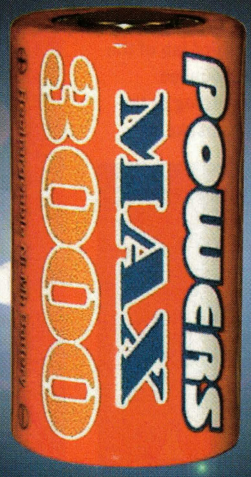
One other LRP product to mention is their Blue Factor ZipTurbo. This is basically CA accelerator in an aerosol can. The Blue Factor Zip Turbo was used by just about every racer their due in part to fact that it comes out in a nice fine mist and doesn't discolor the CA. Unfortunately, we don't expect LRP to import this product to the States, but it's a very good product idea.



Special thanks to LRP for keeping our camera flash batteries charged all week!!!

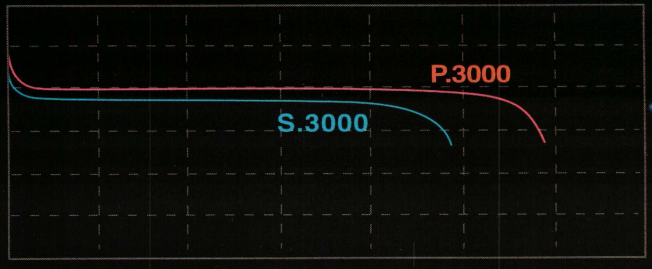
POWERS International

THE NEXT GENERATION



POWERS MAX 3000

The Beginning of Red Cell Legend.....Powers Max 3000 has finally arrived.



The Powers Max 3000 cell is a Ni-MH battery specially designed for the demands of R/C cars. Its voltage is unusually high for Ni-MH batteries while still achieving high capacity. You can now enjoy high power modified motors without the fear of dumping. Every drivers dream; faster, longer and powerful running has come to reality by the Powers Max 3000 cell.

*Be cautious while handling Ni-MH cells.

: Distributed by POWERS International.

: Made by Matsushita Electric Industrial Co., Ltd.

POWERS U.S.A.

Distributed by Schumacher

SCHUMACHER USA Inc. Tel : 813-889-9691 Fax : 813-889-9593

6302 Benjamin Road Suite 404 Tampa Florida 33634

Kinwald, Masami Hirosaka, Jason Ruona, Rick Hohwart, Billy Easton, Lloyd Dassonville, Teemu Leino, Jukka Steenari, and Jouko Termonen. Jouko who? Jouko Termonen was a Finnish driver that was about as close as you're going to get to a privateer at an event like this. Thanks to some great driving, persistence, and determination, Jouko managed to get his almost-stock B3 into the A-main. Jouko has some sponsorship help from a hobby distributor there in Finland, but it was nothing like the sponsorship help that dozens of lower qualified drivers below him receive. It was great to see Jouko in the show. Everyone had lots of respect for him after seeing what he was able to accomplish. Our hats off to Jouko

A-Main

Leg 1

At the start of the race Pavidis, car was positioned at the very first line on the grid. Just a few feet behind and to the side of him was Kinwald's starting spot. The end of the straightaway has a sweeping turn to the left. So Kinwald's position on the grid had a straight line shot to the first turn. As the buzzer sounded and the race began Kinwald had a very quick off the line start. Pavidis however didn,t get enough forward traction or was caught sleeping. Both Pavidis and Kinwald took off direct lines aiming for that first turn, unfortunately their paths crossed and Kinwald ended up on his lid. Around the first sweeping turn and into the first double jump, Hirosaka was in the lead early while fifth qualifier Rick Hohwart was close in second place with Steenari in third. On the hairpin turn leading to the triple jump, Hirosaka caught the corner of the pipe allowing Hohwart to take over the number one position. Hohwart's lead was short lived. On the third lap of the race, Hohwart's car got bounced around on the mogul's leading to the front straight allowing Hirosaka to

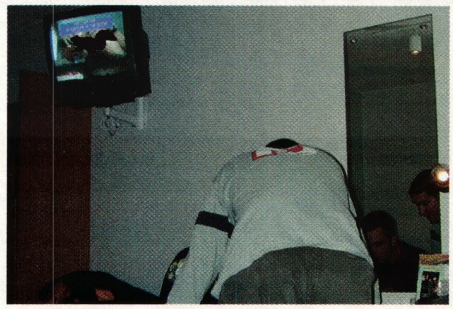
IFMAR Meeting

On Friday evening after 2WD practice IFMAR had an open meeting to discuss a number of issues facing IFMAR events and racing in general. A number of topics were discussed, two of the most opinionated topics were concerning Nickel Metal Hydride batteries and limitations on tires. As far as Nickel Metal Hydride is concerned it looks as if these new batteries will become legal for IFMAR-sanctioned races. Some countries have set dates banning Nickel Cadmium batteries. If Nickel Metal Hydride does not become legal for IFMAR races it would effectively mean that racers from countries banning Ni-Cads would be unable to compete.

The other major topic of discussion was spec tires for these world championship events. Tires are a major concern when you figure out the costs of racing, especially when competing in an event of this caliber. An open letter and proposal was presented to IFMAR. The proposal would put into effect a spec tire to be used by all the participants at the event. Here are the suggested minimum criteria for a spec tire as posed in the proposal:

1. A single manufacturer will supply a single type tire with a special "molded in" marking for the event. Separate manufacturers may be used when different front and rear tires are used.
2. The organizer will mark the tire with a unique hot "brand" that can not be duplicated.
3. The tire chosen for an event must be readily and commercially available at least 6 months prior to the event.
4. All tires supplied to the organizer of an event will be produced from the same batch of raw material.
5. A limited and equal quantity of tires will be allowed. Each competitor's mounted tires will be permanently marked and recorded at tech. No sharing of tires allowed.
6. The quantity and type of tire to be used at an event will be determined by the organizer and a panel of drivers appointed by IFMAR and approved by a majority of the member blocks.
7. Any competitor or manufacturer found to be cheating will be barred from all future IFMAR events.

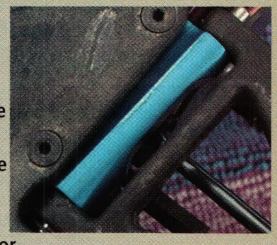
I agree with this proposal in principal. I definitely think that something needs to be done about the escalating cost to compete in this type of event. I also believe that something like this is in even greater demand on the National level. I do however think that the Worlds is not simply a driver's race, but a manufacturer's race. Limiting the tires used to just one manufacturer, no matter how it is arrived or decided on, is very limiting. Where does it stop? Would we eventually have a spec motor, ESC, radio, or car? The open letter pointed out that even the highest levels of auto racing has a spec or limited tire environment. But in CART for instance if you don't like the Goodyears you can always run the Firestones. The choice is still there. What do you think? Let us know. Write to us at xmail@xtremerc.com.



Two drivers catch a ball game on the tele and look up stock quotes on the Internet.

Important Parts In The Pits

Trinity



Trinity had a number of new products on hand at the race

• Team Kinwald Blue Triple-X Pieces

Trinity drivers used Team Kinwald blue anodized aluminum pivot supports. The new piece is stronger than the one it replaces and has a bright blue, anodized look. Also new was a Team Kinwald blue anodized aluminum motor plate with cooling veins. The new piece adds to the looks of the car and keeps the motor running cooler.



• Da-Bomb 2

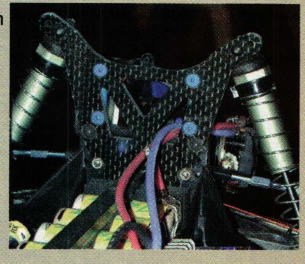
Trinity's Da-Bomb 2 2-stage tire foam was sought after by everyone on Wednesday and Thursday for 4WD. The new foam along with Losi's Yellow compound Taper Pin tires made a lethal combination in 4WD.



• Blue Mod-Lathe

To keep the Trinity Drivers fast, Jim Dieter used Trinity's new Blue Mod-Lathe to cut comms. The new lathe will be packaged with a sturdy carrying case and will come with pre-cut foam and tubes to hold additional armatures and tools.

Team Associated



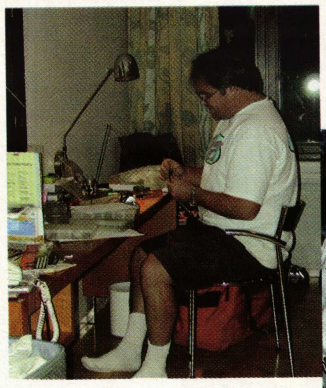
All of the B3's that made the A-main featured a new graphite shock tower with attached Factory Team Blue wing mount tubes. The new shock tower places the rear upper shock mounts lower and closer to the chassis for more suspension down travel. At the race, it was unsure if the new shock tower would ever make to market.

Team Losi



Losi brought with them a new tire compound that worked perfectly in 4WD. In fact, Jukka Steenari rode to victory using Taper Pin tires in the new Yellow compound. The new Yellow compound is unlike any of Losi's currently available compounds. It wears like the red compound but delivers more traction. The yellow compound was specifically designed for track surfaces similar to the one found in Finland.


TRAXXAS®
SLEDGE HAMMER
Model 1806 Ready-to-run w/ESC, TQ Radio
Model 1801 Unassembled kit
RUSTLER
TQ
TOP QUALIFIER
Model 3701 unassembled kit
Model 3710 Ready-to-run w/TQ radio
Model 2203 TQ radio w/ 2 servos
Model 2204 TQ radio w/1 servo and ESC
BLAST
Model 3810 Ready-to-run w/ ESC
BANDIT
Model 2401 unassembled kit
Model 2410 Ready-to-run w/TQ Radio
HIGH VOLTAGE EXCITEMENT!
Villain IV
Model 1501 unassembled kit
Model 1508 Ready-to-run w/ 2-Ch radio and ESC
TRAXXAS ON THE INTERNET!
www.traxxas.com
STAMPEDE
Model 3601 unassembled kit
Model 3610 Ready-to-run w/TQ Radio
STREET SPORT
Model 4201 unassembled kit
Model 4210 Ready-to-run w/TQ Radio
SPIRIT
Model 1209 Ready-to-run w/ radio (only)
4 TEC
ALL WHEEL DRIVE
Model 4301 unassembled kit
Model 4310 Ready-to-run w/TQ Radio
Traxxas Corp. 12150 Shiloh Rd., Dallas, TX 75228 Ph. (972) 613-3300 Fax (972) 613-3599. Traxxas U.K., P.O. Box 1128, Winterbourne, Bristol, BS36-2SH, England. Ph. 44-117-956-1002 Fax 44-117-956-1121. © Copyright Traxxas Corp. 1999. Internet: www.traxxas.com. Call, write, or fax for your nearest hobby shop and our latest catalog. Specifications subject to change. Bodies shown are custom painted. Ready-to-runs are fully assembled. Batteries and charger not included. Kits include motor and rotary speed control.





Left: Rick Hohwart almost pulled an all nighter getting his car tuned for the final day of 2-wheel. Below: During practice. Brian Kinwald tried a number of different setups looking for just the right one.

pass. As the race progressed, Hirosaka continued to stretch his lead by turning four continuous laps under twenty six seconds. While he was imagining the win, Hohwart, Steenari, and Pavidis all formed a freight train through the infield. Only a few feet separated all three cars battling for second position. At about the three and a half minute mark, Kinwald moved past Pavidis to take over the fourth spot behind Steenari. For the remainder of the race Hirosaka was flawless. His lap times slowed down a bit, but he made no mistakes. As the final buzzer sounded, He squeaked by to beat the buzzer and turn 12 laps. He was followed by Hohwart in the second spot and Steenari in the third position.

Leg 2

Just before the start of the second leg, the tension was thick. The entire auditorium was filled with absolute silence. When the countdown beeper wore down and the sounding buzzer went off, Kinwald rocket off the line and got a clean holeshot into the first sweeping turn. Soon after Pavidis tucked right in behind. Pavidis looked to get by but couldn't. As the cars worked their way through the first few turns, Pavidis adjusted course to get past Hirosaka on the short straight section just before the large jump in front of the drivers' stand, but failed and ended up hitting one of the pyramids. During the second lap of the race Hirosaka got loose and spun out just in front of the straightaway allowing almost the entire pack of cars to get by. Once the dust settled, Pavidis was about a half a straightaway behind Kinwald and closing. A couple of more laps ran by with no changes in position. At the halfway point in the race, it got interesting. Pavidis was right on Kinwald's tail. On the seventh lap, Kinwald lined up for the triple jump taking the first jump and going for a double one the back end just as all of the 2WD drivers had been. Kinwald's effort failed causing him to endo over the hard-packed final mound of dirt. The mistake cost Kinwald the lead, but only for a moment. On the next lap, both Kinwald and Pavidis barreled down the short straight leading to the large single jump. Both drivers hit each other and tumbled. The mix up looked clean and was simply a racing situation; no boos could be heard from the hoards of spectators that lined the track. For the remainder of the race Pavidis and Kinwald battled back in forth just as the had done so many times before. With all this exciting racing going on up front, not too many eyes were on the rest of the field. Good thing. No position changes took place from third to sixth for the remainder of the race. On the eight lap of the race, Pavidis hit a pyramid and lost a little ground. Shortly after Kinwald was shaken up on the mogul section allowing Pavidis to close the door. A drag race ensued down the straight-

Talking With A Winner



Xtreme: Where will you put the trophy?
Masami: It will go to the Yokomo warehouse. I have no room in my home.

Xtreme: You didn't do as well as you probably thought you would in 4WD. What were your expectations going in to 2WD?
Masami: Since I didn't do well in 4WD, I was depressed and didn't think I'd do very well in 2WD either. But, I felt very responsible that I had to win that way I could do well.

Xtreme: Where you going to become a Finnish citizen if you didn't win?
Masami: Well, I'd still go home, but I'd be ashamed at work.

Xtreme: During practice how did you feel after the first day?
Masami: My run time was better than I thought so I started thinking I may have a chance.

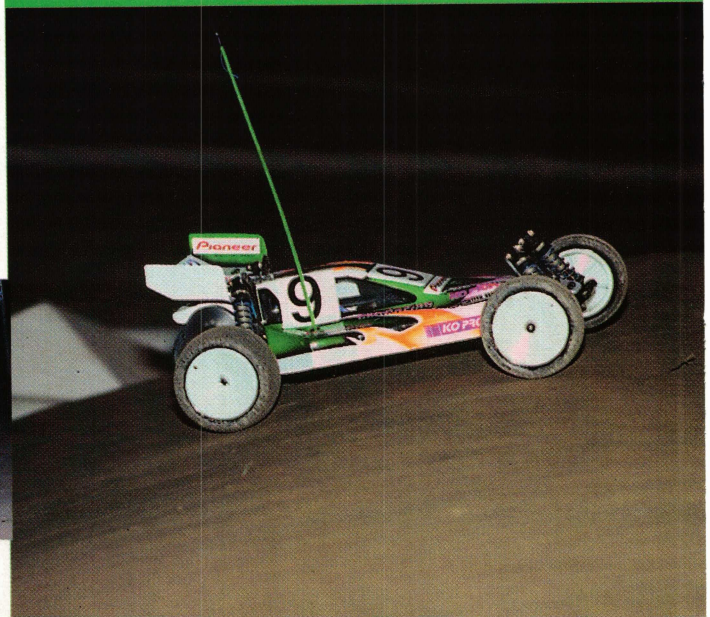
Xtreme: After 4WD and the first day of 2WD, was there any renewed confidence for today's race?
Masami: I had no confidence at all. I still cannot believe it.

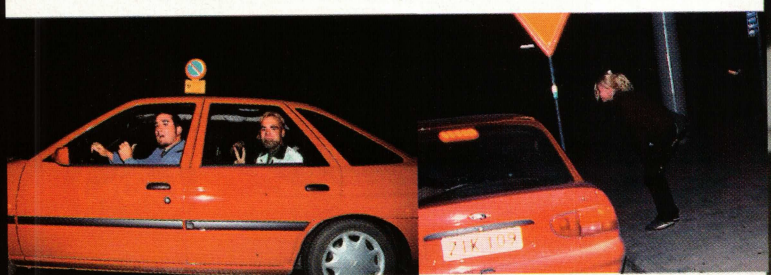
Xtreme: Before this race how long had it been since you'd driven a 2WD buggy?
Masami: Before the race I had two days of practice. Prior to that I hadn't run buggy since the Japanese Nationals last year. So that would be over a year. I didn't attended the Winter Nationals or the Reedy Race this year.

Xtreme: With nine championships already under your belt before this one, how do you find motivation? What motivates you to win?
Masami: I want to go as far as I can. If I can get one more I'll be very happy.

Xtreme: Do you plan on retiring anytime soon?
Masami: I will retire when Mike Reedy retires.

Xtreme: Congratulations. Thank you for your time. I wish you a safe trip home.
Masami: Thank You





For ten straight days, Richard Saxton terrorized the streets and the women of Rauma.

TWO WAYS TO WIN



Quit yer glitch'in, just shut-up and drive.

"Glitching" sucks, so Hitec engineers developed the three-channel, FM, dual conversion DCX receiver. Using the same dual conversion technology we have used for years to produce the world's best R/C aircraft receivers, the DCX receiver filters your transmitters signal twice, instead of just once, for crystal clear reception. The DCX is so good it will operate virtually "glitch" free in most situations, even with your transmitter antenna collapsed! With up to 50% more range and rock solid reception, nothing else comes close to the uncompromising performance of the DCX.



DUAL CONVERSION TECHNOLOGY

With three versions of the DCX receiver to choose from there will be one to work with your existing transmitter.



#24227
For all 27mHz FM transmitters

#24275
For all 75mHz Hitec and Fut FM transmitters

#24375
For all 75mHz Air't, JR and KO FM transmitters

DSC feature is compatible with the Lynx 3D Tx only. You must use Hitec dual conversion crystals with the DCX receiver.

The single conversion, three-channel FM HFS-03MC from Hitec is the affordable choice in aftermarket receivers. Bundled with our popular Lynx FM and the two stick Ranger 3 FM systems, the HFS-03MC offers the solid performance and reliability you expect from all Hitec receivers and is offered in a version compatible with your FM transmitter.

The HFS-03MC is DSC compatible with the Lynx 3D transmitter and is available in two versions:

#24527 for all 27mHz transmitters
#24575 for all 75mHz transmitters

When using another manufacturer's transmitter you must use the matching manufacturer's Rx crystal in the HFS-03MC.

hitec Racing

Hitec RCD, Inc. (858) 748-6948
12115 Paine St. ▪ Poway, CA 92064

See our complete product line on the worldwide web
www.hitecrcd.com

We've moved.

HITEC RADIO SYSTEMS

HITEC RADIO SYSTEMS



away. Both cars look to be even in speed for the most part. Only a meter (hey, we're in Europe, right?) separated the two drivers, all the time Pavidis looking to find some way around Kinwald. On the last lap, Pavidis clipped a pyramid in an effort to pass Kinwald. The mistake meant the race was Kinwald's to win. And that he did. Pavidis finished in second, Hirosaka in third, Steenari in fourth, and Ruona in fifth. At the end of the race, the crowd cheered and everyone at the track, with exception of Hirosaka, was happy that we were going to be treated to another exciting race.

Leg 3

This was it. Hirosaka, Kinwald, Steenari, Pavidis, and Hohwart were all in the hunt for the win depending how others finished. Only Kinwald and Hirosaka controlled their own fates with a win. Before the start of the race, there was an eerie tension all around. There weren,t too many predictions considering it was still anybody,s race. When the car,s were positioned on the track and the grid was cleared, the only thing that could be heard was a God Smack CD playing in the background. A few minutes before the race, Matt Francis threw the God Smack CD into stereo to pump some pre-race adrenaline into Kinwald. With the music in the background, the buzzer sounded. Kinwald got the clean jump and was in the lead in and out of the first turn. As Kinwald rounded the turn just before the first double jump Pavidis ran into Kinwald's side causing his car to roll over. There was very little reaction from the crowd. The actual incident was not penalized, nor should it have been. I'd best describe it as Pavidis pushing into Kinwald. The hit was definitely not clean or something you'd like to see at a race like this, but nonetheless, not worthy of a penalty, or at least not according to IFMAR referees. As the race progressed the top five cars were all Associated. Hirosaka, Pavidis, Easton, Dassonville, and Ruona led the pack. That soon changed as Kinwald worked his way back through the pack and was in fourth position by the end of the second lap. In front of Kinwald was Easton who wasn't about to let him by. Kinwald kept the pressure on Easton and finally got by during the fifth lap. From there Easton was all over Kinwald trying to take back the position. Easton drove strapped from lap seven to ten getting all over Kinwald. At one point Easton didn't let off the throttle at all on the large jump just in front of the drivers' stand and almost landed on top of Kinwald. The move drew some boos from the crowd. Finally in the second-to-last lap, Easton moved past Kinwald just in front of the large drivers, stand jump. In the last moments of the race, Pavidis gave it all he had to catch Hirosaka, but it wasn't enough. Hirosaka crossed the finish line less than a second in front of Pavidis to capture his tenth IFMAR World Championship.

When the Champions were crowned, their hard-fought victories were deserving. For Steenari, it was an truly satisfying accomplishment. Two years ago he was runner up in the 4WD class with a completely different car. This year he did exactly what it took to win in the 4WD class and gave his two major sponsors, Team Losi and Team Orion, the championships they were looking for. For Hirosaka the legend only grows. He hadn't touched an off-road car before this event in over a year. He adds his tenth world championship to his long list of accomplishments and fortifies his standing as the greatest R/C car driver in the world. *Xtreme R/C Cars* magazine would like to congratulate the winners and everyone involved in this year's event.

Controversy

•As you would expect this year's Worlds had its fair share of controversy. Thanks to non-specific rules, the starting grid positioned the cars very, very close together. In the 4WD A-main, TQ Jukka Steenari was given the choice of starting position by the race officials. Jukka chose the most forward outside position. Thanks to lots of traction in the 4WD class this was no problem for Jukka to cut across the lane to the first left hand turn. In 2WD Mark Pavidis was never given the choice of choosing his starting position – a choice he earned by being the top qualifier. His having the Pole Position and still having to cut across the lane to the first turn caused some problems as evidenced in the first leg of the A-main.

•Throughout the week and especially in the two A-mains, some hard feelings had been brewing between Brian Kinwald and Mark Pavidis. Mark's questionable move in the third leg of the 2WD A-main worsened the tension between the two. This became apparent to everyone during the trophy presentation after the 2WD race. After the champagne had been poured, Brian Kinwald let his emotions get the best of him and he threw his spent bottle champagne at Mark's car and trophy. The action completely killed the mood and stunned many of the spectators and racers.



Race Notes:

•The Rauma Auto Sport Club, who hosted the event, was founded 35 years ago.
•Finland's population is about five million.
•One in five Fins tune in to watch Formula One races live on television.
•The northern portion of Finland, called Lapland, sees sunlight almost 24 hours a day at this time of the year.
•Scott "The Squirrel" Hughes was seen running across the rooftop of the host hotel in nothing but his shoes. Thankfully no pictures were taken of this terrifying event.
•Gil Losi, Sr. and Ernie Provetti, two of the industry's most powerful men, were kept from watching the 2WD mains in an area designated for IFMAR referees. (That's saying it nicely, they were actually told to leave.)
•On the return, Mike Velez worked the Associated guys for over a $100 bucks playing cards. The Squirrel was the biggest contributor to Mike's little slush fund.
•When drivers registered their cars and went through tech, a registration sticker was placed on each chassis indicating that the car had been inspected and was in the race. The rules state that chassis may not be changed without approval of the Race Director. With today's modular car design, a number of drivers used rear and front end assemblies from other driver's cars. This was technically not a violation of the rules.
•Brian Kinwald won the second A-main leg using Matt Francis's front and rear ends.
•During 2WD qualifying, some Losi drivers were trying a super large rear wing with an additional front spoiler.
•During the 2WD A-main Mark Pavidis turned the fastest lap in each leg.

Yokomo will be selling Masami's complete Worlds Outfit. Order yours now!

Aurora

THE NEXT GENERATION OF MODIFIED MOTORS



CAD DESIGNED
PATTERN WOUND
EPOXY BALANCED
RACE BRUSHES AND SPRINGS

COMING SOON



TOP 3000 nickel metal hydride cells in PowerFlo voltage enhanced, matched, and assembled versions.

Peak

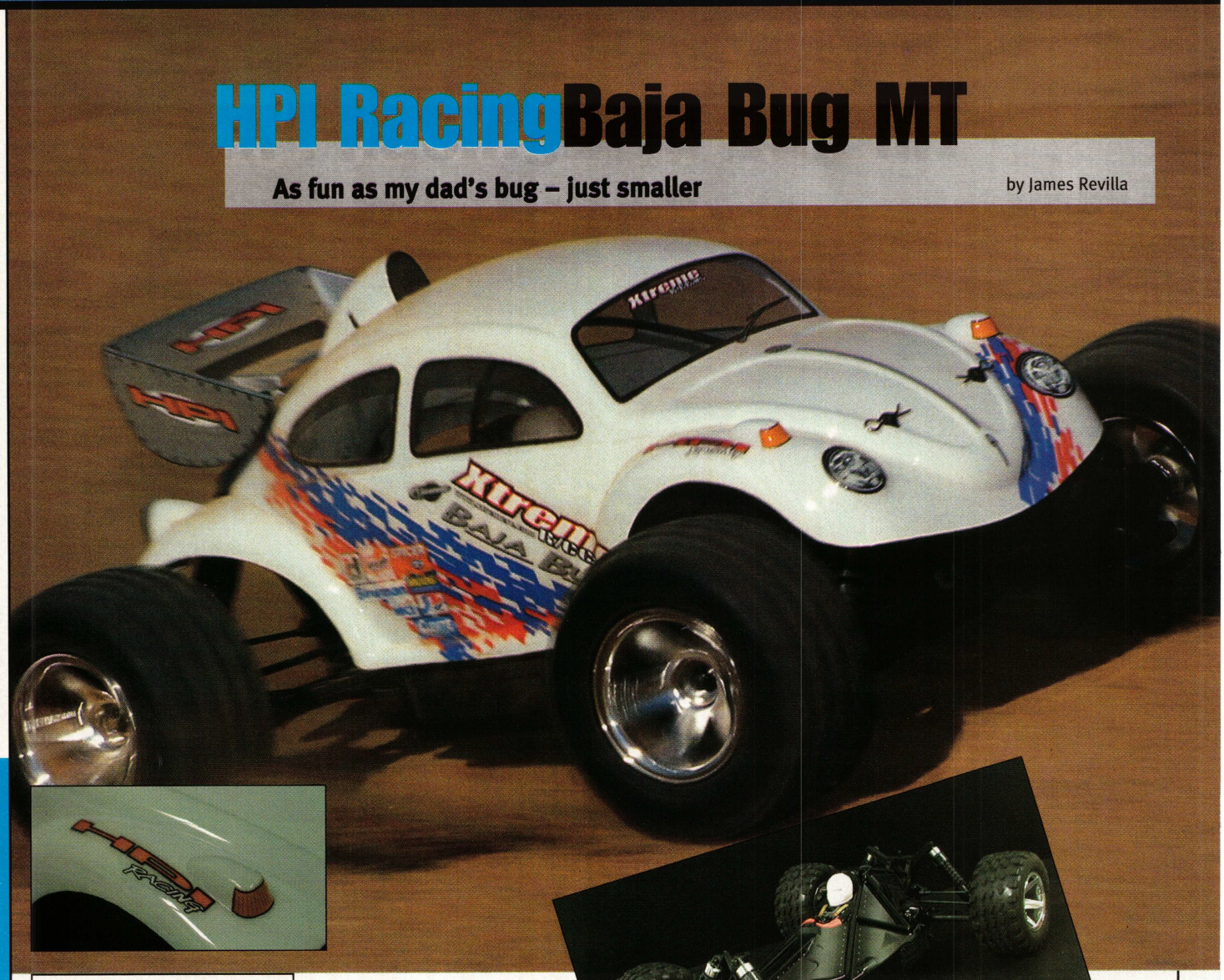
www.peakmotors.com
949.707.4683

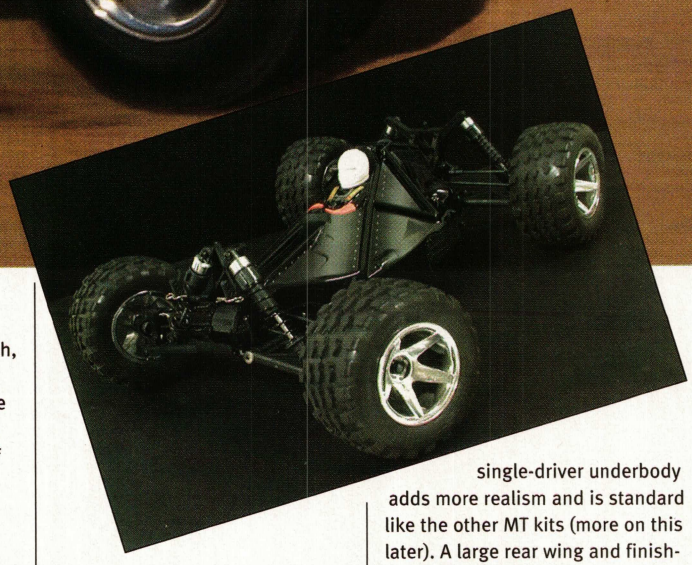
We can't wait to show you the rebuildable stock version.

HPI Racing Baja Bug MT

As fun as my dad's bug – just smaller

by James Revilla





VITAL INFO

HPI Racing
15321 Barranca Pkwy.
Irvine, CA 92618
949.753.1099 ph 949.753.1098 fax

THE HITS

- Good, all around performer.
- Proven drive system.
- Pro-Line tires grab the ground.
- Nicely detailed body.

THE MISSES

- Inner body keeps vital cooling air out.
- Receiver space small when using saddle packs.

THE LAST WORD

Underneath the classic Bug body, the HPI MT chassis is all about off-road. The four wheel drive, oil-filled shocks, and Pro-Line tires make it a complete "dirt burning" package that is sure to please anyone who gets their hands on one.

I remember in my childhood when I was maybe five-ish, my dad owned a Volkswagen Beetle – a little white one with black vinyl seats and an AM radio. Every time I saw one of those "Desert Runner" Dune Buggies with Sand-paddle tires and tuned-up engines on TV, I would ask my dad why he didn't do that to his Bug (racing blood starts at a young age!).

I thought it was cool how the same frugal, slow, and relatively cramped (I was 5!) bug that my dad took me to school in was being used to tear up the Baja deserts in a no-holds barred race to the finish. Well guess what? 20 years later, my Baja Bug has arrived!

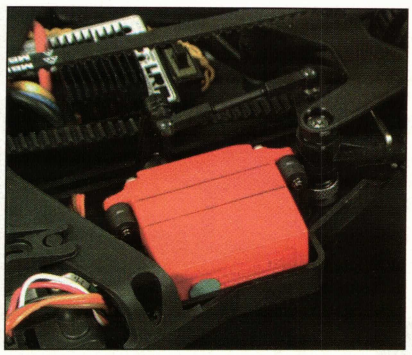
RS4 Baja Bug MT

Okay, so it's not a "real" Baja Bug. I can't even sit in it. However it is HPI Racing's latest version of their popular MT truck platform, the Baja Bug MT. The main highlight that differentiates this kit from others in the MT lineup is the highly-detailed and faithfully recreated Baja Bug body. The body is molded with the "modified bodywork" found on the dune buggies I wanted my dad to emulate, including a tall air intake scoop and an open engine bay showing off twin carbs, air filter can, drive belts, and even the oil filter. A detailed single-driver underbody adds more realism and is standard like the other MT kits (more on this later). A large rear wing and finishing decals are included.

FEATURES

Until this day the old story where the classic Bug chassis was light enough to float on water still floats around the VW community. The MT Bug probably won't float, but the chassis should handle a lot of abuse due to its tough, fiber-reinforced, molded-tub design. The innovative design of the MT's chassis allows the owner the choice of using stick, side-by-side, or saddle-pack batteries. A molded,

Volkswagen will return to Le Mans competition with a Beetle based race car. Just kiding.



A Multiplex Pro servo handled the steering duties while an LRP F-1 Power ESC took care of voltage control.

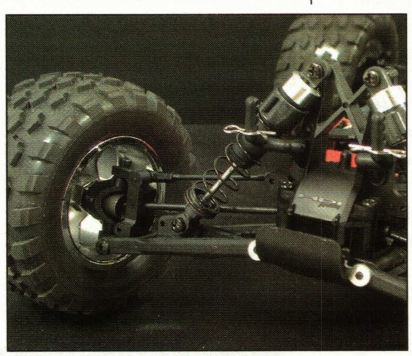
Y-shaped upper brace that reaches out to the outside edges of the chassis aid in its stiffness.

Powered by What?

Don't ask me what powered my dad's bug. It was slow and wouldn't start on Mondays. However, in the MT Bug I used a GM Pinnacle 24 degree motor to power the four wheels. Power runs from the motor through a twin belt transmission setup akin to that found on the RS4 Pro 2, HPI's racing sedan. Like the other RS4 MT kits already available, this kit features full-time 4WD through a dual-belt system. Two heavy duty metal bevel-gear differentials are on each end of the chassis. From here, hardened outdrives and dogbones reach out to heavy duty axles.

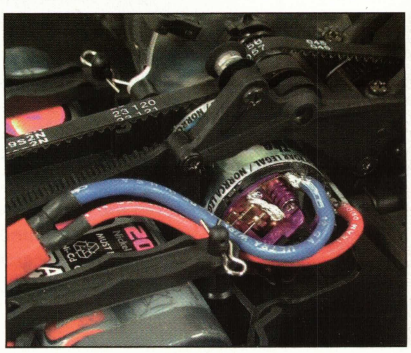
The Rough Stuff

Freeway trips were a bit scary in my dad's Bug. It seemed as if the skinny 13" tires would follow every groove in the road causing the Bug to sometimes veer to one side. Potholes and speed bumps had the same effect. If only his Bug had the suspension that the MT Bug has. The cornerstone of the suspension is HPI's super-long molded shocks. These shocks are oil-filled and feature molded pistons and O-ring seals. Extra long molded suspension arms combine with the shocks to provide the MT with an extended suspension travel to absorb bumps and jumps. Adjustable threaded upper arms position the wheels in their correct alignment. The MT Bug sports a set of shiny chrome HPI Super Star truck wheels wrapped with Pro-Line M2 Dirt Hawg block tires. These tires were designed specifically for dirt, so it is easy to assume that the Baja Bug will fare better in the rough stuff than the other MT's with HPI V-Groove radial tires.



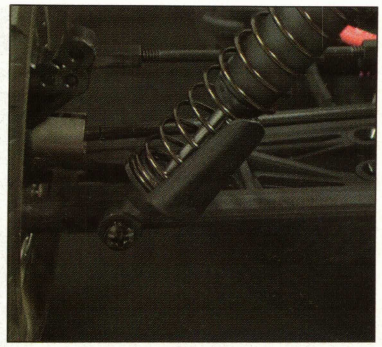
ABOVE: Long-throw, oil-filled shocks and long suspension arms give the Baja Bug a stable base.

BELOW: A pack of Orion Activated 1700 mAh cells and a GM Racing Pinnacle stock can provided ample power and run times.



Extras

No matter how quirky or noisy or "not fun over uneven pavement" my dad's Bug was, I liked it. I liked the pinstripe he added on the side (a thin one, not the two-foot wide ones you see on the hood of some cars these days). The add-on seat covers he bought were comfortable and actually pleasing to look at. Every little extra counted in its appeal. In the case of the Baja Bug, HPI includes nice extras such as a rear belt tensioner and carbon fiber, reinforced spur gear underneath a molded, quick-release gear cover. To keep mud and dirt off the rear shock shafts, the lower spring caps have dirt shields molded into them. Finally, the most functional "extra" is the interior dust cover that is form-fitted to the chassis. This is the same one-piece molded "interior/under body" used on the original RS4 MT, complete with driver helmet and interior decals. It does its job keeping dust and other grimy stuff out of the chassis.

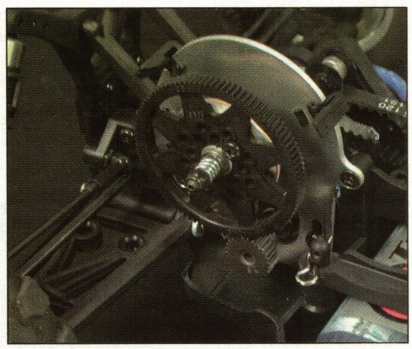


These trick spring seats feature an integrated spash shield to protect the rear shock shafts from kicked up dirt and grime.

TEST DRIVE

I conducted my test drive at a nearby bike track in Diamond Bar, CA. Before taking the trip, I installed the necessary components into the Baja Bug. These consisted of a JR Racing XR-2 radio system, Multiplex Pro steering servo, LRP F-1 Power ESC, GM Pinnacle 24 degree stock motor and an Orion 1700 Active Sport Pack. The night before I painted the Baja Bug body with Pactra paints.

After the pre-drive checks (i.e., steering alignment, ESC setup, etc.), I immediately took to the dirt track. Since the Baja Bug is 4WD, I knew I could power around curves without risking a spinout like some 2WD trucks I,ve driven. What I didn't expect was how quick the steering response was! After a few laps I felt very comfortable driving the machine. I found that if I let off on the throttle in mid





HPI's slipper clutch absorbs some of the drive train shock when landing off of jumps at full throttle. The included Lexan gear cover uses no screws or body clips to secure it. Instead, a pair of quick-release molded clips keep the cover in place.

Ants have nightmares revolving around magnifying glasses, sprinklers, and size 10 Nike's.

Bugs on Film

No I am not talking specifically Baja Bugs like the HPI machine, but all bugs in general. Some people fear bugs, some people worship bugs, and some people even eat bugs. We at *Xtreme R/C* do not fear bugs (lighter and motor spray anyone?), we don't worship bugs (we worship the R/C gods), nor do we eat them (unless we're really, REALLY hungry!) We do however like watching bug movies, so here's our list of our favorite "bugs on film":



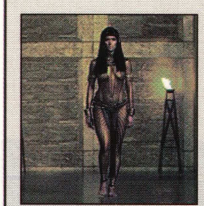
All those old "Herbie" movies (1974-1977)
Who would have ever thought that you could base a string of movies on a Volkswagen Beetle? Disney did just that many years ago with the "Herbie" series. "good old #57" did everything your car can't – drive on two wheels, survive numerous "accidents", and even float in a river (maybe that's where the rumor started!). Herbie may have been a pudgy German car known as "the Love Bug", but Disney made the films entertaining for all ages, even if they were as old as me!



Antz (1998)
Dreamworks SKG surprised everyone by beating Disney to the movie theaters with their "Bug" movie starring Zee (Woody Allen), a neurotic worker ant in a colony of millions who ends up saving his species from the evil intentions of his Army ant counterparts. A lot of guest voices added to the appeal of the movie, including Christopher Walken as the sympathetic Leutenant, Sly Stallone as Weaver, the buffest worker ant on the planet, and even last issues Babe of the Month Jennifer Lopez as Sly's main squeeze. Anne Bancroft, Gene Hackman, Dan Akroyd... the list goes on and on. You'll never look at ants the same way after this movie.

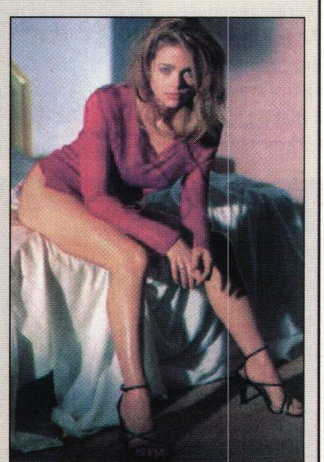
A Bugs Life (1998)
Disney's answer to "Antz" (or was it the other way around??) A Bugs Life follows along the life of Flik, another worker ant who unknowingly hires a troop of circus bugs to defend his fellow ants against the evil gang of grasshoppers (led by "Hopper", voiced by Kevin Spacey). As entertaining as "Antz", this Disney movie is worth watching for the comedy, the computer generated scenes, and the hilarious "out takes" during the film credits.



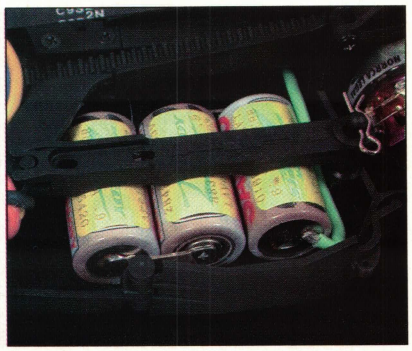


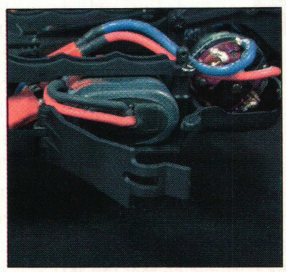
The Mummy (1999)
Brenden Fraisier stars as an ex-Legionnaire hired to help lead a group of archaeologists to blah blah blah... who cares, it's just Brenden Frasier! Okay. It may be about a mummy, but there are killer bugs in this movie, so it passes. Anyways. Every guy with a pulse who saw this movie lost track of time about 5 minutes into the movie when Desert Queen Anck Su Namun (played by euro-hottie Patricia Velasquez) walked into the "Temple of Forbidden Sand in the Pants" (I think that's what it was called) wearing nothing but a chain link fence and some body paint. Get your Egyptian maps out now!

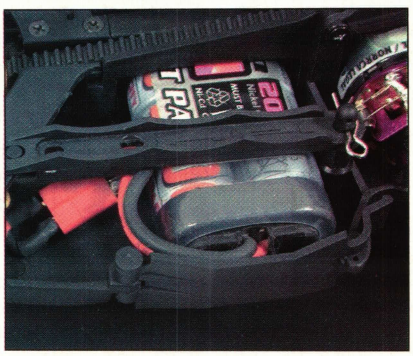
Starship Troopers (1997)
"All bugs must die!" was the most memorable line from this $100-million science fiction adventure, which followed the post-graduate lives of 4 students who join the "Mobile Infantry" to serve their planet, only to be shipped off to a desert world to destroy huge bugs that suck human brains AND threaten the existence of the troopers home planet (like the brain part wasn't bad enough). Kind of cheesy, but even if it has over 500 different visual effects the main reason why we like this movie is the film debut of one person – a superbabe named Denise Richards. Whoo hoo!



The Baja Bug chassis features HPI's trick battery mounting system. By flipping the upper molded braces over, you can convert the chassis to use stick or saddle-pack batteries. However, only stick pack racers can take advantage of the quick release battery door.







turn I could coax the rear end to come around. Likewise, if I went into the corner too fast and was on the verge of a spin, all I had to do was "floor the gas" and the Baja Bug would power it's way back to the correct direction.

The Baja Bug's suspension would soak up the small ruts and bumps quite well. On the jumps, the chassis was easy to level out in mid-air, but when it landed it seemed as if the rear suspension was a bit too soft as the whole body would dip down near the track surface. However, the front end of the chassis didn't bottom out as there were no visible marks on the smooth underside of the Baja Bug.

On the outskirts of the bike track, I found some rough terrain. I wanted to see how the Baja Bug handled the rough stuff, so I swapped battery packs and headed for the bumpy mountains. The Bug was capable of taking on most of what I drove it over, but it got stuck a few times on some uneven terrain. Of course, the Baja Bug wasn't designed with the ultra-high ground clearance that a full-blown monster truck has, so I didn't expect it to perform like one.

The four wheel drive system showed its capabilities during the hill climb. There was one hill that was at a semi-steep angle, covered with pebbles and dust. With about a 10 foot headstart, I floored the Bug and steered straight for the hill. The Bug kicked up pebbles and changed course a little, but in the end the Pro-Line tires and HPI's proven 4WD system pulled the Baja Bug all the way to the top of the mountain. The MT Baja Bug was fun to drive and it worked very well over the rough stuff.

CONCLUSION

Six years after he drove it off the lot, my dad traded in his bug, citing





A seperate molded engine bay shows off the Baja Bug's twin carb powerplant. After upgrading to Holley carbs (with stickers!) I lifted the engine compartment and found its hidden secret – access to the rear body clip mount.

"Pro-Bond" Tire Fixtures

Get the truest running wheels possible with a *"Pro-Bond" Tire Fixture*. By breaking the bead with a "push ring", the bead of the tire separates equally from the wheel. Placing glue (CA) in the bead area then releasing the "push ring" will give an even & uniform bead. The best part is that your fingers stay away from the glue, in addition CA will not stick to the fixture! See our website for more details!

#81270 (Sedans & Mini's)	$8.95
#81280 (1/10 Scale Off-Road Cars and Trucks)	$9.95





Bearing Blaster

Blast away debris from your bearings with the ultimate in quick and easy to use bearing cleaners! The RPM Bearing Blaster forces your cleaner through (not around) the bearings, whisking away power robbing debris! All of your cleaner and debris is directed through the blaster and out the bottom onto a rag, keeping you and your work area clean and neat. See our website for more details!

#81170 $8.95

"Slingshot" Truck Wheels

Looks like nothing you've ever seen in a truck wheel with the strength that only *RPM* can build, the *"Slingshot"* Wheels are available for all Associated Trucks, Traxxas Rustler & Stampede, and Losi XXT & NXT. See our website for more details!

Chrome Finish	$9.95
White & Dyeable	$7.95



Custom Chrome Wheels for Sedans

*including TC3

$ 6.50 White
$8.95 Chrome

RPM

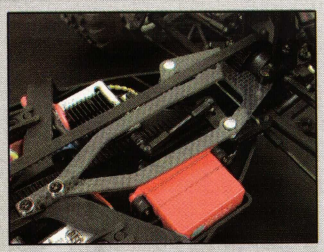
Custom Engineered R/C Products

www.RPMRCPRODUCTS.com

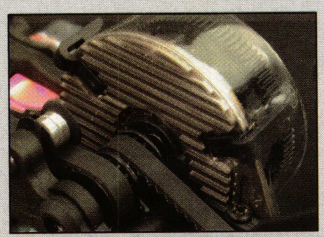
Send $3 for catalog and decals to: RPM Dept. 2, 14978 Sierra Bonita Ln, Chino CA 91710

Get Personal

I still have the little Dodger cap that my dad kept on the dashboard of his bug. It wasn't all just cosmetic; it added another little place to store change and bubble gum. With the Baja Bug, there is a long list of available hop-ups to customize your Bug for both appearance and performance.

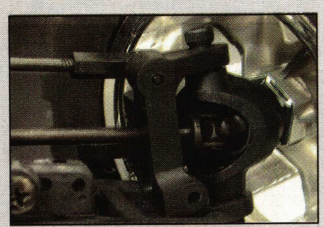


I never leave things alone (how many times have I said that in the pages of *Xtreme R/C*??) so I couldn't leave the Baja Bug in its kit form. Although all of my review testing took place with box-stock components, I wanted to hop it up to custom specifications.

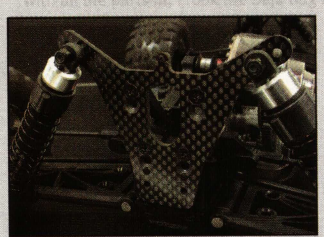


With that in mind, Kent Clausen of HPI Racing sent me a bag of goodies to trick out the Baja Bug. The first (and most important) on the list was a full set of ball bearings (B043). As we all know, bearings make a car smoother, quieter, and faster. After installing the bearing set, I also installed the 2-speed transmission (A286) and universal dogbones both front (A518) and rear (A519). The kit gear diffs were ejected for a pair of ball differentials (A905).

Adding to functionality and looks is their front graphite chassis brace (A700) and rear graphite shock tower (A705). The front plate replaces the kit molded piece and extends fron the front bulkhead to the center brace to beef up the chassis, while the rear tower adds strength and height adjustability. I swapped the kit motor plate to HPI's anozided aluminum motor heatsink plate (A289) to keep temperatures cooler (plus it looks cool!).



With all the parts in, I took the Baja Bug back outside to see the difference.



The parts that made the most impact were the bearings, ball diffs, and 2-Speed tranny. the combination of these parts equalled a quiet but quick performer. The other hop-ups were more for the purpose of durability, so we'll have to see if they are worth their price after a few months of driving.

Best of all, my Baja Bug had been personalized. It was no longer another kit chassis you find on the shelves of your local hobby shop. This one had character. That plus the fact that I could drive it harder and over more demanding terrain with the reassurance that the hopped up Baja Bug would take on practically anything in its path!

numerous reliability problems and convenience issues such as no power windows, door locks, etc. He bought a mid-sized sedan, with "my" little white bug taken away by the dealership, never to be seen again. HPI Racing's Baja Bug MT is on the opposite end of the spectrum, in other words, the Baja Bug is staying in my possession! The suspension and chassis held up to my test session, including some very harsh requests on my part (climbing curbs, driving across thick weeds and big rocks, etc.) and the underchassis kept things dust free for shorter pit "cleaning sessions" and more driving.

Now for a few minor gripes. First, receiver space on the chassis is tight if you decide to use saddle packs, but stick pack warriors need not worry. Second, although the inner body shields the chassis from dust and dirt, it also keeps vital cooling air from reaching the ESC and motor. A couple of well-placed cutouts with a hobby knife would take care of that easy. The third complaint is cosmetic: with the inner body on and the Baja Bug body over it, the driver head disappears! He is positioned so low on the chassis that from side view you won't even notice he's there (kind of like me in my dad's bug when I was 5). It would have been cool if HPI made another mold with roll bars and stuff that was high enough on the chassis to be seen! HPI has an interior set designed for their Z3 sedan body that can be trimmed to fit the Baja Bug body, but you have to pay extra for it. Also, the Z3 interior attaches to the body itself, you would still have to use the MT's inner body shell to keep dirt and dust out (just remove the drivers head and you're set!). Simply put, the Baja Bug MT is a perfect choice for your all-terrain, backyard bashing, off-road needs. With modern day performance traits and a classic body, the Baja Bug MT is ready to pound the ground, whether it's on or off road.



THE SPECIFICS

ITEM INFO
Part #503 (Baja Bug MT), MSRP $239.00. Street estimate $160.00-$170.00. Manufactured in Japan.

CHASSIS TYPE
Fiber reinforced nylon molded tub chassis with upper molded plate. Choice of either stick or saddle pack mounting.

WHEELS AND TIRES
HPI Super Star wheels with Pro-Line Dirt Hawg M2 block truck tires.

TRANSMISSION TYPE
Twin belt-to-pulley driven, with metal bevel-gear differentials, full bushings.

SUSPENSION DESIGN
Independent, molded lower arms and adjustable upper control links.

SUSPENSION DAMPENING
Coil-over oil-filled shocks, molded pistons and shock bodies, steel shafts, bladder and O-ring seals.

VEHICLE TYPE
Electric motor powered, mid/rear-engined 4Wd racing truck.

OTHER ITEMS YOU NEED
2-Channel radio system with 1 servo, electronic speed controller, motor, battery, charger.

OUR TEST GEAR
JR Racing XR2 Radio System, Multiplex servo, LRP Power F-1 ESC, GM Pinnacle stock motor, Orion 1700 mAh Batteries, GM Commander charger.

Try to picture the new Beetle in Desert-Runner gear. I don't think so...

Pinnacle Series

A Stock motor that thinks its a modified.

Have we gone too far...

...or have others not gone far enough.

GM-Racings new stock motors are sure to be a hit in all classes of racing. Our Pinnacle Series motors feature a New Brush Stabilizer System, New Swirl Wind Technology and Step Down race bushings. Check out the Pinnacle Gold and Pinnacle Pro Gold, our latest design in rebuildable stock motors to help put you on the top.



Pinnacle Gold
27 turn rebuildable stock motor

Double-Rotor high torque armature design. *"the torquemonger"*

New Step Down race bushings. *Our new bushings have been created to give you long life and the technical edge. Our new bushings break in faster and give less resistance on the comm.*

GM-Racing Pinnacle Gold Series. *Uses the latest EVO3™ can design. with removable aluminum timing ring and locking endbell.*

New Brush Stabilizer System. *This ensures a more positive feel for the motor as there is less chatter and the brush stays in full contact with the comm throughout the life of the brush.*

Stiff GM-Racing springs

GM-Racing special purple anodized endbell fittings and heatsinks.

New Swirl Wind Technology Cooling. *GM-Racings new Swirl Wind technology endbell dissipates heat at a higher rate to keep it away from the magnets. This lets your motor run cooler, longer, with more power and better efficiency.*

The Pinnacle Pro is the top 10% of our Pinnacle line of motors. *After the top 10% is picked we break in the bushings, install the GMB01 brush and three capacitors. The motor is then dyno tuned one more time and then, and only then, is it called a Pinnacle Pro.*



Pinnacle Pro
ROAR / NORRCA legal



Pinnacle Pro Gold
27 turn rebuildable stock motor

Real Motors Real Parts

GM RACING USA

www.gmusa.com **(330) 530-2330**

© 1999 GM-Racing, USA

gmusa@gmusa.com *OEM available* 416 Ohio Ave. McDonald, Ohio 44437

NEW STUFF summer 1999





NEW HPI TIRES & WHEELS

Racing Slick Belted 24mm tires feature new compounds for increased traction and inner mesh belts for longer life and even wear: 23R for cool-weather & 33R for hot-weather.

#4751 Racing Slick Belted Tire 24mm *(23R)*
#4753 Racing Slick Belted Tire 24mm *(33R)*

New rounded 5 spoke wheel features true 0mm offset and mid-width 24mm sizing.

#3735 Type R5 Wheel 24mm White

PRO MOLDED INNER FOAMS 24mm

Designed specifically for HPI's mid-width Racing Slick tires, the new 24mm Pro Molded Inner Foams are the ideal match! The 3 different compounds allow racers to fine-tune the tire/insert combination for better results.

#4630 Pro Molded Inner Foam 24mm Red/Medium Soft
#4631 Pro Molded Inner Foam 24mm Green/Medium
#4632 Pro Molded Inner Foam 24mm Blue/Medium Hard



SUPER NITRO MESH WHEELS

Check out our new collection of Mesh Wheels for the Super Nitro RS4 kit! Four different finishes are now available for Super Nitro racers to customize their cars for an awesome look! The new Super Nitro Mesh wheels will also fit the Kyosho Super Ten cars.

#3035 Mesh Wheel 57x35mm (2.2") White
#3036 Mesh Wheel 57x35mm (2.2") Black
#3037 Mesh Wheel 57x35mm (2.2") Chrome
#3038 Mesh Wheel 57x35mm (2.2") Gray



HPI RECEIVER PROTECTORS

Protect your receivers from dust, mud and water with HPI's Receiver Protector. Available in three colors: Black, Fluorescent Orange and Purple.

#9072 Receiver Protector Small *(Orange)*
#9073 Receiver Protector Small *(Black)*
#9074 Receiver Protector Small *(Purple)*
#9075 Receiver Protector Large *(Orange)*
#9076 Receiver Protector Large *(Black)*
#9077 Receiver Protector Large *(Purple)*

SUPER NITRO INNER FOAMS (2.2")

HPI now has Inner Foams for the Super Nitro RS4. Available in three compounds: Medium-standard, Firm-great on high-grip tracks and Low Bounce - perfect for smooth tracks with high traction. One-piece circular foam inserts allow for easy installation on Super Nitro RS4 wheels.

#4690 Inner Foam 57x35mm- Medium
#4691 Inner Foam 57x35mm- Firm
#4692 Inner Foam 57x35mm- Low Bounce



SUPER NITRO SUPER CHASSIS 7075S

The 3mm purple anodized Super Chassis is made of 7075S aluminum, one of the strongest types of aluminum alloys made.

#A966 Super Nitro RS4 Super Chassis 7075S



NEW PINION GEARS

Our Aluminum 64 Pitch Pinion Gears are perfect for On-Road & Touring Car racers. Use our 64 pitch aluminum pinion gears for faster acceleration and higher top speeds! Each one is number stamped for easy identification!

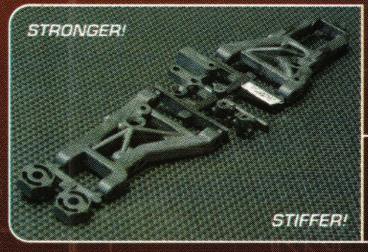
18-50T Pinion Gear *(Aluminum)*
Visit our website for part numbers.

SUPER NITRO PRO TIRE FOAM STRIPS

Racers, our new Pro Tire Foam Strips for the Super Nitro RS4 kits are available in Firm and Soft compounds for the ultimate in race tuning.

#4695 Pro Tire Foam Strip 57 x 35mm 2.2" (Firm/4 pcs/Super Nitro)
#4697 Pro Tire Foam Strip 57 x 35mm 2.2" (Firm/4 pcs/Super Nitro)

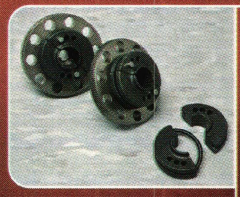




CARBON GRAPHITE SUSPENSION ARMS

HPI is proud to announce a new high performance option part made for the Pro 2: Carbon Graphite Suspension Arms!

#A467 Carbon Graphite Suspension Arms (2 Pairs/RS4 Pro2)



NITRO RACING CLUTCH

Introducing HPI's new Nitro Racing Clutch! This option clutch is adjustable to adapt to changing track conditions and will not melt under the stress and heat of high-power Nitro engines. The clutch has three mounting holes so racers can choose the best setting for high- or low-traction racing surfaces. This is the perfect compliment to any .15-size engine or race-tuned .12-size engine like the Nitro Star Pro 12R SC.

#A885 Nitro Racing Clutch



COOLER RUNNING ENGINES

Designed specifically to fit the Nitro Star 15FE engine, the Heat Sink Head from HPI helps keep your engine run cooler and the purple anodized aluminum head is a perfect match for the stock chassis that come with the RTR and Super Nitro RS4 kits.

#1703 Heat Sink Head for Nitro Star15



ULTRA HIGH PERFORMANCE NITRO ENGINE

Now available is the Nitro Star Pro 12R SC engine from HPI Racing! This ultra high performance glow engine is developed for cars, and with a rating of 1 horsepower at 35,000 RPM is quite simply the most powerful small block (.12-size case) nitro engine on the market! The Nitro Star Pro 12R SC is a true ABC engine *(Aluminum case, Brass piston with Chrome coated sleeve)* designed in Italy by engine manufacturer Novarossi, winner of multiple World Championships with their .21 and .15-size engines. The Nitro Star Pro 12R SC comes with a sheet of Nitro Star Pro decals, slide carb, purple anodized aluminum head, and instructions for installation, break-in and tuning.

#1905 Nitro Star Pro 12R SC

PURPLE HEAT SINK MOTOR PLATE

Racers, use this heat sink motor plate to keep your Pro 2 even cooler! The purple anodized heat sink motor plate features cooling fins to improve the cooling of the motor for longer run times and increased motor life. The purple finish matches all the purple accents on the RS4 Pro 2 for complete custom looks!

#A789 Heat Sink Motor Plate (Purple)



Since we are constantly working on new products and parts, the best way to keep up with all the latest news and product information is to visit our website at www.hpiracing.com.

HPI RACING

15321 BARRANCA PARKWAY IRVINE, CA 92618
PHONE: 949.753.1099 | FAX: 949.753.1098
www.hpiracing.com

Multiplex Digital Servos

Faster than a speeding...



One of the most critical components to any R/C car is the servo. The steering servo on an electric car or truck, and both the throttle and steering servos on any gas car or truck. All the hop-ups and modifications in the world won't do you much good if your steering servo can't hold going around a tight turn or keep up with you through a technical track section. Introducing Multiplex. Multiplex is a relatively new company to the U.S. Market. Multiplex actually has a very broad range of products but the one product of theirs that has gotten the most attention so far are their unique looking red servos. Let's put these unique looking servos to the test.

Features

Multiplex makes a broad range of servos. From micro servos for the smallest 1/12-scale car to the largest jumbo servo for 1/4- and 1/5 scale cars. The subject of this test are two of Multiplex' most popular models, the PROFI-speed and PROFI-mc/V2. Both servos use the same case and some internal components. Both servos have very similar performance stats. The "torque" features 75 in/oz of torque and 225 in/oz of holding power. From lock to lock the servo's speed rating is .12 seconds. The "speed" servo features slightly less toque coming in at 62 in/oz and holding power at 186 in/oz. The speed rating is a blistering .09 seconds lock to lock.

Internally the servos feature five-pole motors with ball bearings throughout. The servos come with a JR/Hitec/Airtronics compatible Z-plug. The plug will also fit Futaba receivers without any modification. Both servos are digitally programmable, meaning you can adjust the servo's center point, end points, speed, failsafe point, failsafe delay, and the return speeds of the left side and right side. Adjusting the servo's parameters is done with Multiplex's hand-held programmer or a PC with the correct software and connection.

Testing

I tested the servos in a couple of different cars. The first on my list was an 1/8-scale Kyosho MP-6. 1/8-Scale cars demand lots of toque and holding power. With the wheels cranked to the left around a fast turn the last thing you want to see is the wheels trying to come back to center. For this test I installed the PROFI-mc/V2 in the steering slot and the PROFI Speed servo in the throttle position. Installing the servo horns I noticed a very, very tight fit. After some giggling and wiggling the servo horns went on. When I was getting things ready to fire that bad boy up I accidently got a little too liberal with the fuel and splashed fuel all over the throttle servo. I grabbed a can of compressed air and blew down the servo as best I could. After the fuel on the outside of the servo had disappeared I fired up my Futaba 3PJ radio and the radio system on the car. With a sigh of relief the excess fuel didn't penetrate or impair the throttle servo. With the radio trimmed and all the adjustments made I headed out to a local bike track. Throttle response was lightning fast- a little too fast at first. It took me a little time to get used to when I would feather the throttle. The carb of my O.S. Engine was definitely being tested for responsiveness thanks to the super fast servo. When it came to steering the PROFI-mc/V2 seemed just as fast. During my entire drive I kept my eyes

VITAL INFO

Made by: Multiplex USA
14751 Calvert St., Van Nuys, CA 91411
(818) 785-2401
www.multiplexrc.com
Price: $99.95; Part #'s Profi-Mc/V2

HITS

- Great speed.
- lots of torque and holding power.
- Digitally programable.
- Unique red color.

MISSES

- Mounting ears need some triming to mount some cars.
- Servo horns fit very tight.

RATING

8

Celebrity Equivalent: Jennifer Love Hewitt



THE LAST WORD

These servos are great replacments for anyone looking for more torque or more speed. Their digital programability is a real plus. Their price is also very reasonable considering the quality and performance.

How We Rate Them

NEW SYSTEM!

10-9 Excellent! a "Must Have" in our book; worth every penny.

8-7 Very Good. Definitely worth taking a look at.

6-5 Good. Although there's room to be improved, it gets the job done.

4-3 Fair. It's okay for some racers, but not for everyone.

2-1 Poor. The grade speaks for itself. Don't say we didn't warn you.

Our new scale replaces the A, B, C grades we used to do. We hope this new system will be easier for you to evaluate and compare similar products. And for those of you who can't figure out the number system (we hope there's maybe only a few of you), we've added something else that everyone can understand, our Celebrity Equivalent. On a scale of one (Janet Reno) to ten (Elizabeth Hurley) you'll be able to figure it out, we guarantee.

focused on the car's front wheels. Not once did I detect that the wheels were moving contrary to my steering input. For a final act of bravery I wanted to test the fail-safe. The factory default setting centers the servos when activated. With my servos trimmed correctly and the car running I nervously switched my radio off. Thankfully the car's drag brake stepped in and brought the car to an almost complete stop. When I was done with the MP-6 I was impressed with both servo's performance. They did just as well as I expected them to.

My next test car would be a Losi Triple-X buggy. For this test toque wasn't necessarily what I was looking for. Instead I opted for the PROFI Speed servo. Installing the servo in the car wasn't very easy. I had to take the Dremel to the mounting ears on the servo to open the holes up so that the servo would fit in place. Once I did this I was good to go.

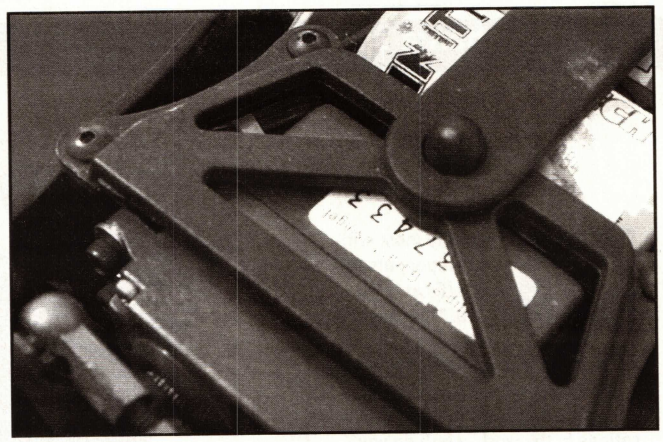
The first time I tried the car out with the Multiplex servo installed I noticed that the servo supplied way too much steering from end point to end point. Even though I could have adjusted this with my radio, I figured this would be the perfect opportunity to try out the servo's digital tuning qualities. I headed up to a local hobby shop, Pegasus Hobbies, in Montclair and used the Multiplex handheld unit to adjust the servo. After fumbling through the instructions I used the programmer to adjust the servo endpoints. Pretty cool! With the endpoints readjusted I headed out to the track.

On the track the car felt great. Not once did the steering chatter. Steering input seemed brisk and responsive. I did notice that there was very little slop in the servo. What I mean by that is when I turned the steering wheel just slightly, the servo reacted, it was very sensitive. All in all another positive experience with the Multiplex servos.

Conclusion

I was very happy with the Multiplex servos both in my gas car and my electric buggy. They performed exactly as I would expect from a premium servo. The suggest retail on both servos is $99.95 which puts them in line and below comparable servos from different manufacturers. Where the PROFI servos really shine is their ability to be programmed. I picked up the hand held programmer for $65. With this accessory I'll be able to tune the servos to just about any car in my garage.

Our test servos fit the MP-6 with no problem. We had to get out the moto-tool however to fit them to the Triple-X.





MIP Tweak Station

Balancing Act

Does your car or truck turn tighter to the left than the right? Do you have to pull the trigger slowly when running a modified motor in fear that your vehicle might suddenly swerve in to the wall like it did the last time? If this is you, your car or truck might be out of tweak. If this is the case, then you need MIP's new Tweak Station.

Features

The MIP Tweak Station is basically a chassis balancer. Two solid metal platforms and a metal center shaft connect together to form an "H" shaped stand. A bubble level is pre-attached to the front platform, which, in turn, rides on the center shaft via two ball bearings. The rear platform stands on two molded feet that are threaded to adjust its levelness. The Tweak Station is designed to be a simple yet accurate means of detecting and resolving tweak in your vehicle. The overall look when assembled is of high quality, with anodized platforms and a satin-finish center shaft. Let's see if it works as claimed.

Testing

Before using the Tweak Station there was a small amount of assembly required. After attaching the feet and the front platform, I went ahead and calibrated the Tweak Station. The included instruction sheet walked me through the calibration process in three easy steps. For the rear platform and the center shaft, calibration adjustments are done by raising or lowering the molded feet. For the front platform, three small lead weights are provided. These lead weights can be used to level the front platform by sticking the weight underneath the platform on the side that is lighter.

With calibration complete, it was time for actual testing. The MIP Tweak Station will work with any R/C vehicle, as long as its wheelbase falls between 8.5" to 10.75" and the front and rear track widths do not exceed 9.5". In other words, off-road trucks can't use it. However, these measurements are perfect for sedan, buggy, pan car, super nitros, and Mini drivers. To use the Tweak Station with wider cars, you will have to extend the platforms in width. An easy way would be to find longer, non-flexible (like metal) beams to place on top of the Tweak Station's shorter beams. If you do so, don't forget to recalibrate!

I randomly grabbed the first sedan I saw in the back offices of *Xtreme R/C*. Placing it on the Tweak Station and watching the bubble level imbedded into the front platform, I found that the sedan was tweaked slightly to one side. With a few twists of a ball end, I got the chassis to be balanced as close to perfect as possible. I say as close to because the bubble inside the bubble level is actually smaller than the two marks on the level tube. This leaves some room for error on my part since I need to eyeball the bubble so that it's centered between the two hash marks on the level. If it were exactly the same size as the space between the two marks, it would be easier to judge.

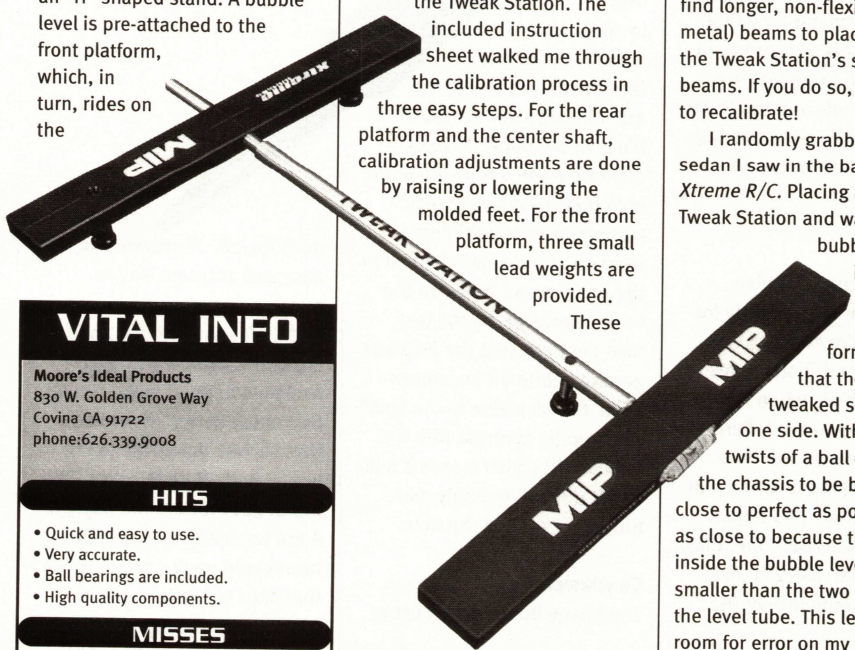
Not to say that the Tweak Station is inaccurate – for it is just the opposite. For example, before testing I wanted to spruce up the looks of the Tweak Station by applying decals. After calibrating the Tweak Station, I cut out one of the small MIP stickers and stuck it on top of the Front Platform, on the right side. You figure a sticker can't do much, right? Wrong! The right side of the platform slowly made its way down until it tapped the surface of my desk. It was that accurate! To fix the balance without using another piece of lead, I simply added a second "MIP" sticker to the left side. Now the left side went down! I ended up repositioning the lead weight underneath to compensate for my sticker job.

Back to testing, I found as many sedans as I could (the final count was four), and one by one placed them onto the Tweak Station. Every chassis was just a bit out of tweak. With the Tweak Station, adjusting their tweak was as easy as putting the chassis in question on top of the platforms and looking at the bubble.

The Verdict

Overall I liked using the Tweak Station. When compared to other tweak tools and methods (have you heard of using an hobby knife?) using the MIP Tweak Station was quick and simple. At $45, the cost is relatively reasonable for what it offers. The asking price is much less than any similar product on the market. I wouldn't mind spending the cash because I race, but the casual or rookie racer might want to hang until their racing or tuning skills demand complete accuracy.

Tweaking your R/C car is an important, but often neglected tuning aid, especially to hardcore racers. With MIP's Tweak Station you'll be one step closer to performance nirvana.





The inset bubble level makes tweak detection easy. Hey, check out that cool sticker!

THE SPECIFICS

ITEM INFO
Part # 9020
MSRP $45.00

ASSEMBLY REQUIRED:
Must assemble and calibrate.

VITAL INFO

Moore's Ideal Products
830 W. Golden Grove Way
Covina CA 91722
phone:626.339.9008

HITS

- Quick and easy to use.
- Very accurate.
- Ball bearings are included.
- High quality components.

MISSES

- Isn't big enough for trucks.
- No carrying bag or case.

RATING

8.5

Celebrity Equivalent: Salma Hayek



THE LAST WORD

Easy to work with, accurate, looks good at the track. The MIP Tweak Station is all of the above. The craftsmanship and quality of the Tweak Station shows, not to mention how it makes chassis tweaking a quick and simple task. All this at a relatively reasonable price.

"From Dusk 'Til Dawn" is a dumb movie except for Salma Hayek's impression of a vampire.

Integy Body Hole Puncher

Make your R/C car body look like swiss cheese

Through the years, R/C racers have tried many unique and creative "tools" for punching holes on their Lexan car bodies – hobby knife, scissors, Moto tool, the tip of your soldering iron (c'mon, admit it!), or even the "let's heat up a steel nail over the stove and melt a hole" technique. Most of the techniques are either dangerous, messy, or inconvenient or all of the above! With the number of aftermarket companies out there in the R/C industry, someone has come up with a simple solution for one of our inevitable chores with Lexan bodies – to our rescue, the Integy Body Hole Puncher.

VITAL INFO

Integy Technologies, Inc.
1140 Centre Dr #E
City of Industry, CA 91789
phone: 909.444.2766 fax: 909.627.4132
www.integy.com

HITS

- Durable titanium nitride bit.
- Trick anodized handle.
- Well protected (plastic case for the unit and sleeve for the bit).

MISSES

- Relatively high price.
- Handle could be a little bit bigger.

RATING

7

Celebrity Equivalent: Britney Spears



THE LAST WORD

If you're currently using any of the methods mentioned in the introduction (with the exception of maybe the moto-tool), you definitely need to take a look at this unit.

Features

The Integy Body Hole Puncher features a titanium nitride-coated ridge reamer for long wear and durability. The unit also comes with a small plastic sleeve to protect the reamer tip. The handle is brilliantly-anodized aluminum (mine was purple), and it matches well with the gold drill bit. The handle has a knurled texture at the bottom of the reamer bit to provide better grip during operation. The whole unit comes in a plastic case to protect the anodized handle and the titanium drill bit from any scratches or damage while it rolls around in your toolbox.

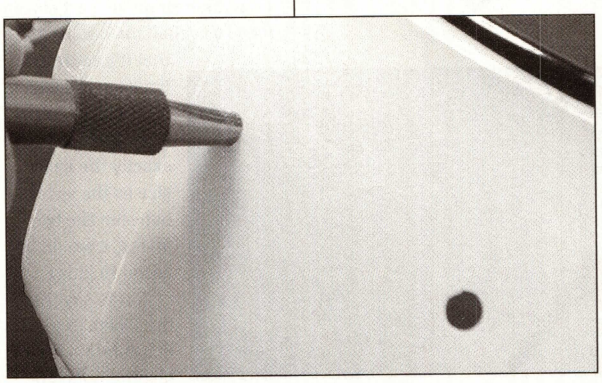
Testing

I just happened to finish painting the LS-400 body for my Kawada review and was just about to drill the holes to mount the body when the Hole Puncher arrived. Perfect timing! I pressed the Hole Puncher's tip against the dimple on the body and began rotating clockwise. One thing I noticed right away is that there is no tendency of the drill to slip on the smooth Lexan surface. Within seconds, the drill bit made perfect round holes in the body. A quick ream from the other side of the hole took away any excess material from the drilling. I went on and reamed the rest of the body mount holes on the body. However, by the last hole I noticed that the grip was getting a little bit uncomfortable. I think is due to the small size grip (in contrast with the reamer bit) which makes it a little bit difficult to apply more torque for drilling the hole.



Conclusion

The Integy Body Hole Puncher does its job. It provides an easy and accurate way to punch holes in your new car body, plus the brilliant andozing of the handle grip (also available in blue) makes it just that much better. However, there is one downside to the Integy Body Hole Puncher. The MSRP goes for around $19.95. A tad too steep for my taste, however, if you're one of those that likes to "wow" your friends with the latest R/C gear (and one that actually gets the job done), this would be a nice addition to your toolbox.



The Integy Body Hole Puncher produces a nice smooth and consistent body mounting hole every time.

THE SPECIFICS

ITEM INFO
Part # Body Punch
MSRP $19.95 EST: $19.95

ASSEMBLY REQUIRED:
None

Edge RS

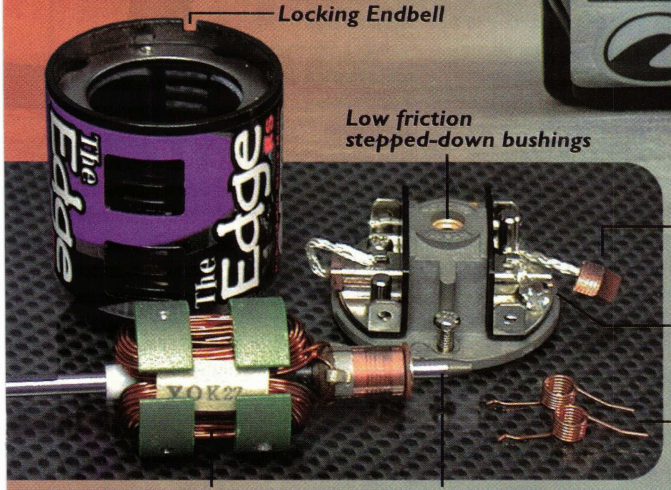
Rebuildable Stock Motor

Edge RS -- REBUILDABLE STOCK!
The new revolution in Stock racing is here! The new Team Orion Edge RS is a fully rebuildable Stock motor. Racers can now legally open their motor for quicker and more accurate resurfacing of the commutator. The result is a faster motor that lasts longer.



Standard features include a new can that optimizes magnetic field and air cooling. Laydown serrated brushes are dampened for less bounce and higher RPM. Get the Edge!

#TM52721	Edge Stock
#TM52721P	Edge Stock (Dyno Tuned)
#TM5270IRS	Edge RS Stock (Rebuildable)
#TM5270IRSP	Edge RS Stock (Rebuildable + Dyno Tuned)



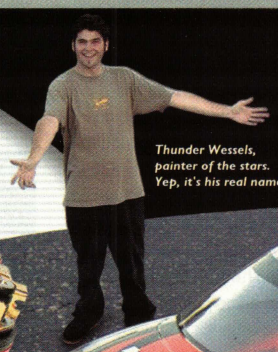


27 Turn High Performance Stock

Also from Team Orion...



Team Orion modified motors are winning races around the world. Try one of the new "Super Touring" pattern-wound ball bearing motors.



Thunder Wessels, painter of the stars. Yep, it's his real name.

Team Orion Thunder Paint

Need race paint? Let Team Orion Thunder Paint take care of you. You've seen the bodies on the Pro racing circuit and featured in many R/C magnetic articles, now you can get 'em too! Most popular bodies are available in a variety of colors and striping styles.



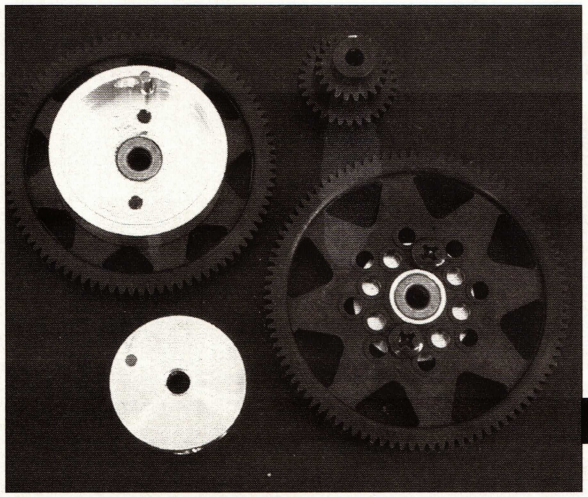




Show the Team Orion colors with our selection of sweatshirts, T-shirts and decals. We have so much stuff that you'll need to get our free catalog. Send your name and address to the address below and we'll mail you a free catalog.

Team ORION

Team Orion, Inc. 15311 Barranca Parkway Irvine, CA USA 92618 949.864.1720 fax: 949.864.1722 web: www.team-orion.com



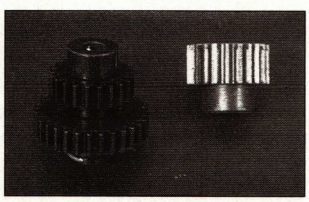
The Ins and Outs of a Two-Speed Tranny

by James Revilla

Shift that baby right

Whether you race nitro or electric, off-road or on-road, surely you've heard of a multi-speed transmission. You know, what that guy you're racing against has that you don't, and the reason why you can keep up with him at the start but at half track his car gets a sudden burst of speed and leaves you in the dust? That would be the two-speed transmission he's packing.

Two-speed and three-speed trannies (also known as multi-speed trannies) offer the best of both worlds in racing: loads of low-end torque and higher top-end. Whereas a single spur and clutch bell can be tuned for only one or the other, a multi-speed tranny can be optimized for both. Before we get into tuning multi-speed trannys, let's explain how they work.



The pinion gear of a two-speed transmission features two different-sized gears to match that of the two spur gears.

MULTI-SPEED BASICS

Unlike manual transmissions in real cars, you don't actually have to shift a multi-speed tranny in your R/C car (think about that for a second). Technically you could call it an automatic transmission since it shifts on its own. However, you do have control over when the tranny actually shifts. But how does it change over?

The secret is within the multi-speed clutch assembly. Since only a handful of cars use more than 2-speeds, from the purposes of this article I'll concentrate on a simple two-speed. The two speed tranny actually consists of four different pieces: the 2-gear pinion gear which goes onto your motor or engine output shaft; the low-speed spur gear; the high-speed spur gear; and the engaging clutch. The engaging clutch works like a clutch on nitro-powered engines. A spring loaded clutch shoe hides inside the clutch assembly. When the clutch assembly spins to a certain rpm, the rotational forces acting on the clutch shoes become greater than the springs force, causing the spring to collapse and the shoe to extend out from the engaging clutch. If you've ever turned a blender on to low speed without the cover (don't try this if you haven't!) the contents usually stay inside the blender, but as soon as you turn up the speed to max, everything flies outward. This same principal applies to a two-speed engaging clutch, albeit with less mess.

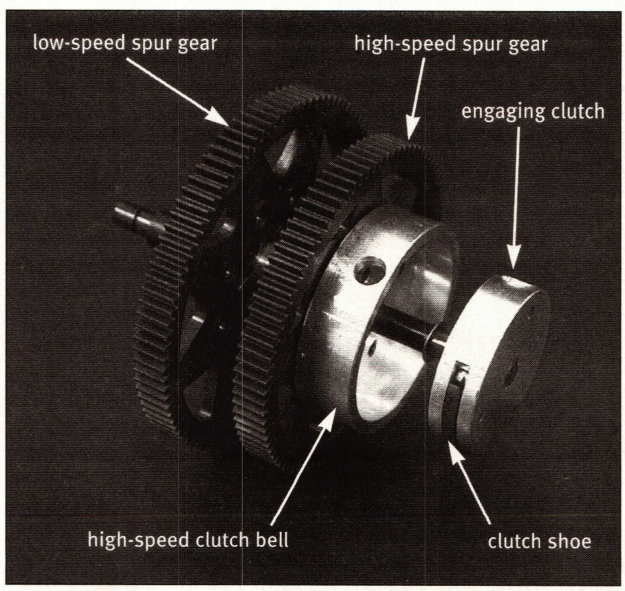
Let's move to the spur gears. The larger spur gear, like running a bigger spur on your single gear tranny, is the low-speed gear. This gear is mounted onto the layshaft through a one-way bearing. The smaller spur gear right next to the low-speed gear is the high-speed (top end) gear. Other than its obvious size difference, this high-speed gear also incorporates a bell housing on one side of the gear itself (more on this later). Just like swapping to a smaller spur gear on your single-speed tranny, this high-speed gear provides more top end (i.e., more speed!) on your 2-speed equipped vehicle. This gear is also mounted to the layshaft through a one-way bearing. The one-way bearing on the low-speed gear allows it to spin freely when the second speed is engaged, and likewise with the one-way bearing on the high-speed spur gear.

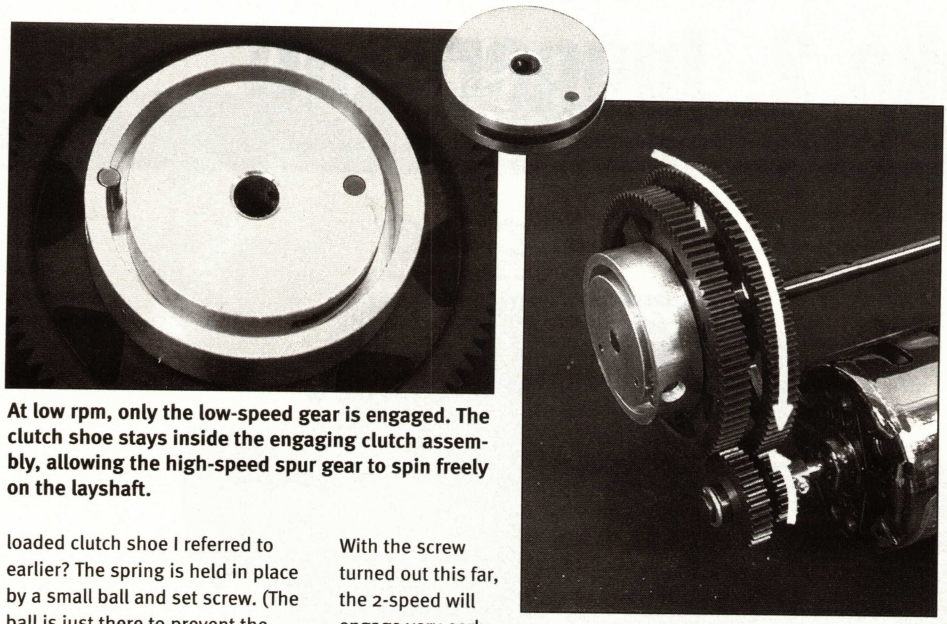
The 2-gear pinion gear (or clutch bell, depending on whether you are running an electric or nitro vehicle) looks like any normal pinion gear with the exception that it has two different sized gears sharing a common shaft. When you are driving at low speeds, the smaller gear on the 2-speed pinion turns the larger spur gear on the tranny. The larger pinion gear and smaller spur gear do nothing until the 2-speed clutch engages.

When the motor or engine rpms reach a certain point, the 2-speed clutch engages the second set of gears (the smaller spur and larger pinion). The clutch shoe extends from the clutch housing and makes contact with the second speed bell housing that is attached to the spur gear mentioned earlier. This action effectively changes the overall gear ratio of your vehicle, propelling it to even higher speeds than if you had a single spur and pinion combo.

2-SPEED TUNING

Tuning your 2-speed is as simple as turning a set screw. Okay, it's not that simple, but once you understand how it works you'll be able to adjust your 2-speed quickly and effortlessly. The actual tuning and adjusting of the shift point is inside the engaging clutch. Remember the spring





At low rpm, only the low-speed gear is engaged. The clutch shoe stays inside the engaging clutch assembly, allowing the high-speed spur gear to spin freely on the layshaft.

loaded clutch shoe I referred to earlier? The spring is held in place by a small ball and set screw. (The ball is just there to prevent the spring from twisting when you adjust the set screw.) When you dial the set screw in, this puts more pressure on the spring. With more pressure on the spring, the tranny will need to rev to a higher rpm level ("late-shift") to release the clutch and engage the second speed. When you dial the set screw out, the opposite happens – the second speed will engage at a lower rpm level ("quick shift").

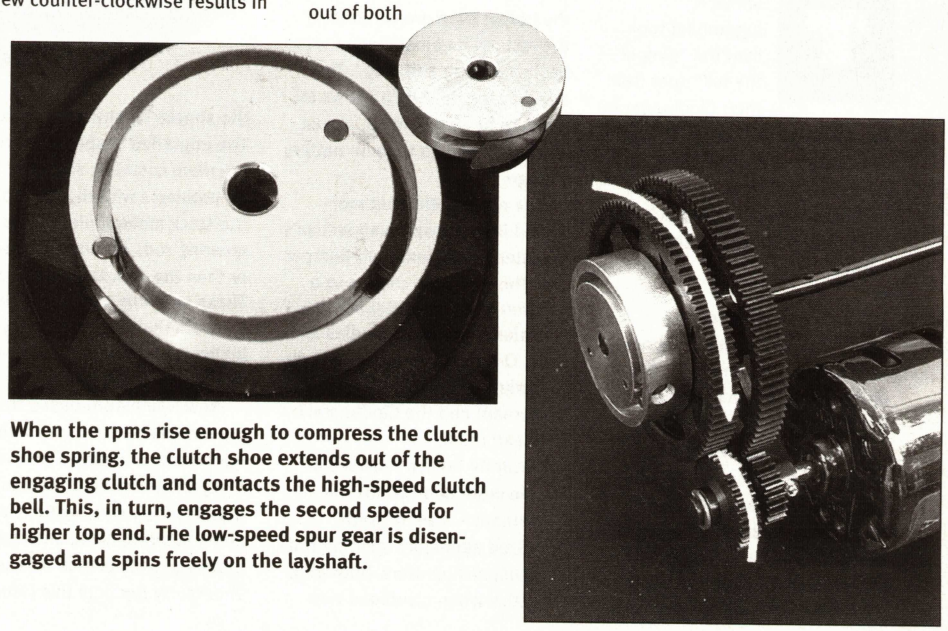
Generally, you want the 2-speed to shift when the low-speed gears reach their maximum rpm level. In other words, you want the engine to rev as high as possible with the low-speed gears before activating the clutch and engaging the second set of gears. If the clutch engages too early, you won't extract the maximum power possible out of your engine in low gear. Your car will jump off the line, bog down, then eventually reach high speeds. If the clutch engages too late, you'll have a car that has the maximum available torque at low speeds, but at higher rpm it will seem to "hang" at a certain speed until the 2-speed engages (if it does at all).

SO WHERE DO YOU START?

Here's an easy way to get your starting point. Insert the appropriate set screw driver into the clutch set screw. Back it out until the top of the set screw is flush with the clutch housing. Now turn it in 1/4 turn. Remove the tool, fire up the car, and do a straight-line run. With the screw turned out this far, the 2-speed will engage very early, maybe so early that you won't even notice. Bring the car back, turn it off, and turn in the set screw 1/16 a turn. Keep doing this until the 2-speed starts shifting. With nitro cars, you'll hear the engine rev, then as the car suddenly "jumps" forward the engine revs will drop slightly, signaling the shift. With electric vehicles, it might be a little bit harder to notice at first (especially with today's virtually silent, belt-driven touring cars) but you can see the car suddenly "jump" forward and speed faster, signaling the shift.

Remember, dialing in the set screw clockwise results in a later shift, whereas dialing out the set screw counter-clockwise results in an earlier shift. When tuning 2-speed shift points, only make set screw adjustments 1/16-1/8 of a turn at a time – the 2-speed clutch is very sensitive to fine adjustments.

Now that you know the transmission is shifting, you're halfway done. The second (and most important) half of tuning a 2-speed tranny is shift point selection (i.e., when you want the second gear to engage). Remember I used the word "generally" when I referred to having the tranny shift at the highest rpm? At some of the larger race tracks with nice, long straightaways this would be the suggested setup so that you can extract the maximum speed out of both gears. On smaller tracks, you might want to adjust the 2-speed shift point differently. If you adjust the tranny to shift earlier, you could be in second gear at the end of a straightaway earlier than the other guy, with more top speed than the other guy. Likewise, if you adjust the tranny to shift a little later, you can have the advantage in the infield by keeping the tranny in its first (higher torque) gear more often.



When the rpms rise enough to compress the clutch shoe spring, the clutch shoe extends out of the engaging clutch and contacts the high-speed clutch bell. This, in turn, engages the second speed for higher top end. The low-speed spur gear is disengaged and spins freely on the layshaft.

FINAL WORD

A properly adjusted 2-speed tranny can be a deciding factor in a tight race. However, as far as we know 2-speed tranny's are not legal for sanctioned sedan races. In off-road they aren't used because of jumping. (Who wants to land from a jump in a high, low torque gear?) But, in 1/8 scale on-road 2wd and 4wd they are common. 2-speeds are fun around the neighborhood but check with the race director beforehand if you plan on using the 2-speed tranny on the track. So what is the only thing better than a having a multi-speed tranny on your R/C vehicle? A properly tuned one, which should be no problem after reading this article!

Some say, "If you can't drive stick, you can't drive."

Take 2: Juggernaut!

We take a second look at Tamiya's big four-wheeler

by James Revilla



Tamiya's Juggernaut took over the "king of the hill" spot from their Clodbuster in Tamiya's model line-up. *Xtreme R/C* first reviewed the monster in Issue 5.0, and since then many hobbyists and monster truck fans have picked up one for themselves.

Options, Options, Options

Other than ball bearings, those with a keen eye remember the optional headlamp and roll bar light kit I had on the truck. This light kit includes five amber/green bulbs for the roll bar and two bright white bulbs for the headlamps, headlamp "buckets", waterproof two-way toggle switch, wire harness, and distribution block. All pieces (including the bulbs) were pre-wired from the factory, and installation was basically "plug and play". The two-way toggle switch allows all bulbs to be switched on, or just the headlamps to save on battery voltage.

The other option not mentioned in the review was Tamiya's Monster Truck Aluminum Damper Set. These shocks come 4 to a set (you need two sets) and feature aluminum shock bodies and caps, O-ring seals, and mounting hardware to fit both the new Juggernaut and the Clodbuster/Bullhead truck.

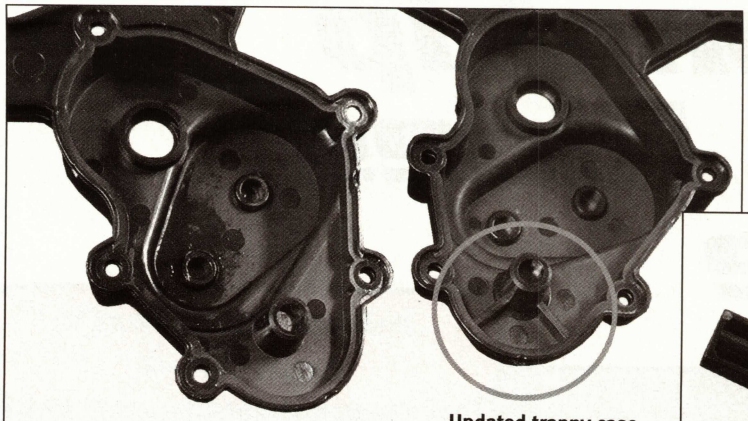
Recently Tamiya released a couple more hop-ups for the Juggernaut – a set of gold-anodized aluminum steering rods and suspension arms. Both look very trick when combined with the shocks I mentioned earlier. The upgraded suspension arms are more cosmetic since I've had no problems with the strength of the stock molded pieces, but the steering rods are thick and beefier than the standard metal rods. These steering rods provide extra level of reliability if you run your Juggernaut through extreme conditions on a daily basis.

New Hampshire-based New-Era Models (which contributed to our heavily modified Clodbuster "Project Mecha-Clod" in Issue 4.6) has their own suspension arms, steering links, and chassis braces as well as trick reservoir shocks. By the time this issue goes to press they should have a full-blown Chromoly steel tubular chassis!

Long-Term Testing

Now that the Juggernaut has been in the hands of hobbyists for awhile, the long-term good and bad traits have surfaced. On the good side, this truck is like no other. Many comments regarding the realistic looking suspension and drive system have been heard. The twin steel drive shafts emulated that of a full-sized truck, and when some of my friends saw that the suspension leaf springs were fully functional, they liked the truck even more.

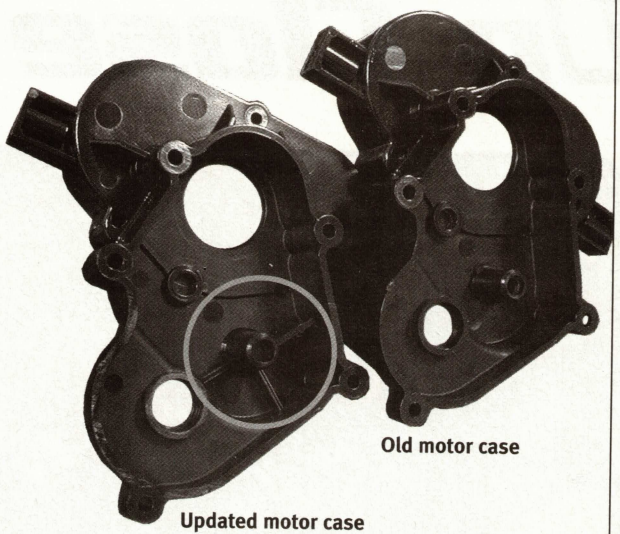
On the other side, there have been numerous inquiries regarding the Juggernaut's transmission gears. A lot of owners have experienced gear stripping, particular-



Old tranny case

Updated tranny case

Tamiya's update kit includes new motor and transmission cases. As seen in these photos, the newer cases have reinforcement webbing where the gear shafts insert into. These keep the shafts aligned properly, even when subjected to high-torque forces generated by stock or modified motors. Tamiya even threw in sealed ball bearings and a cool gold sticker sheet!



Old motor case

Updated motor case

ly the bevel gears that transfer the power from the drive shafts to the reduction gears. Even with the stock motors, full-throttle pulls would often result in a loud "crackling" noise as the Juggernaut lurched forward. We experienced this a few times during testing, but at first we thought it was because of the modified motors I had in there. What's going on here?

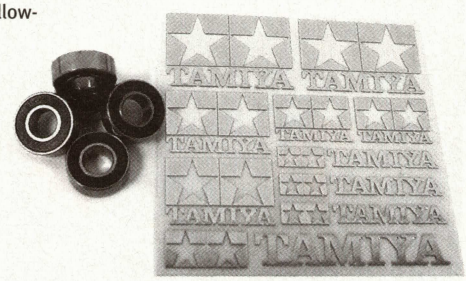
Here's the scoop: early Juggernaut kits came with chrome plated bevel gears, but they were neither hard coated or reinforced. These gears had a number "1" stamped on their backside. Since then Tamiya reworked the gears for a better fit (stamped "2") but some owners were still experiencing the gear crackling action.

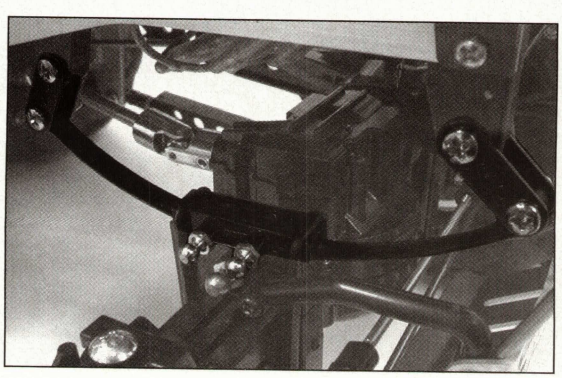
Making good on their reputation for quality, Tamiya is offering a full transmission update kit to all Juggernaut owners. The kit includes replacement axle housings, a new motor/tranny case, new chrome plated hardened metal bevel gears, new transmission gears, ball bearings, instruction sheet and a limited edition Tamiya sticker sheet. That's a lot of parts, and best of all it's free. All you have to do is contact Tamiya and tell them you have a Juggernaut (proof of purchase may be necessary, for those of you who are freeloaders).

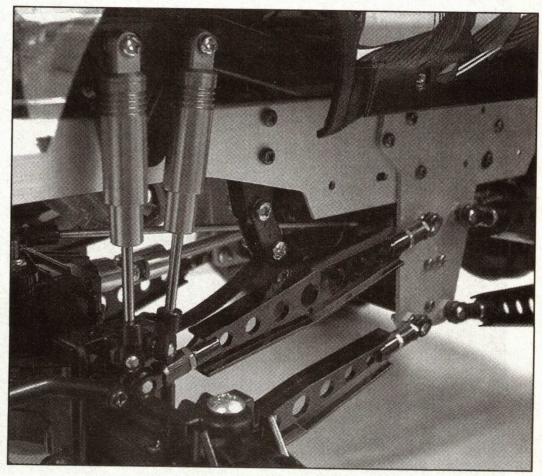
The new tranny case has been reinforced to maintain the proper gear clearances. The reworked bevel gears fit better and are stronger than the kit units. These in combination with the smoother and more precise ball bearings eliminated all traces of the evil crackling noise. During my testing after installing the upgraded parts I did everything possible to try to simulate the funky noises coming out of the kit tranny, but to no avail. In fact, the new parts contributed to a quieter drivetrain. Although you could say that it was because of the extra ball bearings, I attribute it more to the better gear meshing and proper fit of the gears themselves. The newer Juggernaut kits will have these parts included in the box, so you won't have to worry about it unless you bought one of the earliest Juggernaut boxes. Tamiya did a good job in finding a solution to the gear problem, and we commend them on the way they handled it.

Just the Beginning

Although there is a reasonably long list of options for the Juggernaut, this is just the beginning. Keep in mind that the Juggernaut is only a few months old. I'm sure that the Juggernaut will receive even more factory and aftermarket support just as the Clodbuster did years ago. The Juggernaut has a following that is growing every day, so stay tuned- maybe we'll go full blown just like we did with the "MechaClod"!







Quick Tips: To improve the suspension (the original setup is very stiff) there are two things you can do. First, remove the springs and spring cups off of the shocks. Second, remove the two smaller leaf springs so that you are left with only the longest piece. Reattach everything and your Juggernaut will handle much better!

Championship Winning Rides Up Close

Team Losi managed to get eight XX-4s in the A-main compared to just three at the last Worlds.



Jukka Steenari's Losi XX-4

Front Suspension

Toe	1° Out
Camber	-1°
Caster	Stock
Swaybar	None
Steering Bellcranks	Inner holes
Rod length	Stock
# of washers under spindle ball	0
# of washers under carrier ball	2 gold
Shock placement on tower	#2 (second out)
Shock placement on arm	Inside

Front Shocks

Oil	25wt Losi
Piston	52
Springs	Orange -1.5 coils

Rear Suspension

Toe-In	3°
Camber	-2°
Anti-squat	2°
Swaybar	Yes (1.6mm)
Camber on hub carrier	B (middle)
Camber on bulkhead	5/5 middle row outside
Shock placement on tower	4 (outside)
Shock placement on arm	Outside

Rear Shocks

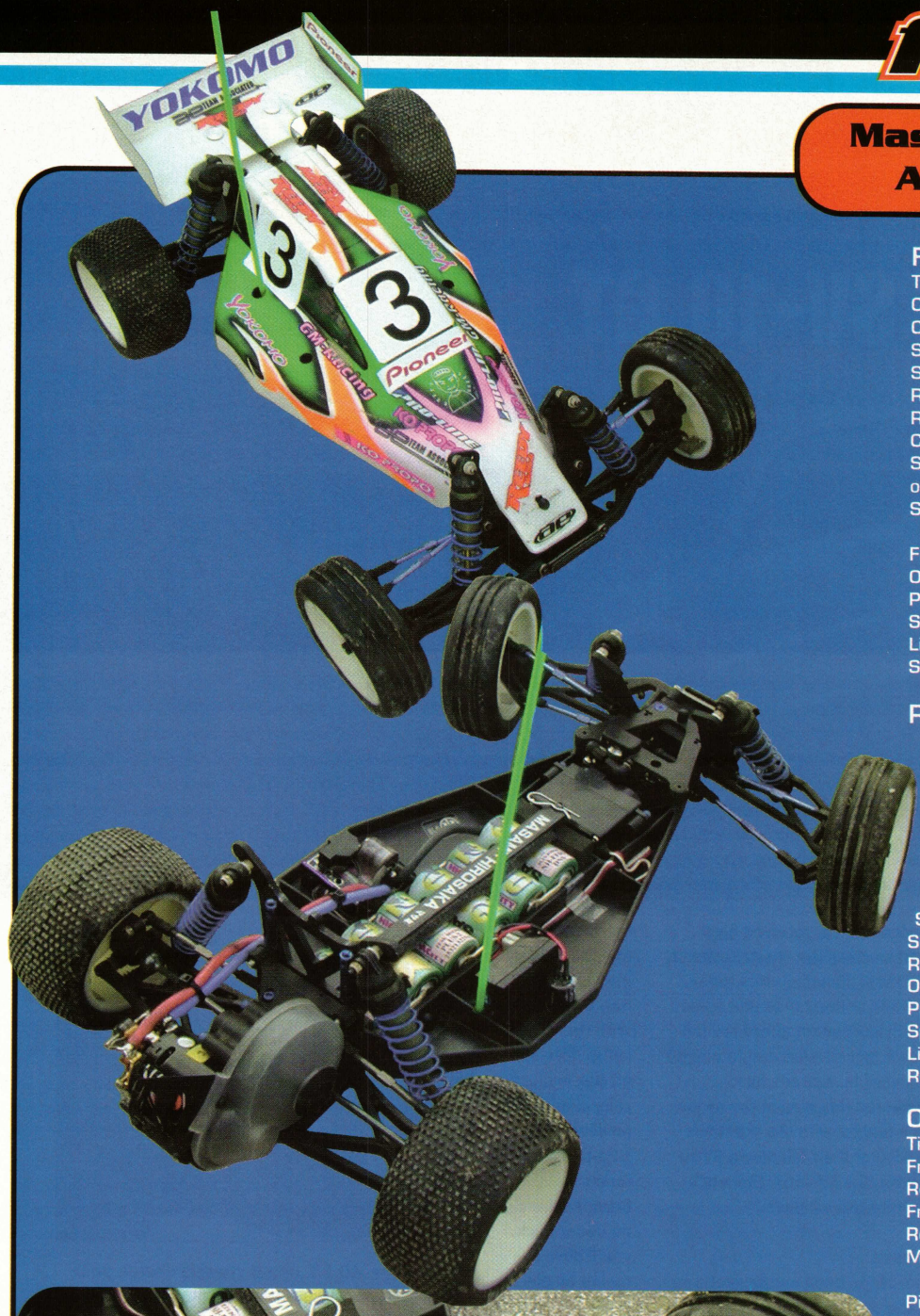
Oil	37wt
Piston	54 one hole drilled 1.7mm
Spring	Yellow
Limiters	"A" inside, 2 "B" outside

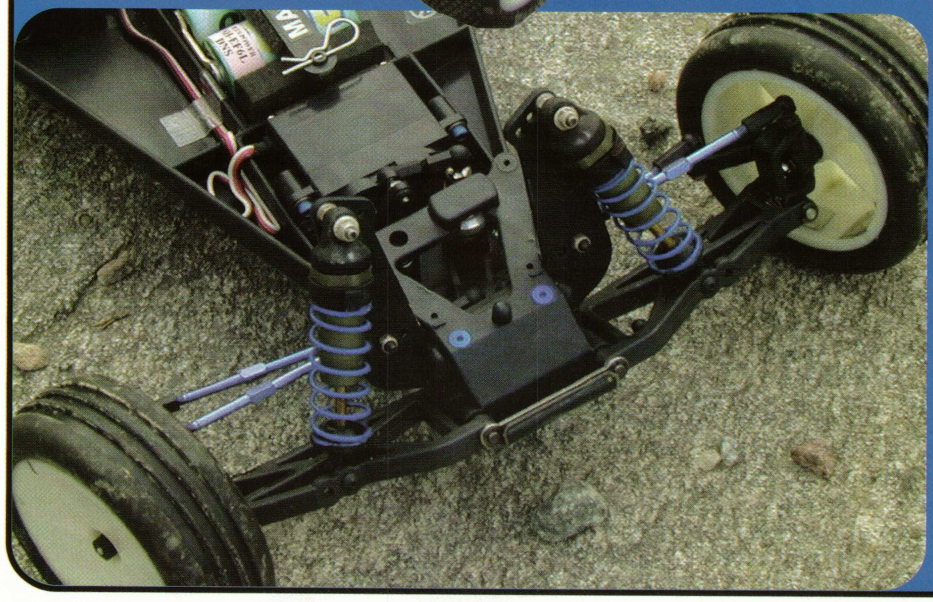
Other

Tires	
Front	Losi Taper Pin Yellow
Rear	Losi Taper Pin Yellow
Front Foam	Pro-Line Firm 3/4
Rear Foam	Trinity soft 2-stage
Clicker Adjustment	One-way loose
Motor	TOP Orion Chrome Modified 9x 2
Pinion	17
Spur	86
ESC	Novak Cyclone
Receiver	Novak XXL
Battery	Orion V-Max 2000
Servo	Sanwa EGR-ZR

Jukka's Notes: Hot Weather body; stock wing; wide Losi rear wheels; Pro-Line front wheels; transponder at the back of the body; plastic outdrives front and rear; hubs centered; rear pivot block raised.

Masami Hirosaka's Associated B3





Front Suspension

Toe	.0°
Camber	-2°
Caster	25°
Swaybar	None
Steering Bellcranks	Standard
Rod length	Stock
Ride Height	Arms level
Camber Mounting	Outside on tower
Shock placement on tower	Outside hole
Shock placement on arm	Inside

Front Shocks

Oil	35wt Associated
Piston	1-hole
Springs	Blue
Limiters	None
Shock Shafts	71 "Unobtanium"

Rear Suspension

Suspension Mounts	3-3
Wheel Hubs	Spaced forward
Camber	-2°
Anti-squat	2°
Swaybar	None
Camber on hub carrier	Inside hole
Camber on bulkhead	Inside
Shock placement on arm	Outside
Shock placement on tower	Middle

Rear Shocks

Oil	30wt
Piston	1-hole
Spring	Blue
Limiters	None
Rear Ride Height	CVDs Level

Other

Tires

Front	Pro-Line Radius Rib M3
Rear	Pro-Line Holeshots M3
Front Foam	Pro-Line grey
Rear Foam	Pro-Line white
Motor	Reedy Sonic II Modified 9x 3
Pinion	17
Spur	81
ESC	GM Racing V12
Receiver	KO KR-297FZ
Battery	Yokomo 2000
Servo	KO PS2000

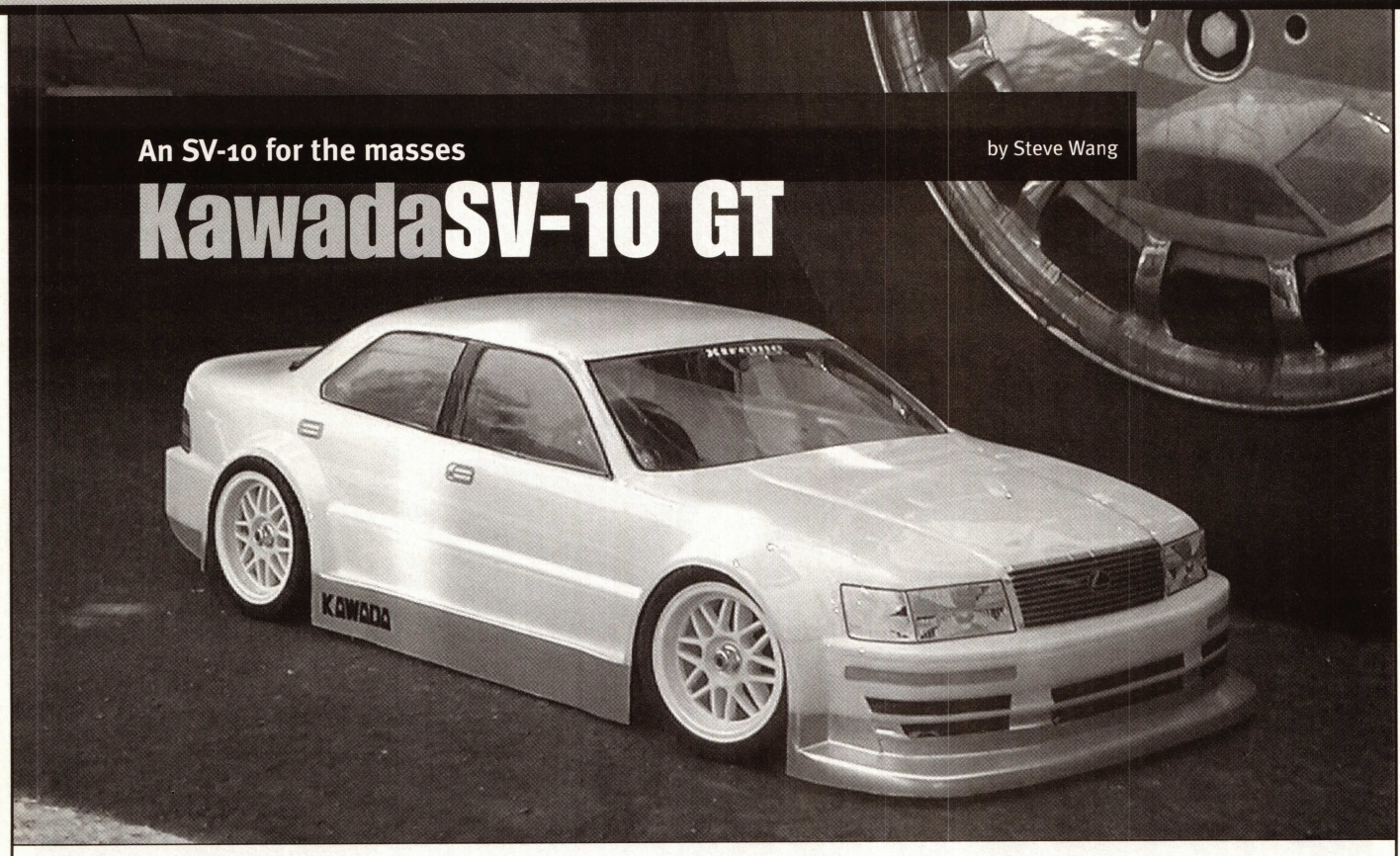
Notes: Pro-Line wide front and rear wheels. Unlike the other Associated drivers Masami ran the standard geometry rear shock tower. All of his components on the car were standard composite, not graphite, including the chassis. Tie-rods were standard Factory Team. Wheels and tires were weight-balanced.

Prior to this year's Worlds, Masami had not driven an off-road buggy for over a year.

An SV-10 for the masses

by Steve Wang

KawadaSV-10 GT



Kawada has been a well-known name to touring car enthusiasts for their high quality hop-up parts, flashy rims, realistic Lexan bodies and high traction rubber tires. About a year ago, Kawada took the big plunge and jumped into the touring car war with their Revilla, the car received high marks across the chart. However, like most manufacturers today, Kawada understands that some hobbyists cannot afford the full blown race version due to budget constraints. Kawada has answered this plea of the racers on a budget with the economic version of their full blown SV-10 Alcyon, the SV-10GT. (So much for innovative names.)

VITAL INFO

Kawada USA, Ltd.
283 S.W. 41st Street
Renton, WA 98055
425.656.0688 phone
www.kawadausa.com

THE HITS

- Comes with front AND rear ball diffs.
- Adjustable turnbuckles.
- Front and rear belt tensioners.
- Fully adjustable suspension.

THE MISSES

- Friction Shocks. (Can I have a pack of O-rings please!)
- LS-400 body is unique, but was not too appealing for my taste.
- Screwing machine screws into molded parts gets very tiring after awhile.

THE LAST WORD

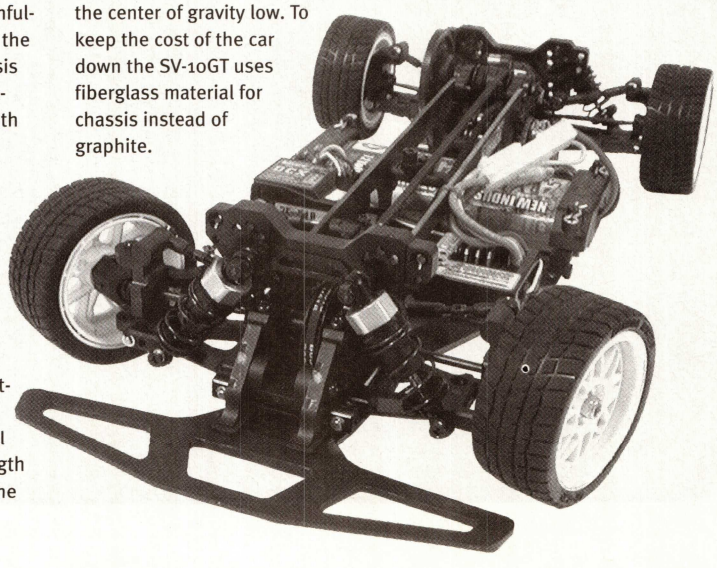
Take a good look at the SV-10GT. Although a budget model, it has a lot of nice features that both the racer and basher will appreciate. This car's got the potential and a lot of room before you out grow the car.

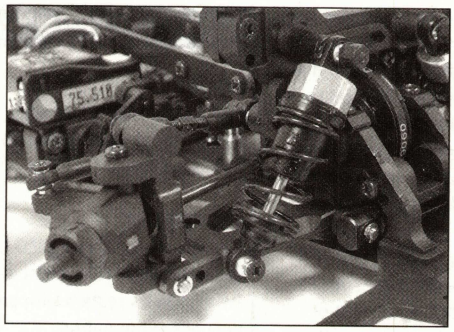
Chassis

One of the most unique features of the pro version SV-10 Alcyon is its V.O.L.T. (Vertical Overarch Ladder-style Twin) chassis design, and Kawada has faithfully carried this design over to the GT version. The V.O.L.T. chassis design uses a regular saddle-pack bottom chassis plate with three batteries on each side. However, and you have the option of running either saddle or stick packs thanks to battery boxes that do come with the kit. Instead of having an upper deck, the V.O.L.T. system uses two vertical beams that run the length of the chassis connecting the front and rear bulkheads. There are also several molded pieces along the length of the chassis that connect the two beams together, completing the ladder-like look. With the V.O.L.T. setup, fore and aft flex is practically eliminated, however, some side-to-side flex remains. Because there is no upper deck, you'll have to mount all electronics on the bottom plate, and this will keep the center of gravity low. To keep the cost of the car down the SV-10GT uses fiberglass material for chassis instead of graphite.



The unique V.O.L.T. upper chassis design positions the two top plates vertically along the chassis' length.

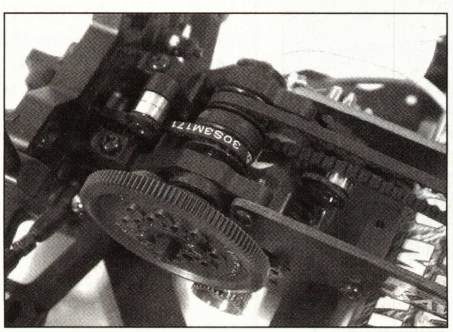




The SV-10 GT uses molded friction dampers which can be easily upgraded to oil-filled units with a few O-rings.

Drive Train and Transmission

The SV-10GT uses a dual belt setup similar to those found on other dual belt touring cars (i.e., short rear belt, long front belt). I noticed a couple of nice features about the SV-10GT: First, the drive belts on the SV-10GT are thinner in width than usual, which cuts down on friction and also make belts more flexible around the pulleys. Second, due to the thinner belts (which stretch slightly easier than those of a thicker width), the SV-10GT features easily adjustable front and rear belt tensioners. Finally, a very welcome feature: front and rear ball diffs. The SV-10GT features what Kawada calls the "Floating Disk" ball differential. The diff rings do not come in contact with the diff hubs, but with conical springs instead, and according to Kawada, this provides extremely smooth diff action and allows better diff adjustments to be made. After building the diff, I must agree, the diff action was silky smooth. A pair of front and rear dogbones transfer the power to the ground. One unique thing about the dogbones on the SV-10GT is that they are "captured" in the axle shaft by a large molded E-clip. This cuts down the probability of a dogbone popping loose (and we all know how much we hate that).



The dual belt tranny is efficient and smooth. Note the two belt tensioners at opposite ends of the top shaft.

Suspension

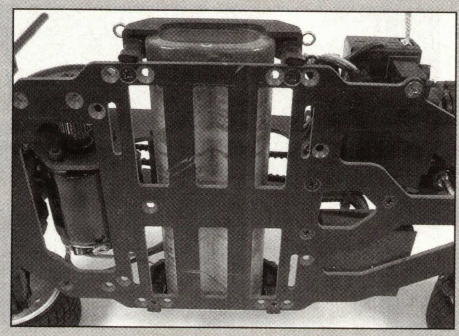
The SV-10GT uses the conventional lower A-arm and upper control link suspension setup. At each corner of the car is a friction damper, but I was informed by Brett from Kawada that these shocks can be easily changed to a oil-filled setup simply by replacing the plastic seals at the bottom of the shock with O-rings. (Instructions on how to do this come with the car.) The SV-10GT features a complete set of adjustable turnbuckles (a feature rarely found on budget cars), and also adjustable caster angle and rear anti-squat. The caster angle and rear anti-squat can be adjusted by simply removing two screws and rotate the lower hinge-pin mount to the desired caster or anti-squat angle. The front and rear shock towers also feature a large number of mounting positions for the upper shock mount and the upper link. All of the suspension pieces of the SV-10GT are all molded of very stiff material and should withstand a good amount of abuse.

Steering

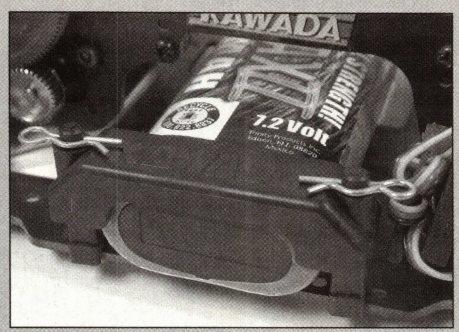
The SV-10GT uses the same unique single bell crank steering setup as its more expensive counterpart. The single bell crank sits in the middle of the chassis, right between the two vertical beams. The single bell crank connects with two turnbuckle to reach each steering knuckle. The single bell crank is also supported by larger bushings (5x10mm) than what you would normally find in a steering bell crank.

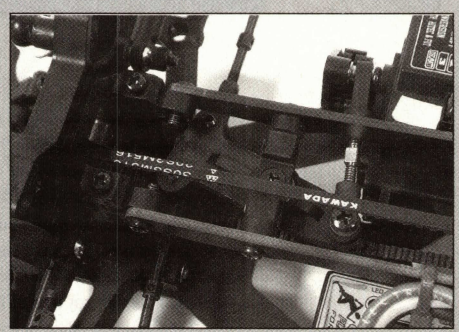
Tires, Wheels, Body, Etc.

The SV-10GT comes with a set of nice chrome rims that look great for Concours and are probably too heartbreaking to use running around on the streets. The kit tires feature very realistic tread patterns, however, they will most likely only be able to provide mediocre traction. The SV-10GT comes with a Lexus LS-400 body. Some of you might find this body to be a delight, but personally I just can't imagine myself racing with a large luxury car body like the LS-400. Because this is a budget priced car, a full set of bronze bushings are included to keep the price down. However, judging by the other features that come with the car (front and rear ball diffs, adjustable turnbuckles, etc.) a ball bearing set might be on the only hop-up you'll need to invest in the near future.



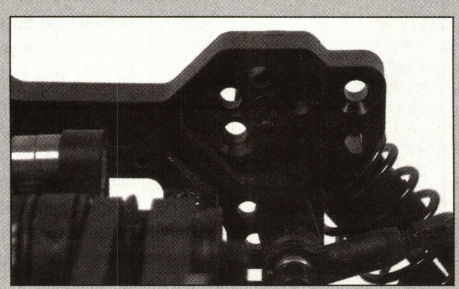
The chassis design of the SV-10 GT allows for your choice of stick pack or saddle pack. This is done by altering the battery hold-down posts during the building processs. Note the dual body clips that secure the battery to the chassis.

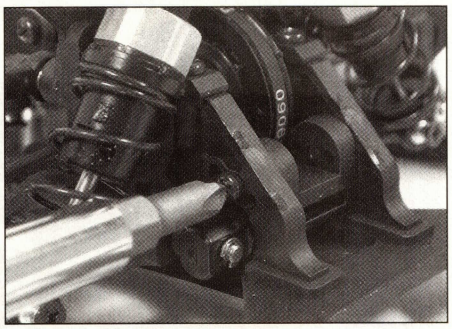




Instead of the usual dual bellcrank steering system found on most sedans, the SV-10 GT uses a center-mounted, single bellcrank, design that is simple and effective.

Like the top-of-the-line Alcyon, the GT also has multiple shock mounting poimts. The difference is that the SV-10 GT uses molded pieces in place of the graphite parts.





Changing caster angles on either end of the SV-10 GT is as easy as removing two screws (above) and pivoting the lower arm mount to the desired angle. Unlike most sport kits and even some "pro level" kits, the SV-10 GT comes with real turnbuckles (shown below), not simple threaded rods!



Testing Equipment

I used the Hitec Lynx 3D with a DCX receiver to control the SV-10GT. I also used a Hitec 525MG metal gear servo steering. A Reedy rage stock motor was used to propel the car, controlled by the new Runner Plus Reverse Digital from LRP Electronics. On the SV-10GT you have the option of either running the stick pack or the saddle pack configuration. I decided to go with the stick pack configuration and I used a Trinity Amp Max II 1500 stick battery pack supplied the power for the SV-10GT.

Testing

Since the majority of time the SV-10GT will probably find itself doing streets or parking lots bashing duties, I took the car out to a large parking lot not far from my house. The parking lot was smooth yet very dusty. I set up my LRP Runner and plugged in the battery. This unique speed control doesn't have an on/off switch, just plug in the battery and go. Make sure though that you turn on the radio first. I took it easy at first, checking the steering trim and just getting use to the car. After making sure everything was in check, I gave the SV-10GT full throttle down the parking lot. The car had good acceleration, but just decent top speed, which is probably due to the gear ratio that came with the kit (116 Spur and 36 Pinion). This yield a ratio of 7.25, which is good for a mild modified motor, but not for the Reedy Rage stock motor that I was using. However, the car was still fast enough for me to get a feel for it. The SV 10GT has a lot of steering built into the car and along with the softer spring for the front shocks that came with the kit, the car turned in very aggressive. Coming out of the turn, the car would get a little loose and requires some counter steering at times to set the car straight, but this is mainly due to the dusty surface that I was testing on.

Later on that day, I took the SV-10GT home and test it on a driveway surface (rough pavement with tiny amount of small rocks). The car hooked up well on the surface and the car's suspension handled the rough surface well, although it was a little bouncy. I decided to cut my testing session short because of the amount of small rocks I hear bouncing around the car as I blasting up and down the driveway. The SV-10GT does have a slots between the bottom chassis plate and the bulkhead pieces for small rocks to exit, but I didn't want to risk damaging the car too badly before the photo session.

Conclusion

As a economic model, the SV-10GT comes with a lot of nice features if you plan on doing some weekend warrior racing, like adjustable turnbuckle, front and rear ball diff, fully adjustable suspensions and the saddle pack configuration option just to name a few. If you plan on racing, the only hop-up I would seriously recommend are ball bearings, some grippier tires and a good pack of O-rings to convert the shocks to oil filled units. If you just plan on bashing around the driveway and parking lot, you don't need anything else, the car works just fine out of the box. The street price of the SV-10GT will be competitive with other sedans out there while offering a slightly better equipped car at the same time. So put the SV-10GT on your list when you're out shopping for a budget touring car... it is worth a good look!



Instead of mounting the receiver underneath the top plate and behind the power switch, I moved it on top of the top plate for protection from stray rocks and to ease crystal inspection or replacement.

Assembly Lines

Here are a few tips when building your SV-10 GT:

- Make sure the conical springs are facing the right direction during assembly of the front differential.
- The instructions call for cutting the rear A-arm bulkhead mount. Make sure you cut the correct side of it.
- When building the shocks, the large rubber O-ring seal goes on top of the shock body's thread and not below it.
- If you're going to use the saddle pack battery hold down, make sure you cut off the correct ear on the mount.

THE SPECIFICS

ITEM INFO
Part #44012 (SV-10 GT with LS400 body), MSRP $229.50
EST: $190-$210

CHASSIS TYPE
Fiberglass chassis with V.O.L.T. (Vertical Over-Arch Ladder style Twin) chassis system with saddle pack setup option.

WHEELS AND TIRES
Kawada one-piece 5-spoke chrome wheels with Kawada medium L-compound treaded tires

TRANSMISSION TYPE
Dual belt drive 4WD with front and rear "floating disk" ball differential

SUSPENSION DESIGN
Lower A-arm upper control link setup with friction dampers. Adjustable turnbuckles and fully adjustable suspension (caster, anti-squat, camber, and toe.)

SUSPENSION DAMPENING
Coil-over, friction shocks; can be upgraded to oil-filled shocks. Molded shock bodies, double O-ring and bladder seals, steel shock shafts.

VEHICLE TYPE
Electric-powered, rear-engine 4WD touring car.

OTHER ITEMS YOU NEED
2-Channel Radio with 1 servo and an ESC, motor, 6 cell stick pack or saddle pack, CA glue for the tires, and paint for the body.

OUR TEST GEAR
Hitec Lynx 3D radio, Hitec HS-525MG metal gear servo, LRP Runner Plus Reverse Digital speed control, Trinity Amp Max 1500 stick pack, and Reedy Rage stock motor.

MAIN COMPETITION
HPI RS4 Sport, Tamiya TA03 series. Schumacher SST 99 Sport, Kyosho Spider EP series.

McLaren

McLaren Mercedes MP4/13
58235 1:10 Scale

- Front And Rear Reinforced Rubber Tires
- Lightweight F-1 Type F103RS Chassis
- New, 6 Double-Spoke Wheels



RC Radio Control

Available in August: McLaren Mercedes MP4/13 20046 1:20 scale Static Display

Tamiya also makes a line of Static Model McLaren kits that have been some of the most coveted and collectable in our history. Unavailable for years, they have now been re-released. Please see your local hobby retailer for more information on these or any of Tamiya's other Automotive, Motorcycle, Military, or Radio Control model kits.





TAMIYA

Tamiya America, Inc. · 2 Orion · Aliso Viejo · CA 92656 · 1-800-TAMIYA-A · www.tamiya.com



BRP Fun Wons "Da Bug"

The name fits!

by James Revilla



VITAL INFO

BRP Inc.
1575 Lowell Street
Elyria, OH 44035
440.284.0270 phone

THE HITS

- Fun to drive.
- Lasts around 18 minutes per charge.
- Size makes the car easy to drive anywhere (like in your bedroom).
- Simple chassis design.

THE MISSES

- Price higher than expected.
- Narrow body and wide wheels give it that "Lowrider" look.
- Cheesy body mounting.

THE LAST WORD

Race in the office, in the garage, almost anywhere small. The Fun Won is entertaining to drive amidst it's simple yet effective chassis design. If you like long run times, have extra electronics, and are willing to part with $100 for a 1/18 fun car, give the BRP Fun Won a look.

The new Beetle has sparked a large following of drivers who want something unlike other cars; something with room for three friends and a built-in bud vase. To some the new Beetle is an extension of their personality. To others the new Beetle fits their lifestyle like a Neon green suit at a wedding.

Every once in awhile we get a "weird" car delivered to the *Xtreme R/C Car* office. I don't mean weird in a bad way; it's more like weird in an unconventional, "uneasily categorized" way. This car may not fit within the usual mix of sedans, buggies, monster trucks, etc., but for some reason it raises enough eyebrows to warrant a review. BRP's "Fun Wons" is one of those cars.

How different is it from the norm? Well for starters, the box the car comes in is smaller than the average shoebox. Upon opening the package, I noticed that the box could have been even smaller if it weren't for the size of the body! Aside from the tiny Lexan body, there were a few parts bags and a couple of instruction sheets. I laid the parts bags out and assembled the chassis.

Features

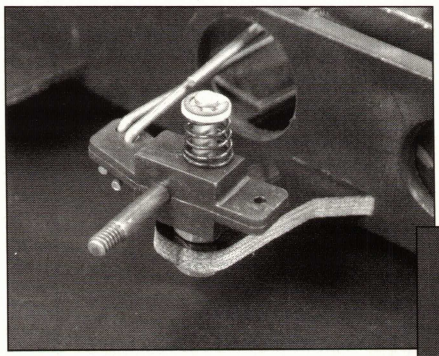
Once complete, the chassis is very basic. Its simplicity is admirable after countless experiences with the multi-piece suspensions and complicated drive systems I've worked with in the past. The backbone of the chassis is a pair of flat molded plastic panels. The panels sandwich the bottom chassis plate and serve as a mounting point for the rear pod. A molded post holds both panels together up front. A molded screw and nut hold the rear end together. The bottom chassis plate fits into slots cut through the side plates, and serves as a mounting area for all of the electronics. At the back end of the chassis assembly an angled plate serves as a body mount.

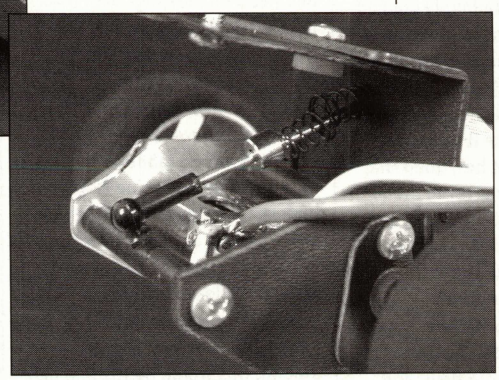
Look underneath the rear body mount and you'll find the rear pod assembly. The rear pod consists of a metal motor mount plate and a molded plastic sheet. The tiny drive motor, which has a pinion gear press-fitted on its output shaft, bolts to the metal

Wild idea: James wants to bolt in a 540-sized mod motor into the Fun Won.

plate. Both pieces are connected together by a pair of molded posts. The rear pod pivots through molded bushings off of the chassis, and is dampened by a double spring torsion rod that passes through the rear body mount. The solid drive axle runs through the rear pod via a pair of metal bushings, just like an on-road pan car. Again, simplicity is a rule here. BRP sent an optional ball diff rear axle, so I installed it in place of the "diff-less" stock piece.

Front suspension is handled by a single spring and kingpin setup found typically on on-road pan cars. The front hubs attach to a fiberglass plate positioned just forward of the main chassis plate. A standard-sized servo is mounted onto this plate, fitting snug within the two chassis side plates (after the servo mounting ears are trimmed off). The steering servo controls the wheels through a metal Z-bend rod connected to the right side hub assembly. A second Z-bend rod runs from the right side wheel, through cutouts in the chassis side plates, to the left side wheel. No servo saver is included in the kit, but it didn't bother me at all since I doubt it will be needed in a small car like this one. Finally, another body mounting plate attaches directly to the steering servo.





The Fun Won suspension setup is simple. Up front you'll find a sliding kingpin and spring setup like those found on on-road pan cars, while out back a sliding rod with dampening springs absorb tiny bumps.

Four identical blue-compound foam tires pre-mounted on chrome-plated wheels sit on all four corners of the chassis. The front wheels ride on metal bushings, however I'm sure ball bearings won't be hard to find to smooth things out. The kit I received was the "Fun Wons" version, which includes a Beetle body and oversized wheels. Buds also offers a similar kit with NAStruck body.

Test Equipment

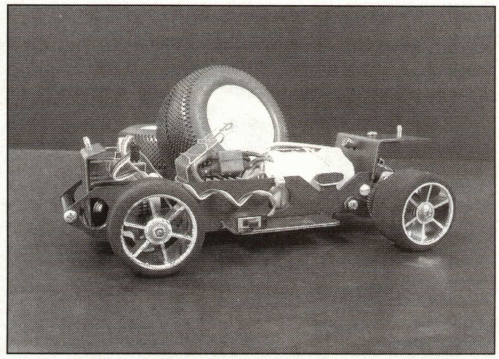
The 1/18-scale chassis called for small electronics. Instead of chopping off the mounting ears on a standard-sized servo (which seemed overkill for a chassis this small, I enlisted the services of a JR Racing micro servo. The servo attached to the front suspension plate with servo tape. Since it was a micro servo, there were no problems with clearance between the chassis plates.

The battery, ESC and receiver were a different story. The special 6-cell AA battery pack BRP sent with the chassis fit perfectly in the back half of the chassis, held down by a simple rubber band that hooked onto two tabs cut into the side plates. No matter how I repositioned the GM Racing Champ electronic speed controller and the Tekin micro receiver, I couldn't get both of them to fit between the two side plates. The bottom chassis plate extended about an inch outside of the side plates, so I tried using that space. I installed the receiver to the left side of the chassis and the ESC to the right side, leaving the extra space between the side plates for the receiver antenna mount. With the heavier ESC on the right, I figured it would balance out the receiver and motor weight on the left (as if I were going to race this in a World event!) When fully assembled, the entire chassis measured in at 9" x 5 5/8" (L x W) and weighed in at a featherlight 16 ounces.

Test Drive

Being 1/18-scale has its advantages. Once I assembled the chassis and charged the battery, I simply stepped into the shipping area of the *Xtreme R/C* Headquarters and switched the ESC on. With a quick pull of the trigger, the Fun Won was off. Mind you, acceleration wasn't at all spectacular, but what do you expect from a tiny motor? The foam tires and dusty concrete floor didn't mix well, as it wasn't hard to get the chassis into a spin.

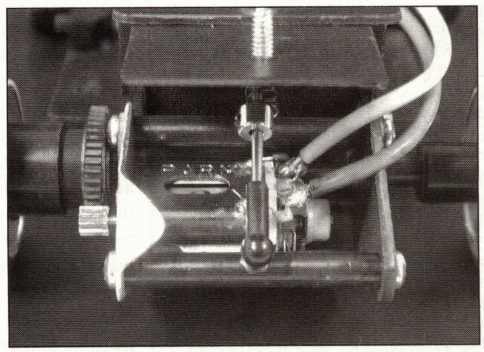
Xtreme R/C staff writer Steve Wang was just hanging around the offices, so I had him take control of the Fun Won to see what he thought. After seeing what a handful the tiny little car was on the slick floor, he took it outside to see if it would fare better on the hot summer asphalt. Outside temperatures lingered in the mid 90's, so the asphalt surface was more than just warm.



See those two round things sitting behind the Fun Won? Those are your standard sized off-road truck tires. The Fun Won is very, very small!

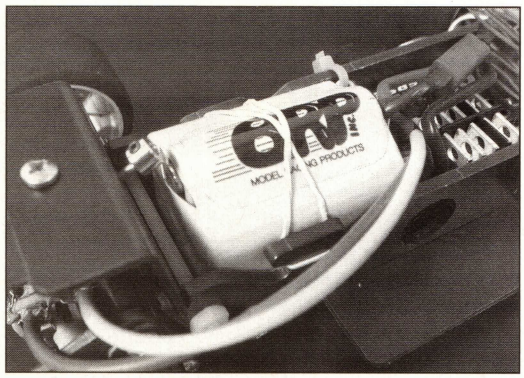
The Fun Won hooked up better on the asphalt, but was still prone to spinouts. With a little more trigger control, Steve had the car racing around, stating that although the car was slow it was actually fun to drive. With hopes of cutting the front traction down a bit to control spin, Steve brought the chassis into the pits and I swapped the blue-compound front foams to a pair of optional orange compound foams that BRP also sent with the kit. I also repositioned the electronics, moving the ESC inside the chassis plates and the receiver on top of the steering servo. This configuration had as much of the weight down the centerline of the chassis.

The tire change took traction out from the front end, and the car hooked up a little better out on the hot asphalt. After moving the electronic components around, the Fun Won had a more equal turning radius both left and right. Literally baking from the heat of the



The Fun Won is powered by a miniature electric motor, similar to those used in scale slot cars. In this view you can also see the optional rear axle with a built-in differential.

If you don't like the Beetle body, BRP has a truck body that fits the Fun Wons chassis, too.



Using BRP's 6-cell AA pack, run time with the Fun Won averaged 17-20 minutes (depending on how many consecutive donuts we do on the office floor!)

sun, Steve and I retreated back into the nice, air-conditioned offices. Inside, we both took a look at the office carpet (don't ask us why we were staring at the carpet!) and I switched the car back on.

You know how you hear that foam tires work well on carpet tracks? Well guess what, they do! The Fun Won chassis was definitely hooked up on the carpet. Steve challenged me to do a full throttle oval run around one of my desk legs (remember, the car is 1/18-scale!) At full throttle the Fun Won was quick enough to enjoy, and on the carpet surface it turned on a dime. A couple of times I forgot how good the front end hooked up and I over steered the chassis into the desk leg! Luckily, nothing broke on the tiny machine. The battery/motor combo is claimed to have a 15-20 minute run time, and they aren't lying- you could drive this car on and on while your 1/10-scale sedan buddies would be recharging after the 5th minute.

When the battery finally dumped, I surveyed the chassis. Other than a slight layer of dust that would disappear with a quick shot of compressed air, the chassis was as good as new. Tire wear was far within acceptable tolerances, and the only gripe I could find was a very hot motor (Actually, Steve found it when he burned his finger on it, heh heh!). With a quick ball diff adjustment, the rear end hooked up even more during subsequent drives, and the orange front foams kept their composure throughout the countless drives in and out of the office. The chassis was even better over the bumpy surfaces after I made a small modification to the rear dampener (see "Building and Setup Tips" sidebar).

Assembly Lines

1. Chassis prep
Building the Fun Won is basically a piece of cake. Before actual assembly, take a small file or a hobby knife and round out all of the edges on the holes in the two chassis side plates, particularly where the bottom deck and steering plate slide through the side plates. This will ease assembly, but don't enlarge the holes themselves or the chassis and steering plates will wobble around.

2. Front Kingpins
When assembling the front suspension, put a couple of drops of liquid thread-lock on the kingpins where they bolt to the front suspension plate.The nuts do not have a nylon insert to keep them in place, and a couple of times I had to re-tighten the nuts until I used thread-lock.

3. Steering
Clean the front suspension plate and the side of your servo with motor spray and a rag before servo taping the two together. This will ensure that the steering servo won't move out of place.

4. Rear suspension
Instead of placing a spring on each side of the chassis (as instructions show) put both springs on the side closest to the motor. Set the inboard collar to the very end of the dampener shaft, then adjust the outboard collar until you have a satisfactory ride height. This mod softens up the rear end a bit to counteract the high traction front end.

Final Thoughts
At first, in all honesty, I thought this would be a slow, boring car to drive but I found out it was exactly the opposite! The speeds weren't ballistic, but it was enough to keep the word "Fun" in Fun Wons. As simple as the chassis was, it hooked up very well after some minor adjustments, especially on the carpet. Driving it was so fun Steve was considering picking up one for himself so that we could have impromptu races during our lunch breaks.

I didn't break anything on the car, even after numerous angle and head-on meetings with desk legs, walls, door ends, etc. But if the time comes for some replacement parts your local hobby shop should be able to get them. Now, at a manufacturer's suggested price of $100.00 (about $80 EST), the cost of this machine is a bit high considering the fact that you could pick up a 1/10-scale size entry-level buggy or sedan for the same if not less. Then again if you already own a sedan or buggy and have extra electronics lying around, this would be worth a look if you are in the market for something a bit different from the norm.

What can I say about the Fun Won? The whole time we drove the car during testing and afterward, we were having a good time. It wasn't even close to being the fastest car I've ever driven, or the largest, or the best handling. It was however a lot of fun. If you are looking for something different that you practically don't have to worry about, take a look at BRP's Fun Won's. The car's name speaks for itself!

THE SPECIFICS

ITEM INFO
Part #105 (Fun Wons: "Da Bug"), MSRP $100.00 Street estimate $70.00-$80.00.

CHASSIS TYPE
Four piece pan-type with interlocking molded fiberglass sides.

WHEELS AND TIRES
BRP foam donuts mounted on BRP chrome one-piece wheels.

TRANSMISSION TYPE
Direct-drive, bushing mounted solid rear axle, optional ball differential .

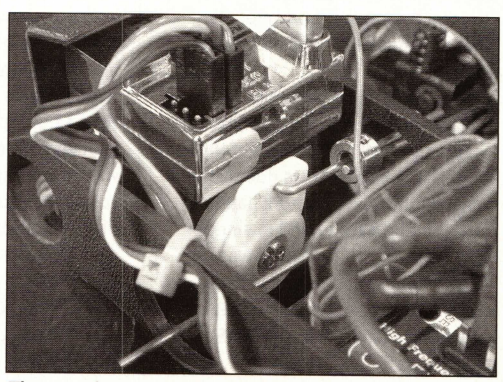
SUSPENSION DESIGN
Front: sliding kingpin; Rear: pivoting motor pod.

SUSPENSION DAMPENING
Front: kingpin springs; Rear: dual-spring dampener.

VEHICLE TYPE
Electric-powered, 2-wheel direct drive.

OTHER ITEMS YOU NEED
2-Channel radio system with 1 servo, small sized electronic speed controller, 4-6 cell AA rechargeable battery pack, and paint for the body.

OUR TEST GEAR
Futaba 3PK Radio System, Tekin Micro receiver, GM Racing Champ ESC, Hitec RCD micro servo, BRP battery pack.



The steering servo sits dead center in the chassis, seen here beneath the receiver. Even Hitec's micro-sized servo looks huge within the Fun Wons chassis.

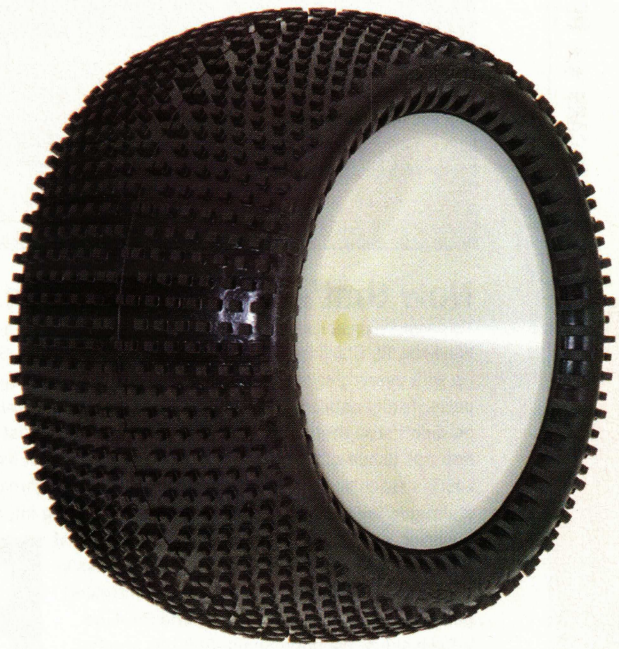
SUBSCRIBE SUBS

Subscribe Now and get FREE PRO-LINE tires!



Yes- We are giving away a pair of ***Pro-line tires for FREE*** *when you subscribe* for a one or two year subscription! That's right! Get a free pair of the same tires the fast guys are using, and get your buggy, truck or sedan on rails! While you're waiting for the glue to dry on your shiny new tires, you can read the most informative, honest (and don't forget entertaining too!) magazine you'll ever get your Super-Glued hands on!*

THE TIRES YOU WILL RECEIVE, WHETHER BUGGY, TRUCK OR SEDAN, WILL BE THE LATEST TREADS AND COMPOUNDS AVAILABLE. *Tires will be shipped 3 to 4 weeks after you PAID subscription order is received. US RESIDENTS ONLY!





Xtreme R/C/Pro-Line Subscription Form

❑ One year subscription (10 issues) at $16.99 (U.S. Only)!
❑ Best Deal! Two year subscription (20 issues) at $31.99 (U.S. Only)!
❑ Check here if renewal.

I want PRO-LINE tires for my: (check one, 2yr. subs will receive 2 pairs.)

❑ 1/10 buggy ❑ 1/10 truck ❑ Touring Car

Name_____ Age_____
Address_____
City_____
State_____ Zip_____ Country_____
Payment Type (check one): Payment Enclosed___
Bill My Credit Card___ Card Type: ❑ Visa ❑ MC ❑ Amex ❑ Discover
Card #_____ Exp __/___

Signature_____

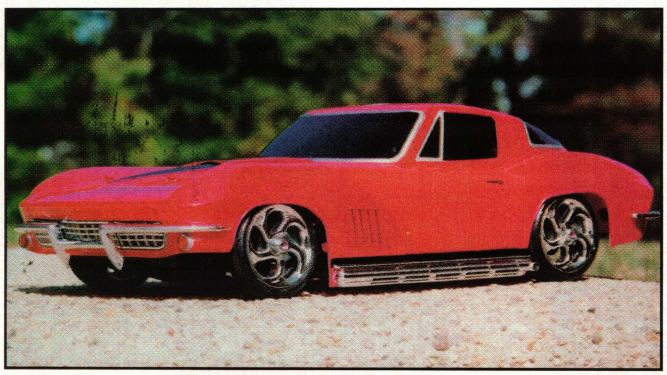
If you're paying by check, please make payable to **Team Action Publishing**. Please allow 5-7 weeks for your subscription to begin. * Free Pro-line tire offer applies only to new subscribers and renewals at the prices indicated above. Sorry, free tire offer only to U.S. Residents

Loyal readers, this page is all yours...

Sand Blaster

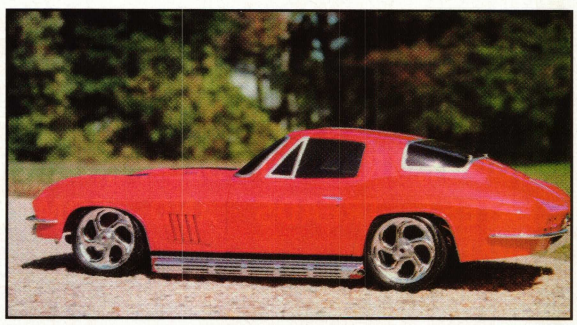
When Jon Williams of Beaumont, TX hits the sand, he does so with his Team Losi NXT Graphite Plus. Jon hooked up his truck with a lot of options, including an O.S. CV -.15 engine with Alien Racing purple anodized head, a "hand ported" header, Paris pipe, lightweight red anodized flywheel and MIP clutch. The transmission is also beefed up with Hammad Ghuman titanium gears, MIP carbide diff balls and diff rings, RPM slingshot chrome rims and Pro-Line tires. Jon even used our "How-To" and anodized his titanium parts! He controls everything with a JR-XR2 radio, Airtronics 94258 servo for steering and a Hi-Tec HS-605MG servo for throttle. Those hours and hours of work have paid off, Jon!





HEY ALL YOU READERS, TAKE NOTE!

These two are excellent examples of the Racers' Rides we get in the mail everyday. Keep sending them in! However, if you have to use two hands to hold a spray can and your R/C paint jobs suck, it's okay. Snap a shot of your hottie girlfriend, send THE MAN a pic of her along with the car (Important: don't forget to send HER pic!) and who knows - he might like your picture so much that he'll become your new best friend!



Now that's a Street Weapon!

This super-sweet racer's ride belongs to Robert "Shaga-Bob" Brown of West Warwick, RI. Starting with a stock Losi Street Weapon, Shaga-Bob hooked it up with everything we used in Issue 3.5, including full graphite factory parts, Trinity anodized everything, and Lunsford Titanium turnbuckles. But, he didn't stop there. After that Bob took our top ten list of Street Weapon hop-ups (Issue 4.4) and added those parts, too! That list included Team Losi's suspension update kit, lowered CG chassis, threaded shock bodies, aluminum lay shafts, Trinity's ball bearing steering kit, and more. To us, however, we don't care right now about his list of hop-ups. We are all speechless by the flawlessly-detailed classic Parma Corvette body contrasted beautifully by RPM Turbo wheels and Pro-Line V-Rage skins. We hope Shaga-Bob has another body specifically for racing because this Vette is like butter – smooth!

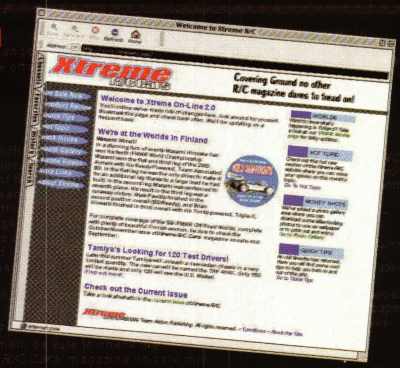
INSTRUCTIONS FOR YOU

So you've spent countless hours getting your ride to look its best. Now it's time to show it off to the world! Send us sharp, clear color prints or slides of your car (no Polaroids) along with your name, address, phone number,and a description of your ride to: *Racers' Rides c/o Xtreme R/C Cars Magazine,* 14175 Telephone Ave. Ste.O, Chino, CA 91710. If we choose to feature your ride, you'll receive a FREE 5 ISSUE SUBSCRIPTION (or subscription extension) to *Xtreme R/C Cars Magazine.* Limit one extension per calendar year. Previous winners can still send photos during the 12 month period, but will not recieve another extension during that period. So don't hesitate. Send in those prints or slides now! Good luck!

Finally, use your computer for something other than girlie pics...

The ALL NEW Xtreme R/C online, full of more information, news, and pictures, plus:

-Reviews
-Quick Tips
-Hot Topics
-Photo Gallery
-Video Clips



Take a break from Cindy Margolis-
Sign on and check out the NEW Xtreme R/C Online!
www.xtremerc.com

INTERNET ACCESS www.integy.com [NEW ONLINE CATALOG]

Simply Call Your Local Hobby Shop Or Call Us At 1-909-444-2766

TEAM INTEGY TECHNOLOGIES, INC.


EAG 1259 $3.99
Shock Rebuilding Stand


EAG 1282 $3.99
Spring Set Organizer


MT7901-5.0 $39.95
INDI Booster Discharger 5.5A


INT C22300 $15.99
C22 Spec Speed Tune Spring Set


TOP T3581 $1.50
BBQ Stick for Tires & Wheels 3pcs


TOP T3803 $59.99
Manifold & Tune Pipe Set


TOP T3803C $59.99
Chrome Manifold & Tune Pipe Set


MAT MS07-789G $35.99
Modified Heat Sink for 12CV


TOP T3841 $19.95
Rear Hub for Losi NXT (2 degree)
AVAILABLE IN BLUE OR PURPLE


TOP T3840 $19.95
Steering Block for Losi NXT
AVAILABLE IN BLUE OR PURPLE


TOP T3839 $19.95
Castor Block for Losi NXT
AVAILABLE IN BLUE OR PURPLE


TOP T3838 $19.95
Engine Mount for Losi NXT
AVAILABLE IN BLUE OR PURPLE


TOP T3842F $17.99
TOP T3842R $17.99
Hard Universal Drive for HPI Pro2


TOP T3883 $3.99
Antenna Mount Super Light Weight
AVAILABLE IN BLUE OR PURPLE


TOP T3882 $19.95
Titanium Body Hole Puncher
TITANIUM COATING


TOP T3596 $39.95
Castor Block for YR4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3611 $39.99
Complete Arm Set for YR4 Series
AVAILABLE IN BLUE OR PURPLE

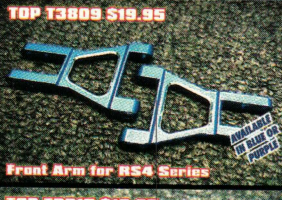

TOP T3804(PS) $17.99
TOP T3804L(NPS) $17.99
Engine Mount for Nitro RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3805(PS) $13.50
TOP T3805L(NPS) $13.50
LW Fly Wheel for Nitro RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3806 $39.95
Front Gear Box for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3819 $19.95
Castor Block for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3810 $19.95
Rear Arm for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3809 $19.95
Front Arm for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3807 $39.95
Rear Gear Box for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3813 $39.95
Rear Block for Nitro RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3814 $19.95
Rear Hub Carrier for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3812 $19.95
Center Block for Nitro RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3815 $19.95
Steering Block for RS4 Series
AVAILABLE IN BLUE OR PURPLE


TOP T3811 $19.95
Steering Bell Crank for RS4 Series
AVAILABLE IN BLUE OR PURPLE


INT E2005 $45.99
High Current 20A Pack Discharger
INDI REACTOR 20


INT C22301 $29.95
0.05"
1/16"
3/32"
5/64"
1.5mm
2.5mm
Titanium Hex Wrench Set (6pcs)
TITANIUM COATING


TOP T3843 $39.95
(Inch & mm)
Precision Dual Dial Caliper


TOP T3381 $2.50
NEW 0mm OFFSET
24mm BBS16 Wheel 0mm Offset


TOP T3397(M) $3.99
Medium Molded Tire Insert 24mm


EAG EM00L M003 $79.00
Diamond Bit $65.00
55T Motor $29.00


EAG 1261 $25.99
CNC 7075 SUPER ALLOY
Steering Block for Pro2 Series


EAG 1262 (8 degree) $25.99
CNC 7075 SUPER ALLOY
Castor Block for Pro2 Series


EAG 1263 $25.99
CNC 7075 SUPER ALLOY
Front Arm for Pro2 Series


EAG 1264 (2 degree) $25.99
CNC 7075 SUPER ALLOY
Rear Hub Carrier for Pro2 Series


EAG 1265 $25.99
CNC 7075 SUPER ALLOY
Rear Arm for Pro2 Series

EAG 1257(F) $15.99
EAG 1258(R) $19.99
Shock Tower for Pro2 Series

VESC Matched Panasonic 3000
5.10s-5.19s 1.17V-1.18V $39.95
5.20s-5.29s 1.17V-1.18V $44.95
5.20s-5.29s 1.19V-1.20V $65.95
5.30s-5.40s 1.17V-1.18V $49.95
5.30s-5.40s 1.19V-1.20V $69.95
5.40s-5.50s 1.17V-1.18V $64.95
5.40s-5.50s 1.19V-1.20V $74.95

VESC Matche Sanyo RC2000 with battery bar and INDI Activator
3.70s-3.79s 1.14V-1.15V $39.95
3.80s-3.84s 1.14V-1.15V $44.95
3.80s-3.84s 1.16V+ $65.95
3.85s-3.89s 1.14V-1.15V $49.95
3.85s-3.89s 1.16V+ $69.95
3.90s+ 1.14V-1.15V $64.95
3.90s+ 1.16V+ $74.95

EAG M103B-24RG $16.99
now with molded insert!
Mounted 24mm 25R Belted Tires

Modified V7.3 $59.95
8T thru 17T
Double
Triple
Our Best Hand Wound MOD Motor

Modified R1.1 $39.95
10T thru 17T
Triple
MATRIX Subzero Machine Wound

MAT M2471R $35.95
V6.6
TQx-R High RPM Rebuildable Stock

MAT M2470R $35.95
TQx-R High Torque Rebuildable Stk

INT E2019 $49.95
Nuclear 7 Power Supply (7A Max)

NEW RACE PROGRAM R.021

NOW ACCEPTING SPONSORSHIP REQUEST

www.integy.com

We sponsor a maximum of 2 drivers/location
Dealer inquires: IntegyDLR@aol.com

140 Centre Dr #E, City of Industry, California 91789 International and Non-Toll Free (909)444-2766 24 Hour FAX (909)444-2767 Tech Support E-Mail: INTEGY1@aol.com

RECTORS R/C RACEWAY AND ACTION HOBBY

RR 3 BOX 104
ALBION, IL 62806

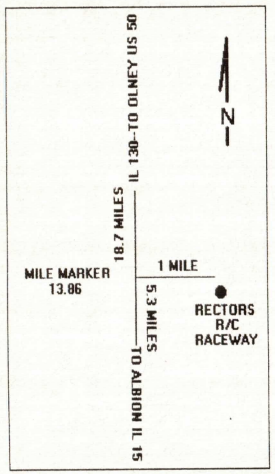
PRESENTS

1999 Illinois State Offroad Championship

Saturday November 13, 1999

Doors open at 7:00 AM Racing Starts at 10:00 AM

Practice Friday November 12, 1999 From 5:00 PM to 10:00 PM



TRINITY WORLD CHAMPIONS | TEAM LOSI | TEAM ASSOCIATED | RACERS EDGE NATIONAL CHAMPIONS

INDOORS AND HEATED

PLENTY OF PIT SPACE, ELECTRIC SERVICE AND RESTROOMS
AMB LAP COUNTER ON SITE HOBBY SHOP

LODGING WITHIN 25 MILES
THE HOLIDAY @ OLNEY IL ROUTE US 50 (618) 395-2121
BEST WESTERN @ GRAYVILLE IL ROUTE I-64 (618) 375-7930
ALBION MOTEL @ ALBION IL ROUTE ILL 15 (618) 445-2311

WEEKLY RACING EVERY SUNDAY TRACK OPEN AT 10:00 AM
RACING AT 1:00 PM

FOR MORE INFORMATION CALL TIM AT ACTION HOBBIES
(618) 842-9379 AFTER 5:00 PM

SATURDAY NOVEMBER 13, 1999 TRACK OPEN AT 7:00 AM RACING STARTS AT 10:00 AM
Practice November 12, 1999 From 5:00 PM to 10:00 PM

ENTRY FEE ALL CLASSES $25.00 FIRST ENTRY $15.00 NEXT ENTRIES
UNOPENED ROAR 91-98, AFTERSHOCK, AND REBUILDABLE STOCK MOTORS 6 CELL ALL CLASSES
ALL ROAR RULES WILL APPLY BUT MEMBERSHIP NOT REQUIRED
TROPHIES TQ 1-10 A-MAIN 1-3 ALL OTHER MAINS
3 QUALIFIERS & MAIN

NAME _____ ADDRESS _____

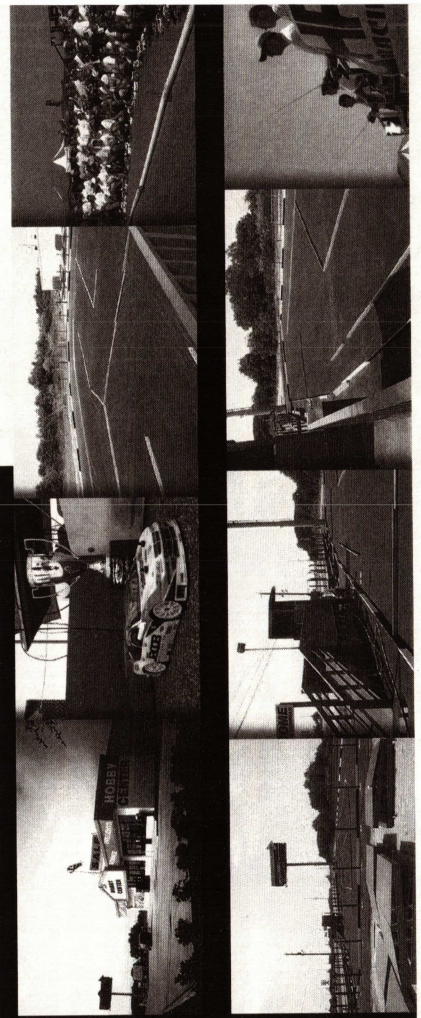
CITY _____ STATE _____ ZIP _____ PHONE. (____)_____

FREQUENCY	1	2	3	FREQUENCY	1	2	3
TRUCK MOD	___	___	___	TRUCK STOCK	___	___	___
BUGGY MOD	___	___	___	BUGGY STOCK	___	___	___
4 WHEEL MOD	___	___	___	NOVICE	___	___	___

HPI Challenge

Race Event #2

September 25 & 26, 1999
Houston, Texas



Hobby Center Houston, Texas

For more information contact
HPI: 949-753-1099 ext. 27
Hobby Center: 281-488-8697

For the latest race information, rules, and special events, visit us on the web:
www.hpiracing.com

Trophies and Prizes

R/C Competition Prizes Trophies
New Track Giant Hobby Shop

Mail to: 1999 HPI Challenge Race, 15321 Barranca Parkway, Irvine, CA 92618

Name _____

Address _____

City _____ *State* _____ *Zip* _____

Phone _____ *email* _____

◯ *Electric RS4 Class* ◯ *Nitro RS4 Class* ◯ *Super Nitro RS4 Class*

Entry fee is $10 per class. Amount enclosed: $ _____

Join the excitement of the second leg of the HPI Challenge. Hobby Center has just completed an all-new race track that will be the site of race #2 of the HPI Challenge. We'll have classes for Nitro and Electric HPI cars, with giant trophies for the winners and prizes for every competitor. More than **$2,000 in prizes** will be given away, don't miss it!

The race will be held Saturday and Sunday, September 25-26. A complete schedule and rules are posted on our web site, send in your race entry early!

Exclusively for HPI car owners!

Advertiser Index

Manufacturer	Page	Phone	Website or email
Ace Hobby Dist.	13	(660) 584-7121	www.acehobby.com
Associated Electrics	C2,4,5	(714) 850-9342	www.rc10.com
Dahm's	25	(707) 792-1316	www.dahms-intl.com
Deans	34,35	(562) 634-9401	deansco@earthlink.net
Dynamite	37	(217) 355-9511	www.horizonhobby.com
Futaba	31	(949) 455-9888	
GM Racing	61	(330) 530-2330	www.gmusa.com
Hitec RCD	53	(619) 258-4940	www.hitecrcd.com
Hot Bodies	27	(609) 893-7716	hbrc@bellatlantic.net
HPI	19,62	(949) 753-1099	www.hpiracing.com
HRP	16	(800) 622-7223	
Integy Technologies	85	(909) 444--2766	www.integy.com
Kimbrough Products	14	(714) 258-7425	www.kimbrough-products.com
Lunsford Racing	18	(541) 928-0587	www.lunsfordracing.com
New Era Models	30	(603) 888-4453	www.neweramodels.com
MIP	26	(626) 339-9008	www.miponline.com
Mugen Seiki	39	(949) 475-9505	www.mugenseiki.com
Multiplex	21	(818) 785-2401	www.multiplexrc.com
Orion	11,67	(949) 864-1720	www.team-orion.com
O.S. Engines	23	(800) 682-8948	www.osengines.com
Parma/PSE	30	(440) 237-8650	www.parmapse.com
Peak	55	(949) 707-4683	www.peakmotors.com
Powers U.S.A.	49	(813) 889-9691	www.racing-cars.com
Progressive Suspn.	20	(760) 948-4012	www.progressivesuspension.com
Pro-Line Racing	15	(909) 849-9781	www.pro-lineracing.com
Robinson Racing	42,43	(209) 966-2465	www.robinsonracing.com
RPM	39	(909) 393-0366	www.rpmrcproducts.com
Tamiya America	09,77,88	(800) TAMIYA-A	www.tamiya.com
Team Losi	46-47, C3	(909) 465-9400	www.teamlosi.com
Traxxas	51	(972) 613-3300	www.traxxas.com
Trinity	3, C4	(732) 635-1600	www.teamtrinity.com
Yokomo USA	6,7	(949) 252-8663	www.yokomousa.com



Order now! Subscribe while you're at it. You know you want to.

back issues

order now! 888-200-8299

Looking for a particular how-to or review? Or do you just want to complete your collection of *Xtreme R/C Cars*? Whatever the reason, don't delay! Issues are selling out fast, and while you're at it you can subscribe to *Xtreme* to make sure you don't miss an issue. Order now!

1.6 Sept-Oct '95
Trinity's Midnight; Associated's RC10L; Rebuilding Losi Shocks; Select Off-road tires; RPM's Gauges; More DTM Tips; Tool Time; Tekin's Rebel

1.7 Nov-Dec '95
Practice w/the pros; Learn How-To: Paint, Mask and Detail; Fix the Glitch, Tamiya's GTX; MIP's Zero Maintenance Steering; JR's Python Radio; What's Your Power Curve?

1.9 Mar-Apr '96
Associated's B2; Tekin's G-12c; Learn How-to: Mount your ESC and Receiver; Preventing Glitches; Save and Repair Stripped Screws.

2.1 May '96
Losi's GTX; LRP's ICS Digital; Kyosho's Sard Supra; Learn How-To: Rebuild Between Race Days; Read Dyno Sheets; Charging Class for Racers.

2.3 Jul-Aug '96
Buy and sell used stuff; Airtronics' CL3PS; Trinity's EV10 Deluxe; Tuning the T2; Tamiya's Mini Monte Carlo; One-way Diffs; Titanium, Graphite, Aluminum Exposed.

2.9 May-June '97
Reviewed: Team Losi's XX-4, HPI's RS4 Pro, Novak Profile Software, Tekin G-12c III. How-to: Build Battery Packs, Mask and Prep Bodies. Inside A 2-Stroke Engine

3.1 July-August '97
Reviewed: Tamiya Martini Alfa, Futaba 3PDF. How-to: Rebuild Mods, Clean Between Races, Take Jumps, Paint and Cut Bodies. IFMAR World Warm-up Coverage

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

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

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

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

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

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

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

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

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

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

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

4.6 Feb-Mar '99
Tested: FSR Nitro Bullet V12, HPI RS4 Rally, Fox Team Losi R/C Racer. Learn How-To: 11 Tips to Better Decals, Use Camber to its Fullest Hook-UP: Associated B3 and Tamiya TA-03F Pro. First Takes: HPI Super Nitro RS4, Traxxas Nitro 4Tec, Tamiya Nitro TG-10, Losi IWC Street Weapon.

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

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

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

5.1 September '99
Tested: Losi Triple-X, Traxxas Nitro 4-Tec Pro, Tamiya McLaren MP4/13. How-To: Charge Ni-MH, Hook-up your HPI RS4 Pro2. Race Coverage: ROAR Off-Road gas and Modified electric Nationals, Reedy Touring Car Championship. Feature: R/C and the Internet, Drag racing basics.

!!!Xtreme Decals!!!
One decal sheet free with every back issue order. ISSUES 1.1, 1.2, 1.3, 1.4, 1.5, 1.8, 2.2, 2.4, 2.5, 2.6, 2.7, 2.8 , 3.8, 4.1 4.8 are SOLD OUT!

All issues only $4

1-888-200-8299

Xtreme R/C Cars back issues

___1.6@$4.00 ___1.7@$4.00 ___1.9@$4.00 ___2.1@$4.00
___2.3@$4.00 ___2.9@$4.00 ___3.1@$4.00 ___3.2@$4.00
___3.3@$4.00 ___3.4@$4.00 ___3.5@$4.00 ___3.6@$4.00
___3.7@$4.00 ___3.9@$4.00 ___4.2@$4.00 ___4.3@$4.00
___4.4@$4.00 ___4.5@$4.00 ___4.6@$4.00 ___4.7@$3.00
___4.9@$4.00 ___5.0@$4.00 ___5.1@$4.00
___2 yr. sub.(20 issues)@ $31.99 **SAVE!**
___1 yr. sub.(10 issues)@ $16.99

Sub Total $_____
Shipping $3.00 (except sub only)
Total $_____

___**Payment Enclosed**
Bill My: ___Visa ___MC ___Disc.___Amex
Card #_____
Exp_____ **Sig.**_____

Name:_____
Address:_____
City:_____
ST:_____ **Zip:**_____

To order your Back Issues today, simply fill out this form (photo copies) and send it in with your payment to : **Team Action Publishing, 14175 Telephone Ave. #O, Chino, CA 91710. MOST ORDERS SHIPPED WITHIN 24 HOURS.** California residents, we'll pick up the sales tax for you. Foreign orders will be charged applicable postage and subscription rates. New subscribers will automatically be entered into any current sweepstakes.

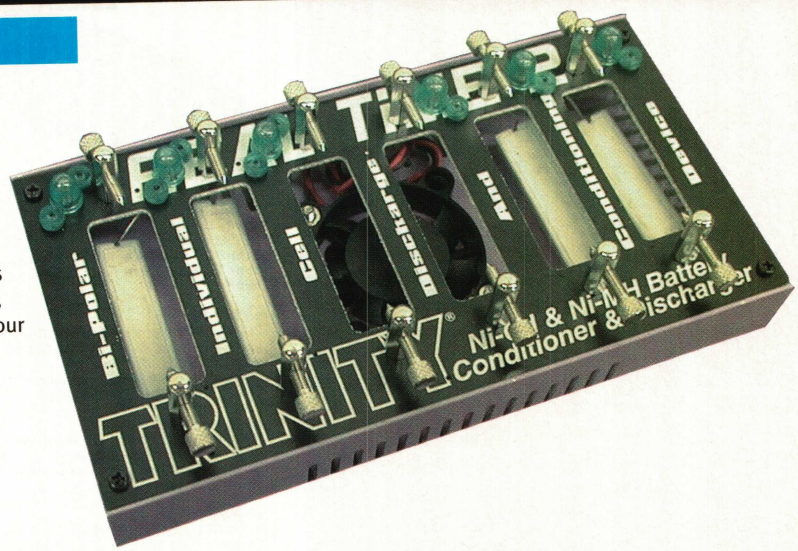
new stuff

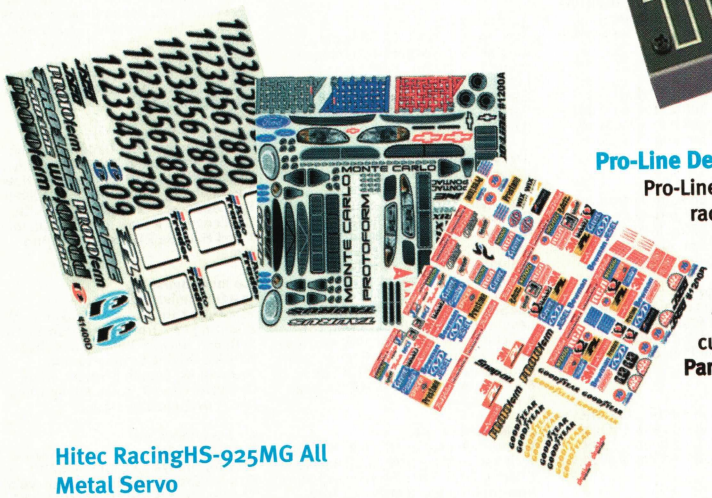
Get the new stuff before your friends

Trinity Real Time 2 Discharger

Want to have the latest for your batteries? Check out Trinity's new Real Time 2 Discharger/Conditioner. The new design features seperate discharging/conditioning circuitry for each cell, allowing each cell to be drained completely without risk of cell voltage reversal. The Real Time 2 features a cooling fan inside the base to keep temperatures in check, and with the new design it doesn't matter which direction your cells go into the holder.

Part #: RC5100; price: $49.99.





Pro-Line Decal Sheets

Pro-Line has three new decal sheets to add realistic looks to your favorite racer. The Stock Car Sheet includes Monte Carlo, Taurus, and Grand Prix decals, window netting and various ducts to customize your stock car. The Sponsors sticker sheet includes window netting, tire decals and sponsor clusters. Finally, the Touring Car Sheet features number fields and Pro-Line/Protoform logos. Each sheet is made from easy to cut vinyl.

Part #: various; price: $ various.

Hitec RacingHS-925MG All Metal Servo

Hitec Racing has a new heavy duty servo for your 1/8-scale and monster truck needs. The "MG" in the servo's name stands for "Metal Gear", as in all internal gears are made of metal instead of nylon. The coreless servo also features dual ball bearings, MOSFET motor drive, and gold contacts. The servo also packs a hefty 83 oz.-inch torque rating and a transit speed of 0.11 sec/60 degrees. The HS-925MG is standard sized with a Hitec/JR Racing compatible servo plug.

Part #: 32925S; price: $89.95 (Street Price).

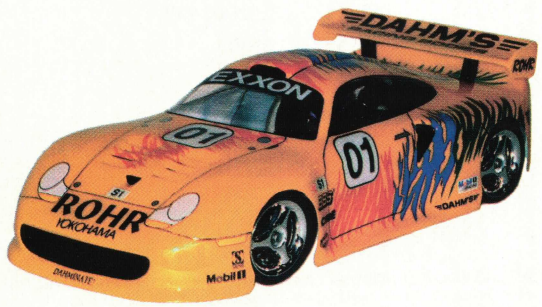




Take-Off Neo SS Tires

Take-Off expands their racing tire line with the new SS. The new SS Tires are made of Take-Offs "Neo" compound and is available in two different types- Type "A" for high grip in low temperature conditions and type "B" for high grip in mid to high temperature conditions. Each pair of tires feature a internal reinforcing belt that runs the width of the tire and Take-Off's own special pressure foam inserts.

Part #: 245SM-B; price: $13.95.

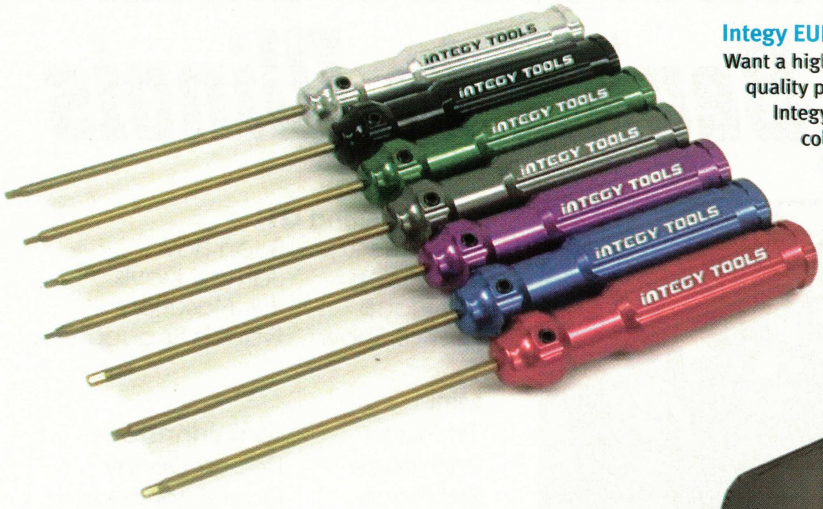


Dahm's 911/GT1(RS/190)

If you're looking for a replacement body for your Tamiya TA03RS short wheelbase car but don't want to spend a bundle check out Dahm's new short wheelbase 911/GT1. This new body features recessed hood vents, aerodynamic roof and roof scoop, aerodynamic wing supports, new rear spoiler styling, and Dahm's Extreme Wing.

Part #: D258 (light), D259 (strong); price: $19.98, 21.98.

Support your local hobby shop! When asking for new stuff, tell 'em you saw it in *Xtreme!*



Integy EURO Ti-Nitride Hex Wrenches

Want a high-quality wrench set but don't want to pay a high quality price? Check out this new set of wrenches from Integy. Each wrench features a cast aluminum, anodized, color-coded handle. Each wrench bit itself is ground from hardened steel and is titanium nitride coated for extra hardness. Sizes range from 0.050" to 2.5mm.

Part #: various; price: $5.95 each, $29.95 set of six.



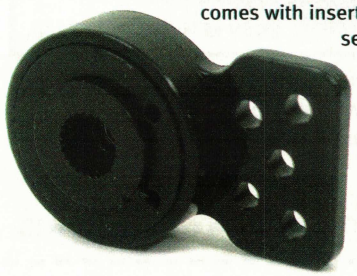
Yokomo Field Bag

Have too much stuff and no way to carry it? Hate going back and forth from your car to bring all of your R/C equipment? Yokomo has the answer with their new pit bag. The pit bag is constructed of heavy duty nylon and features an internal cardboard liner to keep the bag in shape. Inside of the liner are three separate containers with carrying handles built in so you can hold all your gear. Each container is the same size as Yokomo's kit boxes, so your MR4 box will slide right in. Available in black or dark blue.

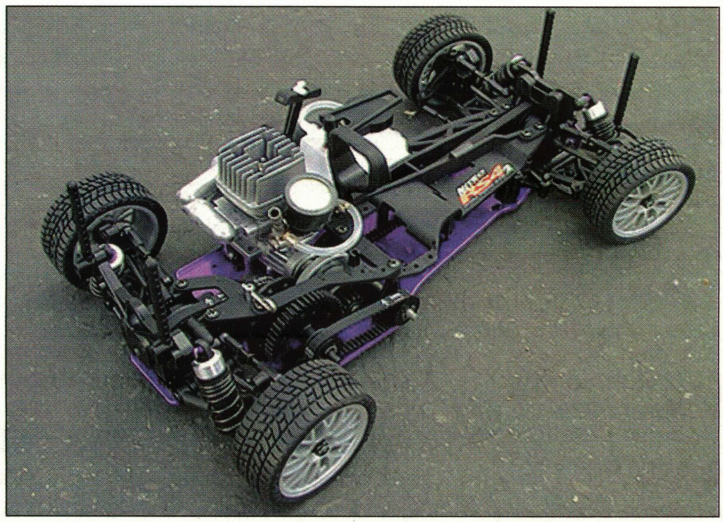
Part #: YT-20BK or BL; price: $49.95.

Kimbrough Mid-size Servo Saver

Is your standard size servo saver too small? Is a giant sized servo saver too big? Kimbrough's got the right fit for you with their new midsize servo saver. This new midsize servo saver allows you to mount the servo directly to a flat chassis while being used. The new saver comes with inserts for most popular servos. The midsize servo saver is available with and without holes.



Part #s: 201 (w/holes), 200 (no holes); price: $5.50.



HPI Racing Nitro RS4 2

HPI has taken their popular nitro sedan to the next level with the Nitro RS4 2. Upgrading from the previous version, the new 2 features the same front suspension design as their RS4 Pro 2 electric racer, a 15FE Nitro Star engine, full bearings, turnbuckles, tuned muffler, Super compound radial tires, and more. Initially the Nitro RS4 2 will be available with one of two body choices – the 911 GT3 or Lamborghini Diablo VT.

Part #s: 411 (911 GT3), 412 (Diablo VT); price: $439.00.

New Stuff is based on manufacturer press releases; we haven't tested these products yet.

TCS
TAMIYA
Championship Series

1999/2000 Season Begins in Illinois



Results from Race #60 held at HobbyTown USA, Overland Park, KS - June 20, 1999

F-1

1st Place	Russel Johnson
2nd Place	Jim Folson
3rd Place	Marvin Blake
Best of Show	Tom Johnston

Touring GT2

1st Place	Kyle Lundberg
2nd Place	Robert Denny
3rd Place	Nathan Looney
Best of Show	Daniel Johnston

Super Touring GT1

1st Place	Sean Boyd
2nd Place	James Davis
3rd Place	J.J. Nasution
Best of Show	Francis Shaughnessy

Mini

1st Place	Tom Johnston
2nd Place	Robert Denny
3rd Place	Daniel Johnston
Best of Show	Tom Johnston

Le Mans Exhibition

1st Place	Russel Johnson
2nd Place	Sam Daugherty

TL01 Spec Exhibition

1st Place	Charles Lyndon
2nd Place	Jason Eisberg



BMW M Roadster #58240

Tamiya Representatives will be attending TCS Races to preview new products like this BMW M Roadster. Be sure to visit them!

Check out our Website www.tamiya.com

Mail in attached form to: Tamiya America, Inc., Attn: Customer Service, 2 Orion, Aliso Viejo CA 92656 or Phone: (800) TAMIYA-A or Fax: (949) 362-6852 Hurry! Registration for Race #65 closes 10/14 and Race #66 closes 11/10.

Next Qualifiers

Please Check One:

☐ **TCS Race #65**
October 17, 1999
RMR Raceway
Libertyville, IL

OR

☐ **TCS Race #66**
November 13, 1999
Trackside Hobbies
Glendale, WI

Name_____ Age _____

Address_____

City_____ State _____ Zip _____

Phone #( )_____

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

(Minimum of 2 frequencies required)

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



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

Subscribe and WIN a XXX!

Sponsored by:
Team Losi & Trinity



Win What Everybody Wants!

Send Your Entry to:
Xtreme R/C Cars
XXX Sweepstakes
14175 Telephone Ave #o
Chino, CA 91710

1-888-200-8299

At random we'll pick one winner and they'll win it all.

- **Team Losi's new Triple-X Off-Road Buggy.**
- **Trinity Paradox Rebuildable Stock Motor.**
- **Trinity Heavy Metal 3000 mAh 6-cell battery pack.**
- **A total value over $450!**

The Rules

1. To Enter: No purchase necessary. Only one entry per person, please. Anyone submitting more than one entry will be disqualified. To enter for your chance to be one of one (1) winners in XTREME RC CARS XXX Sweepstakes: Complete the entry found in the September, October-November, December 1999 issues of XTREME RC CARS and mail to "XXX Sweepstakes," c/o XTREME RC CARS, 14175 Telephone Ave #O, Chino, CA 91710. Or, send a 3 x 5 card with your name, address, city, state, zip code, daytime phone number and age and mail to: "XXX Sweepstakes," c/o XTREME RC CARS,14175 Telephone Ave #O, Chino, CA 91710. All mail entries must be received by November 15, 1999. Sponsors assume no responsibility for lost, late, damaged, misdirected, illegible, incomplete or postage-due mail entries. Photocopies, facsimiles and other reproductions will not be accepted. Facsimile or mechanically reproduced entries will be allowed. All entries become the property of the sponsor and will not be returned.
2. Prize: Grand Prize (1): Team Losi Triple-X Buggy Kit, Trinity Paradox Pro Rebuildable Stock Motor, Trinity Heavy Metal 3000 mAh 6-Cell Battery Pack. Approximate retail value: $450. All prizes will be awarded.
3. Judging: The winner will be determined in a random drawing from all eligible entries received on or about December 1, 1999 by XTREME RC CARS magazine, whose decisions will be final in all matters related to this sweepstakes. Judges reserve the exclusive right to interpret all conditions in regard to this promotion without claim for damage or recourse of any kind. By participating in the sweepstakes, entrants agree to be bound by the rules and the decisions of the judges that shall be final. Odds of winning depend on the total number of eligible entries received. All winners will be notified by mail. Grand prize winner may be required to sign and return an affidavit of eligibility and liability release within 21 days of notification. If the affidavit is not returned within the given time period properly executed, or is returned from the post office as undeliverable, an alternate winner will be chosen. If the Grand Prize winner is under the age of 18, a parent or legal guardian must also sign and provide their social security number on the Affidavit of Eligibility/Release of Liability & Publicity. Except where prohibited, acceptance of a prize constitutes winner's consent to use his/her name, likeness and biographical data for advertising and promotional purposes without additional compensation.
4. General Conditions: Sweepstakes is open to all US residents except employees of Team Action Publishing, Team Losi, Trinity, and their affiliates, subsidiaries, sales representatives, distributors, retailers, advertising and promotional agencies, and the immediate families of each. All federal, state, and local laws apply. Prizes are non-transferable and may not be substituted. If a prize becomes unavailable, sponsors reserve the right to substitute prizes for those of equal or greater value. All taxes on prizes are winner's sole responsibility. By accepting a prize, winners agree that all prizes are awarded on the condition that Team Action Publishing, Team Losi, Trinity, their agents, representatives and employees will have no liability whatsoever for any injuries, losses, or damages of any kind resulting from acceptance, possession, or use of a prize. Winners further acknowledge that said parties have neither made nor are in any manner responsible or liable for any warranty, representation, or guarantee expressed or implied in fact or in law or, relative to any prize, including but not limited to, its quality, mechanical conditions or fitness. Void where prohibited by law.
5. For a list of winners, available after January 1, 2000, send an S.A.S.E. to "XXX Sweepstakes Winners List," c/o XTREME RC CARS, 14175 Telephone Ave #O, Chino, CA 91710.
6. For a complete list of rules, send a S.A.S.E. to: "XXX Sweepstakes Rules," c/o of XTREME RC CARS, 14175 Telephone Ave #O, Chino, CA 91710.

Official Subscription & Entry Form

- ❑ One year subscription (10 issues) at $16.99 (U.S. Only)!
- ❑ Best Deal! Two year subscription (20 issues) at $31.99 (U.S. Only)!
- ❑ On year to Canada or Mexico (10 issues) at $27.99
- ❑ On year foreign (10 issues) at $49.99
- ❑ Check here if renewal.
- ❑ No, I don't wish to subscribe yet, but please enter me to win.

Name_____ Age_____

Address_____

City_____

State_____ Zip_____ Country_____

Payment Type (check one)

Payment Enclosed___ Bill My Credit Card___

Card Type: ❑ Visa ❑ MC ❑ Amex ❑ Discover

Card #_____ Exp __/___

Signature_____

If you're paying by check, please make payable to **Team Action Publishing**. Please allow 5-7 weeks for your subscription to begin.

Todd Hodge

New roommate wanted!

VITAL SPECS

Age: 25
Residence: Originally: Youngstown, OH; Recently: Corona, CA.
Occupation: Engineering Assistant/Racer
Years Racing: 8
Favorite Racing Class: 4WD Modified
Sponsors: Team Losi, GM Racing, Lunsford, MIP, Warlock Paints, and Kimbrough.
Favorite Babe: Pamela Anderson

How did you get into racing? There was a local track in my home town. I had a Kyosho Icarus and I thought I'd give it a try. From there I was pretty much hooked. There was a production class that raced at the track. The first time out I won the race. I got an RC10 not long after that win.

How did you become a sponsored driver? I met Dave Evans, who at the time owned Scooter Motor Works, and went to the '95 ROAR Nationals. Dave introduced me to Pops Losi there. After that, I got picked up by Losi at a discount.

What's been your biggest win so far? Biggest win? I haven't won anything yet (saying with laugh). My best placement was probably the ROAR Nats last year. I finished second in 4WD.

What do you like about racing at the level you're racing at right now? I like the traveling and all the people. I like the competitiveness. The technology of the cars is pretty awesome.

You recently went to work for Team Losi, what do you do for them? My title is Engineering Assistant. Basically I fill the gaps between Richard Trujillo and Junior. I help Junior a lot with R&D and the tire program.

How did you come across getting your job at Losi? Actually I was just talking to Pops on the phone one day, and he offered me a job in quality control. He said they had a guy leaving. I told him I'd think about it. I called him back a couple days later and told him I wanted the job. He told me the guy was staying, but that he wanted me to work for him anyway so it went from there.

Who do you like to race against the most? Randy Raider, Brian Dunbar, Dave Montgomery, Adam Drake, Rob Shaffer, Bill Bridges – all the racers back in Ohio.

That's a big move from Ohio to California. Were there any other factors that helped you make your decision? The local track at home closed. I knew in California there would be a lot more racing – a lot more opportunity.

What's the next for you in racing? Getting to the level of Brian Kinwald and Mark Pavidis. Consistently being at the top.

Where do you see yourself in three of four years? Still racing. I want to race as long as I can. Racing is something I love to do. I think I'm very fortunate to be one of the people that has found something in their life that the love to do and get to do it for a living. Not too may people can say that. There are people out there that go to school for four or five years, then get out of school and end up doing something they didn't even go to school for and they hate the job.

What's been your most memorable moment at a race? I'd have to say last year's Off-Road Reedy race when I won my first main. I beat Brian and Mark. I was following Mark down the straightaway and he crashed on the last lap, so I beat him in that race. I remember looking at the heat sheet and thinking I'm probably going to finish fifth in this one. Everybody was in that race. And when I won it, that was pretty awesome.

What's been your worst moment at a race? Probably the '98 Winter Champs. I was eleventh in 2W, twelfth in 4W, and fourteenth in truck. I was on the verge of making all three mains. That was depressing. At least I won the B in truck.

What's been your most embarrassing moment at a race? Waking up in the middle of the night only to find my roommate is getting jiggy with it with some chick. I always room with the same fellow GM driver. I won't say any names. You don't want to know what I hear. I just try not to open up my eyes.

Has that happened here at the Worlds? It happened last night here in Finland, in Dalton, Georgia last year – do I need to go on?



At a big race like the Worlds, what motivates you? Trying to win, trying to do my best. Trying to promote the companies that sponsor me, especially with the kind of money they spend to get us to races like this. I try to be as successful as I can be for myself and my sponsors.

What do you do outside of racing? Mountain biking, spending time with my girlfriend. Back in Ohio I'd spend more time with my friends. Now all my friends are racing buddies in California.

How do you like California so far? It's cool. MnM's right down the road from my house so I get to race against Brian a lot now. That's going to be awesome, just to learn from him. The competition will help a lot.

Favorite TV show? Friends
Favorite Movie? Pulp Fiction
Favorite Band? Guns N Roses
Favorite Full Size Car? '96 GMC Jimmy (laughingly saying, that's what I drive)
Favorite Car? Losi Triple-X. I've never made a Nationals A-main until I ran this car.

Some Racers Dream The Dream Other Racers Actually Live It!

"I could have spent my money on any car to run at the nats but I wanted a shot to win, so I chose the XX-CR by Team Losi!"

Diego Anastasia

ROAR Stock Off-Road National Champion

2 Wheel Stock "A" Main

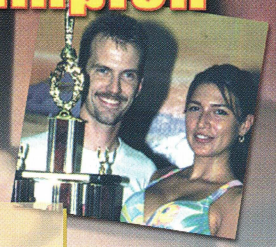
	Name	Chassis	Tires	Inserts	Traction Compound
1.	Diego Anastasia	XX-CR	Losi	Trinity	Trinity
2.	Rob Betts	XX-CR	Losi	Trinity	Trinity
3.	Vinnie Nocella	XX-CR	Losi	Trinity	Trinity
4.	Todd Lewis	XX-CR	Losi	Trinity	Trinity
5.	Matt Longfield	B3	Proline	Proline	NA
6.	Eric Clarke	XX-CR	Losi	Trinity	Trinity
7.	Justin Morrison	XX-CR	Losi	Trinity	Trinity
8.	Jim Franz Jr.	XX-CR	Losi	Trinity	Trinity
9.	Randy Esposito	XX-CR	Losi	Trinity	Trinity
10.	Jason LaDow	B3	Proline	Proline	NA

Truck Stock "A" Main

	Name	Chassis	Tires	Inserts	Traction Compound
1.	Todd Lewis	XX-T	Losi	Trinity	Trinity
2.	Rob Betts	XX-T	Losi	Trinity	Trinity
3.	Justin Morrison	XX-T	Losi	Trinity	Trinity
4.	Chris Marsh	XX-T	Losi	Trinity	Trinity
5.	Jesse Robbers	XX-T	Losi/Proline	NA	NA
6.	Diego Anastasia	XX-T	Losi	Trinity	Trinity
7.	Randy Esposito	XX-T	Losi	Trinity	Trinity
8.	Josh Knight	T3	Losi	Trinity	Trinity
9.	Jason LaDow	T3	Proline	Proline	NA
10.	Dave Antos	XX-T	Losi	Trinity	Trinity

4 Wheel Drive Stock "A" Main

	Name	Chassis	Tires	Inserts	Traction Compound
1.	Todd Lewis	XX-4	Losi	Trinity	Trinity
2.	Rob Betts	XX-4	Losi	Trinity	Trinity
3.	Diego Anastasia	XX-4	Losi	Trinity	Trinity
4.	Dave Antos	XX-4	Losi	Trinity	Trinity
5.	Charles Higgins	XX-4	Losi	NA	NA
6.	Chris Systma	XX-4	Losi	NA	NA
7.	Justin Morrison	XX-4	Losi	Trinity	Trinity
8.	Vinnie Nocella	XX-4	Losi	Trinity	Trinity
9.	Jim Franz Jr.	XX-4	Losi	Trinity	Trinity
10.	C. Barbour Jr.	XX-4	Losi	Trinity	Paragon



Todd Lewis
1999 ROAR Stock Truck & 4 Wheel Drive Stock National Champion

TEAM LOSI™ Racing

Where winning is more than just a dream...

Team Losi Inc., 13848 Magnolia Ave., Chino, CA 91710, 909.465.9728,
www.TeamLosi.com, feedback@TeamLosi.com

TRINITY

New "Modified Touring" Silver Serrated Motor Brush, More Power! More Low End!

RC4455 With Terminal $3.50
RC4455NT No Terminal $2.99



Team Kinwald Tie-Rod Wrench TK3086, $10.99

Bomb One, Standard Firm Foam Inserts
TK1510 Standard Buggy Front Insert $2.25
TK1511 Standard Buggy Rear Insert $3.50
TK1512 Standard Truck Front/Rear Insert $4.00
TK1517 Standard 4wd Front Insert $3.00

Bomb Two, 2 Stage Foam Inserts
TK1513 2 Stage Buggy Soft Rear Insert $3.50
TK1518 2 Stage Buggy Firm Rear Insert $3.50
TK1514 2 Stage Truck Soft Front/Rear Insert $4.50
TK1519 2 Stage Truck Firm Front/Rear Insert $4.50

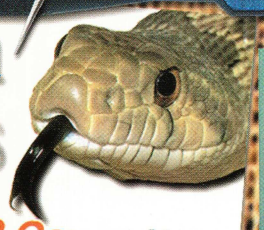
Bomb Three, 3 Stage Foam Inserts
TK1515 3 Stage Buggy Rear Insert $5.50
TK1516 3 Stage Truck Front/Rear Insert $7.00

Bomb One, Touring Foam Inserts
TK1520 Standard Touring Foam Insert $2.50



Remember to pick up some this Week! "The Bomb" Multi-Stage Tire Glue
TK3504, $7.99
To obtain the maximum performance from your multi-stage off-road tire inserts, you need to glue the insert rings to each other. Team Kinwald now has the perfect glue for this. Special formula does not dry out and turn brittle like other glues which affect the stiffness of the liner as they dry.

Anaconda Wire Works



For The Best 12 Gauge Wire Call On Us!.....732-635-1600

RC5146	12 Awg Anaconda Wire, 4' Black	$6.75
RC5147	12 Awg Anaconda Wire, 4' Red	$6.75
RC5148	12 Awg Anaconda Wire, 4' Blue	$6.75
RC5149	12 Awg Anaconda Wire, 25' Black	$39.75
RC5150	12 Awg Anaconda Wire, 25' Red	$39.75
RC5151	12 Awg Anaconda Wire, 25' Blue	$39.75

RC5152 Anaconda Speedo Wire Kit, 1' Each $5.29



Heavy duty, super low resistance 100% pure copper battery bars. Bars are marked with plus & negative and are bent to not hit the shrink wrap.
RC5106 Copper "Watt Bars", 7 Pieces $2.99
RC5107 Same As Above But 28 Pieces $11.20
RC5108 Silver Plated "Watt Bars", 7 Pieces $3.99
RC5109 Same As Above But 28 Pieces $15.39

Real Time 2 Discharger
Discharges single cells or 6 cell packs. Built in fan can be powered by pack or external power supply. Discharges each cell independently. Impossible to reverse a cell. Each cell has its own light.
RC5100, $49.99





RC1400 1400SCR Plus, 1400+ mAh Panasonic Sport Pack $18.99
All new high power, high durability, 1400 SCR cell. Hand picked to exceed 1400 mAh's!

RC4041, $5.99
New comm drops increases power in all stock and modified motors!



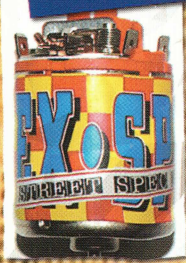
TK5000	Motor Mount/Heatsink Plate	$24.99
TK5001	Aluminum Front Shock Tower	$19.99
TK5002	Aluminum Rear Shock Tower	$24.99
TK5003	Aluminum Belt Guides	$6.99
TK5004	Aluminum/Delrin Shock Bushings	$6.99
TK5005	Replacement Balls, 4 Pieces	$2.50

HPI RS-4 Pro 2 Purple Aluminum Hop-Up Parts



TK3502 OS CV Kool Power Punk Head
TK3503 Nova Rossi Kool Power Punk Head
Blue anodized aluminum .12 gas engines

Street Spec Rebuildable Stock Legal August 1st SS2226, $34.95





TK3700 Bead Lok Glue Thin $7.50
TK3701 Bead Lok Glue Thick $7.50

Th best glue ever for gluing off-road and buggy tires to the rim.





Send $5.00 Today For The New Catalog!

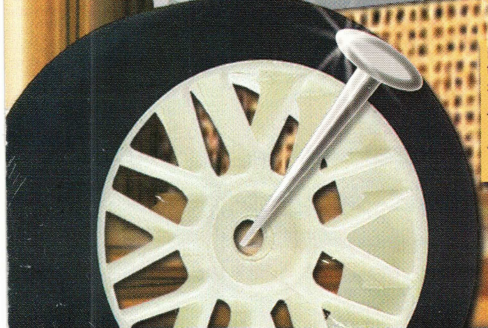
TK3077 $14.99



Team Kinwald Fake Transponder. Lets you practice with the same weight distribution you will run under race conditions!

New Super Touring Car Carpet Tire. Great traction without rolling over. Carries more speed down the straightaway.

TT1066	Plaid, Dual Rate Carpet Fits Associated, Kyosho, Tamiya	$20.99
TT1166	Plaid, Dual Rate Carpet Fits Team Losi Street Weapon	$20.99



PH: 732-635-1600
FX: 732-635-1640
www.teamtrinity.com

MODEL RACING CAR MANUFACTURER & DISTRIBUTOR
RADIO CONTROL, SLOT CARS, OEM BATTERY ASSEMBLY

TRINITY®

36 MERIDIAN ROAD
EDISON, N.J. 08820

DAVID SPASHETT
World Champion