

RADIO CONTROL Model Cars

OCTOBER 1989
Vol. 4, No. 45

CD 08658

U.S.A. \$2.95
Canada \$3.95

QUARTER-SCALE:
Western Regionals
Midwest Series

LOSI'S JR-X2:
Wild in the Dirt

AGITATOR JR.:
Economy 1/10-
Scale Road Racer

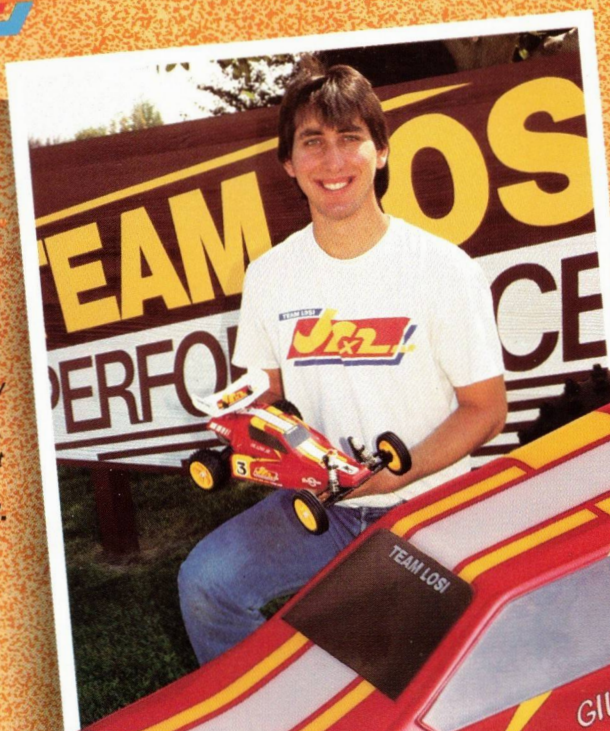


JR-X2 TECHNOLOGY IS HERE!

WHY JR-X2?

The JR-X2 is the product of my many years of R/C car racing experience. It incorporates the many little things that helped me win 4 World Championships and numerous major titles around the world. The highly tested and developed design will help you be successful against the toughest competition.

GIL LOSI JR.



BODY AND WING

Super tough and stylish Lexan® body shell form fits to chassis and covers the rear shocks for added protection from dirt.

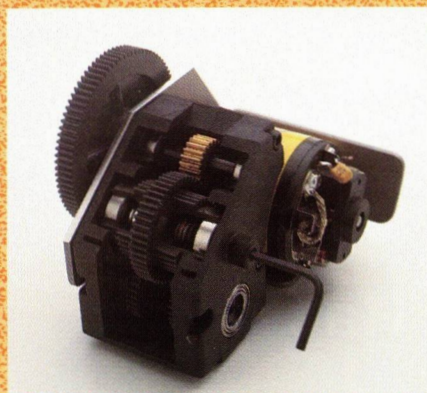


LOSI SHOCK ABSORBERS

Internally pressurized with hardened and microground shafts. Easy to replace pre-assembled cartridge and ultra smooth stainless steel springs.

LOSI 5 LINK SUSPENSION

The new LOSI 5-Link® rear suspension handles all types of track conditions ... features unique universal/slider drive shafts.

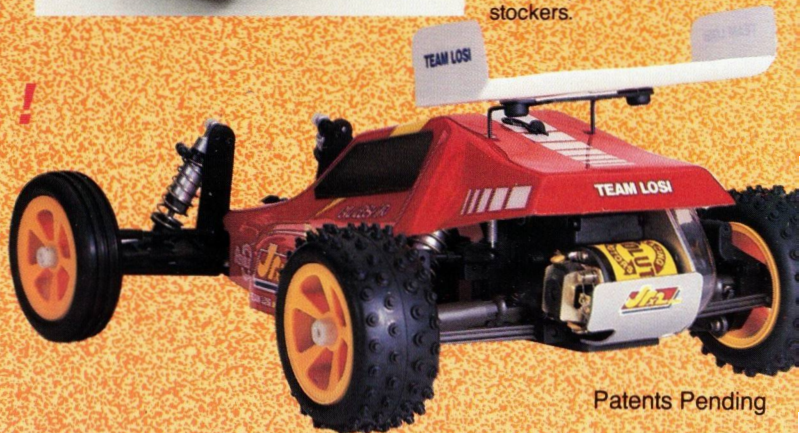


"ALL-NEW" JR-X2 TRANSMISSION

The JR-X2 is a dramatic winning edge. The L.R.M. (low rotating mass) gears are 48 pitch and molded from self lubricating materials specially formulated for low friction and durability. The 2.18 to 1 final drive ratio is lower than most others and allows selecting the correct gear ratios for the new breed of hot modified motors along with the proper ratios for stockers.

THE WINNING EDGE . . . !

A group of dedicated, performance minded, professionals working to develop quality products at a reasonable price. Team Losi supports their products with continuing testing, racing, and customer assistance. When you choose Team Losi you get years of World Championship experience and expertise. The JR-X2 is the new generation in 2 wheel drive performance. Team Losi has given you a kit that out of the box will give you the edge against other cars.



Patents Pending

TEAM LOSI 1655 E. MISSION BLVD., POMONA, CALIFORNIA (714) 620-0164

RACE PROVEN "ON ROAD" BODIES

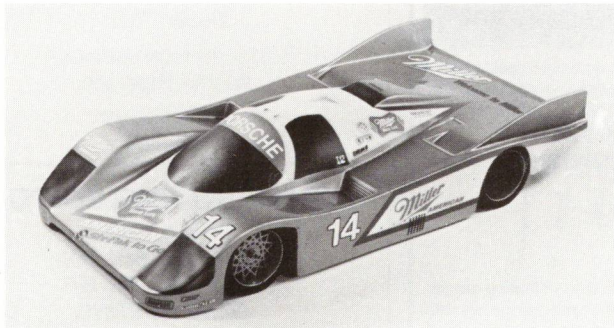
Quality Performance & Design

On & Off The Track

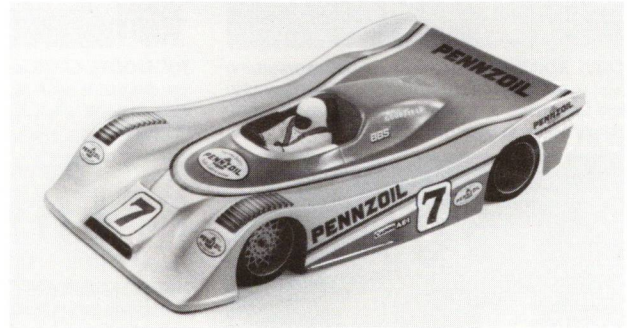
Fits Most 1/10 Scale Cars (Clear or Painted)

R/C PRODUCTS

- Built To Scale And Proportion
 - Added Stability Due To Design
 - Consistent Performance
- Improved Ground Effect
 - High Performance Lexan
 - Concours Winning Detail
- Body Strength by Design
 - Easy Body Mounting
 - Excellent Wheel Clearance
- Hi-Tech Development
 - Air Flow and Motor Clearance
 - Painted and Clear Bodies Available



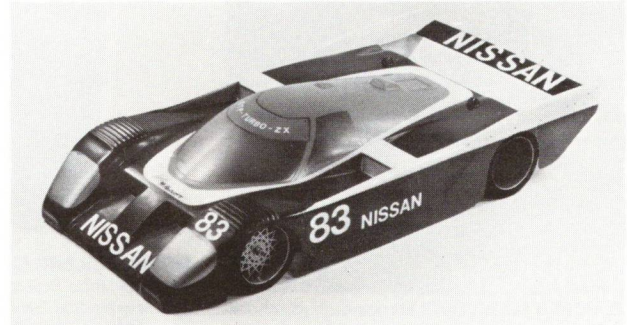
3140 - Porsche 962 GTP



3142 - TOJ "On Road" Body 1/10 Scale



3144 - Mercury "Merkur" XR4Ti



3145 - Nissan GTP

Offered By Distributors Worldwide:

Airborne Dist. — A.K.S. — A.R.S. Sales — Bay Cities R/C — Eagle Dist. — Emery Dist. — E.R.I. — Great Planes — Horizon-East — Horizon-West — Horizon-Central — H.R.P. — Ja-Lea Co. — Outlaw R/C — Progressive Sales — Race Prep — Ranch Pit Shop — R/C Depot — Speed and Sport — Southern Art Supply — Team Pit Stop — T.G. Hobbies — Trinity Products — Universal Supply Co.

Overseas Distributors: Central Models LTD. — Competition R/C Imports — J.L.R.C. Dist. LTD. — Performance Hobbies — Top Qualifier Imports — T.Q. Models of Italy

Retail Dealers Send For Catalogue and New Products Information Kits.

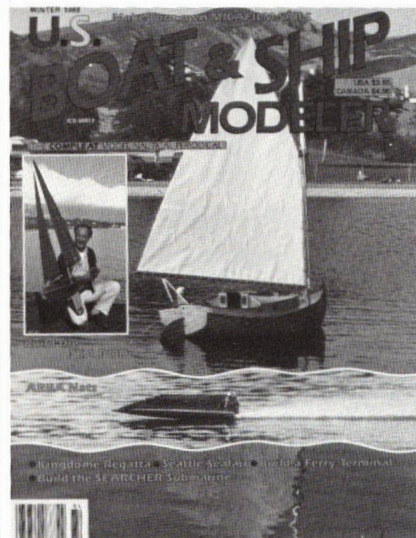
R/C PRODUCTS

(714) 592-4737 FAX (714) 592-0505
466 W. ARROW HWY., UNIT K • SAN DIMAS, CA 91773

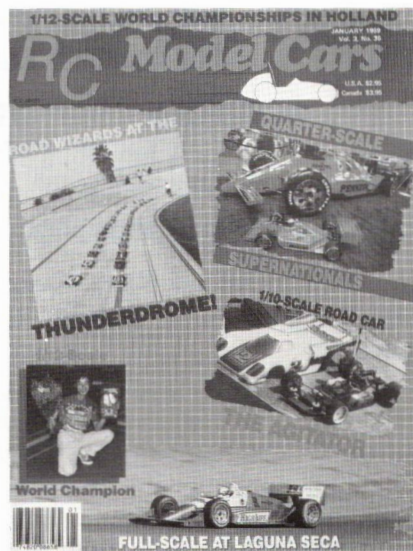
GREAT IDEAS FOR CHRISTMAS GIVING



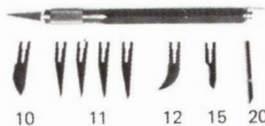
MODEL BUILDER, the premier modeling magazine covering all types of aircraft modeling, from Peanut to Giant Scale R/C. A one-year subscription brings 12 monthly issues to your door. **\$25.00.**



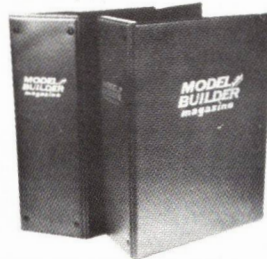
U.S. BOAT & SHIP MODELER comes to you chock-full of construction features, interesting boat designs, the latest in product reviews, plus stimulating columns. Four quarterly issues, **\$13.95.**



R/C MODEL CARS is the most popular radio-control car magazine, with feature reviews of new products, race reports, helpful hints, and Readers' Photos. Twelve monthly issues for only **\$25.00.**



UBER SKIVER KNIVES, the discriminating modeler's choice for the finest precision modeling knife with a variety of blades available. A complete set in a wood box, only **\$16.95**. Individual handles, only **\$6.95**. A vial of six blades is only **\$4.00.**



MODEL BUILDER BINDERS. Keep your precious copies of *Model Builder* safe and accessible with our exclusive binders. Each holds a year's volume of *MB*. One: **\$6.95**; three: **\$17.95**; six: **\$27.95**. Shipping and handling: one, add **\$2.25**, for each additional binder, add **\$1.00.**

- MODEL BUILDER**, one year, 12 issues: **\$25.00**
- R/C MODEL CARS**, one year, 12 issues: **\$25.00**
- U.S. BOAT & SHIP MODELER**, 4 issues: **\$13.95**
- UBER SKIVER SET:** \$16.95; individual knives, \$6.00 ea. Vial of 6 blades, \$4.00 ea. Minimum order, \$10.00
- MODEL BUILDER BINDERS**, \$6.95 ea.; 3 for \$17.95, 5 for \$27.95
For shipping, add \$2.25 for one binder, each addl. binder, add \$1.00

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Visa/MC No. _____ Exp. Date _____

(Add 5% for credit card orders)

SIGNATURE _____ For foreign orders, write for details.

California residents add 6% sales tax. **Mail to: RCMB, 898 W. 16th., Newport Beach, CA 92663**

R/C MODEL CARS

STAFF

PUBLISHER
Wm. C. Northrop, Jr.

VICE PRESIDENT
GENERAL MANAGER
Anita Northrop

ASSISTANT GENERAL MANAGER
Dawn Johnson

EDITOR
Richard Dowdy

ACCOUNTING MANAGER
Robert Ruiz

SUBSCRIPTION MANAGER
Audrey Peterson

OFFICE STAFF
A. Valcarse

CONTRIBUTING EDITORS

DEREK ARITA
STEPHEN BROWN
LARRY FLETCHER
GENE HUSTING
GARY KYES
VERNON LEWIS
MIKE LIEM
ELOY MAREZ
MIKE OGLE
STEVE SAIK
BILL STRAUSS
WOODY TRIMBLE

ADVERTISING

Corporate Office
(800) 243-9593

or

Stephen Brown
(212) 517-7800

Radio Control MODEL CARS (ISSN0887-4689) is published monthly by RCMB Inc., 898 W. 16th Street, Newport Beach, California 92663.

SECOND CLASS postage is paid at Newport Beach, California, and at additional offices. Subscriptions: \$25.00 per year, \$47.00 for two years. Single copies \$2.95. Subscriptions outside the US (except APO & FPO) \$38.00 for one year, two years \$68.00. All payments must be in US funds, drawn on a US bank. Copyright 1989 by RCMB Inc. All rights reserved. Reproduction without permission prohibited.

CHANGE OF ADDRESS notices must be received six weeks before date of issue that new address takes effect. Send old address with new, old label preferred. Duplicate issues cannot be sent. POSTMASTER: send address changes to R/C Model Cars, 898 W. 16th St., Newport Beach, California 92663.

RADIO CONTROL Model Cars

CORPORATE OFFICE: 898 WEST SIXTEENTH ST., NEWPORT BEACH, CALIFORNIA 92663 (714) 645-8830

FEATURES

THE JR-X2 36

By Vernon Lewis
Team Losi's first production racer, the JR-X2, is destined for the Winner's Circle.

QSAC WESTERN REGIONALS 40

By John Rahe
Quarter-scale excitement at the *R/C Model Cars*-sponsored Regional Champs.

PRO-LINE'S RC10 CONVERSION 46

By Steve Saik
Take an RC10, add a Pro-Line Conversion, and you have a rompin' monster!

AGITATOR JUNIOR 48

By Larry Fletcher
The economy-size brother to the Agitator Pro is a winner in its own right.

IFMAR GAS WORLD CHAMPS 52

By Gene Husting
Holland hosted the Championships, and an Italian won the 1/8 Gas Final.

THUNDERSHOT QD 58

MRC/Tamiya's ready-to-run dirt racer is an entry-level delight.

DEPARTMENTS

AT THE WHEEL / Richard Dowdy

PITSTOP 10

READERS' PAGES 12

ANSWERMEN 24

RADIO WORKSHOP / Eloy Marez 26

TRACKSIDE / Mike Liem 30

R/C SPORTSMAN / Woody Trimble 34

RACING AROUND / Stan Smith 60

TRACK OF THE MONTH / Woody Trimble 84



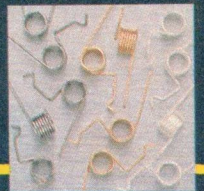
COVER: Belinda Northrop (the boss's daughter) gets ready to fire up her Raco Quarter-Scale NASCAR racer at Orange County's Mile Square Park.





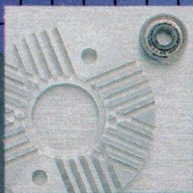
...On The Cutting Edge
Of Speed And Horsepower.

- #0001 The Buggy Master, 20 Turns, 30,000 RPM
- #0002 427 4WD, 16 Turns, 36,000 RPM
- #0003 350 2WD, 18 Turns, 34,000 RPM
- #0004 Dirt Oval Stock, 2WD or 4WD
- #0005 Super Speedway Stock, On-Road
- #0012 The Road Beast, 20 Turns, 30,000 RPM



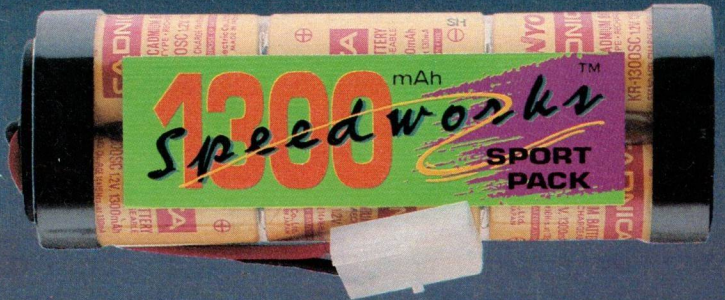
#4028, #4032 Lite
and #4033 Heavy
Replacement Springs.

Tomorrows Technology



#4043 Motor Spacer,
#4031 Motor Bearing.

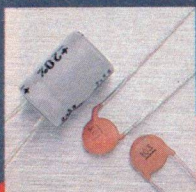
#0011 Sport Pack,
6 Cell Sanyo KR-1300SC



#4044 Motor Rebuild Kit.



#4011 Capacitor Kit.



Improvement. That's what it's all about. If you don't improve, you can't win. At Trinity we know this, we live for it! We have gone to the limits of state-of-the-art technology to design, manufacture and test products that can make you a winner. Motors, batteries and hundreds of other accessories that can give you that competitive edge. Stock or Modified, 2 WD or 4 WD, on road or off, novice or pro — let's face it, without the right equipment in your car, you might as well stay home.

Nobody goes to the limit for you like Trinity. When you're looking to push back your limits, make improvements, and get your shot at winning, choose the high-tech leader in the world of R/C racing — choose Trinity!

#5050 SCR 6 Cell Racing Pack
#5051 SCE 6 Cell Racing Pack

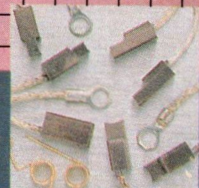
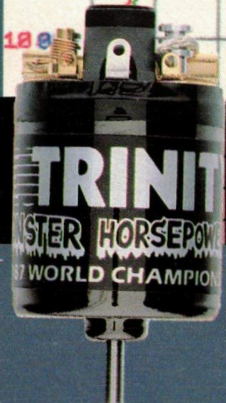
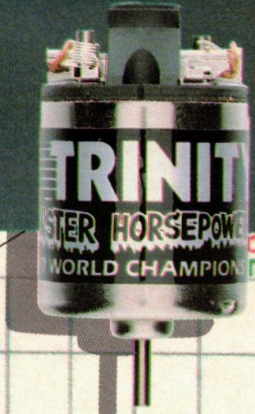
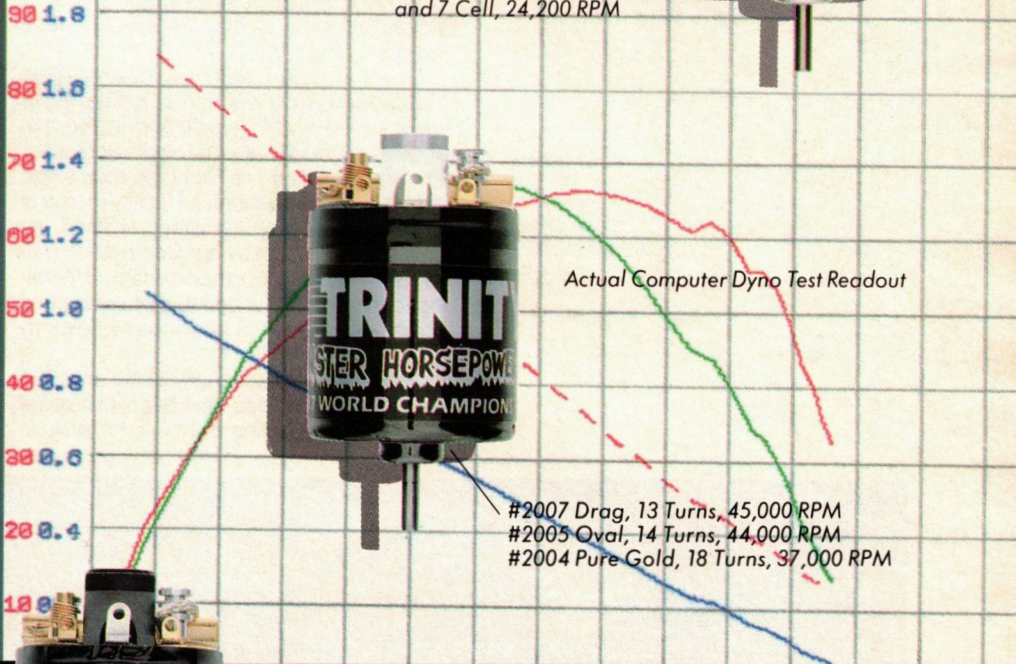


#5043 Matched SCE 4 Cell Set
#5044 Matched SCE 6 Cell Set
#5045 Matched SCE 7 Cell Set

TODAY

- #1012 Big Daddy, 10 Turns, 49,500 RPM
- #2014 Top Fuel, 11 Turns, 47,000 RPM
- #2015 Godzilla, 12 Turns, 46,200 RPM
- #2002 Sprint, 15 Turns, 41,000 RPM
- #1010 4 Cell Single, 15 Turns, 40,000 RPM
- #2008 Whippoorwill, 16 Turns, 39,500 RPM
- #1004 4 Cell Double, 16 Turns, 39,200 RPM
- #2011 Joel Johnson, 17 Turns, 39,000 RPM
- #1005 4 Cell Triple, 17 Turns, 38,000 RPM
- #1006 4 Cell Quad, 18 Turns, 36,000 RPM
- #2003 Enduro, 19 Turns, 35,000 RPM
- #1011 6 Cell Single, 19 Turns, 32,000 RPM
- #1007 6 Cell Double, 20 Turns, 29,000 RPM
- #1008 6 Cell Triple, 21 Turns, 28,000 RPM
- #1009 6 Cell Quad, 22 Turns, 27,000 RPM

OVERALL EFFICIENCY (%)
TORQUE (kg.cm.)



#4005 Brushes/Springs
#4006 Cut Brushes
#4007 Timed Brushes and
#4035 Off Road Brushes

TRINITY
WORLD CHAMPIONS

TRINITY PRODUCTS, INC.
1901 E. Linden Ave., #8, Linden, NJ 07036 • (201) 862-1705 • (201) 862-6875 FAX

© 1989 TRINITY PRODUCTS INCORPORATED

THIS MONTH

From the quarter-scale Raco stock car on the cover you have a hint of some of the features we have for you this month. The QSAC Western Regionals were run recently, and John Rahe was there to follow the proceedings as well as work in the Raco pits. John was a busy man, as usual. The stock car, sprint, and super modified classes each offered exciting, close racing, and the weekend's efficient program was a tribute to the fine El Cajon racing facility and its staff.

This month we welcome a new contributor, Stan Smith, from Lansing, Michigan, who debuts his "Racing Around" column with a report on quarter-scale activity in the Midwest. Stan has been fooling with radio-control cars for many years, with experience in 1/8-1/10, and 1/4 scales, and will offer stories on each of these scales in future issues.

One size down from the quarter-scale competition is the exciting 1/8 Gas; these wallers offer sound, smell, and action that appeals to the drivers and spectators alike. The IFMAR World 1/8 Gas Championships, held this year on a beautiful facility (home of the Serpent car) in Heemstede, Holland, are covered this month by our Competition Editor, Gene Husting, who had the task of traveling to this wonderful country, where he had an enjoyable time (and even won a celebrity race!). See page 52.

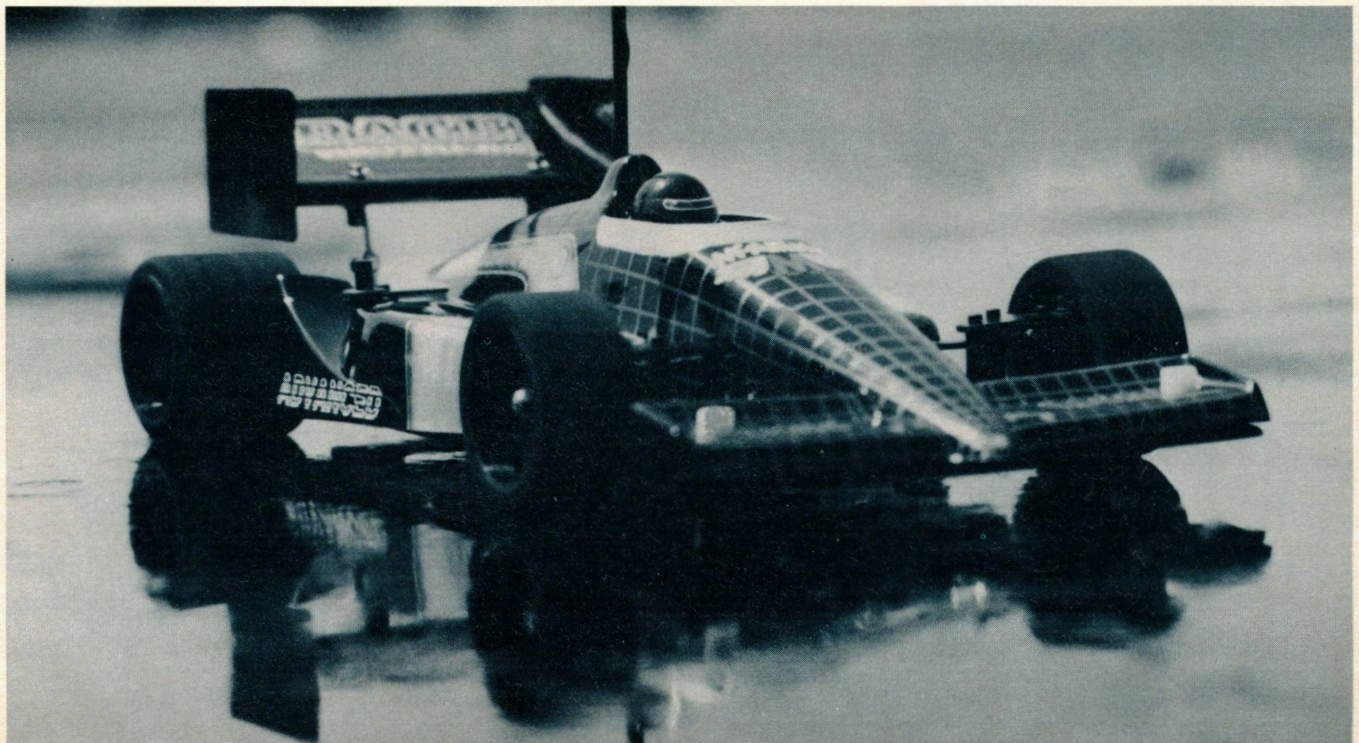
Team Losi, manufacturer of the new Losi JR-X2 2WD dirt racer, have been involved in importing and racing dirt cars for quite a

while; more than a year ago they set about producing their first dirt car to bear the Losi name. The JR-X2, designed by Gil Losi Jr., is a worthy first effort, a car that has found favor with a growing number of enthusiasts. Vernon Lewis takes us through assembly and testing of the exciting JR-X2, beginning on page 36.

While we're still in the dirt, Pro-Line has introduced a conversion kit that will turn an RC10 chassis into a monster truck. Now you'll never have to be run down by the big boys again! Check out Steve Saik's analysis of this makeover kit on page 46 this month.

First there was the Agitator, then the Agitator Pro, the Agi-Jammer, Son of Agitator, and now, finally, the Agitator Jr., a less-expensive version of the original Agitator, a 1/10-scale road racer that has dominated local racing since its introduction. Agi-fan Larry Fletcher brings us not only an assembly article, but valuable tips on tuning your Junior for maximum performance. Look for Larry's feature, beginning on page 48.

If you think the foregoing is just about enough for one issue, you're wrong! We managed to stuff Readers' Pages (Del's back!), Radio Workshop, R/C Sportsman, The Answerman, What's New, Trackside, and more between the pages, so get reading! Next month, before you know it, we'll be back with another bountiful issue chock full of the best in R/C racing fun, along with a few surprises you won't want to miss. See you then! ●



Classic Plastic

Street is neat. And nothing says "cruisin" better than a '57 Chevy built to the hilt, and Parma's got the goodies to create such a boulevard blaster. Like their '57 Chevy clear lexan body, colored and flamed with Parma paints.

The muscle under the hood comes from a mighty Sprint-wind Parma Yokomo modified motor, and keeping it cool, a Parma 360 degree motor heatsink. More than enough get-up-and-go juice from a high-powered battery pack of Parma matched Sanyos is fed through a Parma resistor speed control.

Burnout style torque is achieved with Parma's 10T steel pinion and 48T spur gears,

while wheel hop is controlled by a set of Parma teflon pistoned coil-over shocks and adjustable anti-roll bars. Traction action happens with meaty Parma rear sponge slicks and front smoothies mounted on sparkling styled chrome wheels.

Of course this Main street missile is just one example of the Parma-packed street machines that are possible. For help in building your "cruiser", send \$2.00 for the latest catalog of hot products from Parma that you can purchase at your local hobby dealer.



Established 1964
WORLD CHAMPIONS

Parma International, Inc. 13927 Progress Parkway North Royalton, OH 44133

Dear *RCMC*,

I love your mag guys, so keep up the good work! I want to bring something to your attention, though. In the July issue you did a review of the new Tamiya Vanquish, but there's a couple of things missing on it. On page 40 on the right rear wheel of the car there's a nylon nut instead of the metal one that should be there like on page 43. In the top left photo of the car the correct nut is on. How could you lose the original? Also on the front end, the screw, nut, and bronze shock mounting bushing are all missing. Where'd they all go? What kind of builder is Steve, anyway? Thanks a bunch!

Jayson Thivierge
Van Buren, Maine

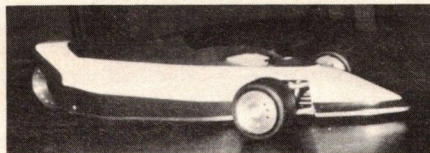
Steve Saik replies:

You definitely have an eye for detail. As you know, dirt-burning, body-crashing, and tire-tearing maneuvers often kick parts loose on any car, as with the Vanquish's shock. The torturous offroad testing results in missing parts, which most offroad racers can attest to. In this

case, the wheel was vibrated loose and the metal nut was simply replaced with a nylon one. As you can see in the action picture, nothing stopped the Vanquish!

Dear *RCMC*,

I am a machinist. I work in a small room in a large plant, just outside the city. The company is called Engineering Research Inc. I set up and operate two Swiss-made CNC milling machines and two CNC Hardinges. I make parts for missile guidance systems for the U.S. Air Force. I work second shift and



John's homebuilt racer

when the machines are not in use I have full access to them.

I designed and constructed a 1/8-scale, three-wheel monodrive race car, all from raw materials (minus the motor).

The body is a fiberglass shell, molded on a styrofoam carving and the frame is aluminum. I turned the tires as well as the wheels. It is gas-powered and I'm using Airtronics R/C components. Being born and raised in the racing capital of the world, it is easy to see why it resembles an Indy car.

The wings or steering stabilizers as I call them, are tied into the steering servo. It is belt driven, and has fully functional three-wheel suspension. I have spent three years making it. The car measures 24 inches long by 8-1/2 inches wide. I enjoy reading your magazine and have used some of your ideas for completing my car. Thank you sincerely.

John Pierson
Indianapolis, Indiana

Dear *RCMC*,

In Gene Husting's article, "Everything You Always Wanted To Know About R/C Car Racing" in the August issue of *RCMC*, he briefly mentioned "there are also some tractor pull events in the Midwest" under the heading: "1/10 Offroad Electric." I would like to add the following information so that your

KYOSHO

A World Champion Ultima

For winning races, Ultima is the name to know. Whatever 2WD off-road crowd you race with, from beginners to pros, **Kyosho** has a 1/10 scale electric Ultima that is just right for you. Out of the box, the new **Ultima Pro** with graphite chassis puts serious racers in charge of the most advanced 2WD buggy available. If you're hungry for a taste of high-powered competition, the **Turbo Ultima** offers a long menu of the most important upgrades. The original World Champion **Ultima's** amazing record of wins is still unmatched – a perfect choice to begin your racing career!

The Kyosho Ultimas are Number 1 in 2WD off-road competition. There's a high-tech Ultima for every racing level, making your successful onslaught into the top ranks at your track simply a matter of good judgment. Choose your weapon carefully, and the winning will take care of itself.



Ultima™

The Ultima claims top honors every time, including sweeping the 1987/88 IFMAR World Championships and taking Number 1 at many demanding national, regional, and local competitions. It's the perfect car for anyone ready to start racing – and winning.

- **Most advanced suspension geometry available.**
- **Includes many features found in higher-priced models, from a powerful stock motor to high grip, low profile tires.**
- **Accepts hop-ups for even greater performance.**

Turbo Ultima™

For drivers who are ready to move up in performance and durability, Kyosho offers the Turbo Ultima. It has all of the Ultima's proven features, plus over \$350.00 worth of hop-ups – at a price you can afford.

- **Full set of 14 ball bearings.**
- **Special, heavy duty 2mm chassis.**
- **Race-winning Kyosho ball differential, 4 Platinum Shocks, Heavy Duty Rotary Speed Control, and more!**

readers can be better informed about this new and rapidly growing sport.

1. The hottest activity in R/C Pulling is actually in the Northeast with the northern Midwest second and Southeast third. There is very little activity in the west, but interest is picking up. These events sometimes include monster truck car crushing races and mud bogs.

2. The National Radio Control Truck Pulling Association currently has 24 Affiliated Clubs in the following states: Pennsylvania, Ohio, West Virginia, New York, Massachusetts, Connecticut, North Carolina, Michigan, Georgia, Indiana, and Kansas. Individual membership numbers over 650 with members in the U.S., Canada, Korea, Greece, Puerto Rico, and New Zealand.

3. The "Summer '89" New England R/C Pulling Championship Series, sanctioned by the NR/CTPA, is coming to a close and plans are underway for a winter series.

4. Champaign, Illinois will be the host of the 1st Annual NR/CTPA World Championship R/C Truck Pull and Monster Competition on October 14-15, 1989. This will be the

largest event of its kind ever held.

5. Most of the R/C Pulling is being done with 1/12- and 1/10-scale electric vehicles, but fuel-powered 1/10, 1/8, 1/6, and 1/4 are being considered and fuel competition will most likely begin in 1990.

In conclusion, I would like to mention that R/C trucks have been growing rapidly in popularity over the past few years, accounting for almost 50% of total R/C "car" sales. Maybe we should be regarding R/C trucks as a separate category? If your readers would like more information about R/C Truck Pulling or Monster Events in their area, they may contact the NR/CTPA at the address below. Thank you for allowing us to provide some input on this subject.

David J. Sproul, President
National Radio Control
Truck Pulling Association
P.O. Box 1488
Champaign, Illinois 61824-1488

Dear RCMC,

I have been reading your magazine for longer than I have had my subscription,

which my parents bought for my birthday, and I have to tell you that I really like your reviews and racing photos. I have an RC10 that I converted to a road racer. It works as good as the real road racing 1/10-scale cars at our track, so there's no problem there. I just wanted to tell you to keep up the great stories and photos and I'll send you a photo of my car for the Readers' pages in a while. Let's see some full-size stadium racers and sprint cars too. They're hot.

Michael McClaskey
Des Moines, Iowa

Dear RCMC,

I have been enjoying Mike Ogle's articles on "How to Paint," Parts One and Two, and have just completed my first paint job. I have had a lot of fun doing it, but found it quite a challenge as well, especially the masking of the inside of the body where it is very awkward to manipulate the tape inside the tight angles and corners.

Now that I have completed the body, I

Continued on page 74

Design for Every Driver

NEW!
Ultima Pro™

The new Ultima Pro is the buggy that Kyosho Team drivers will be winning with at the next championships. Straight from the box, it's fully equipped to take experienced drivers racing through heated competitions in a blaze of glory!

- Over \$400.00 worth of top-quality hop-ups.
- Newly designed ultra-light, ultra stiff graphite chassis.
- Gold Shocks, ball differential, full ball bearings, universal swing shafts, and more!

Whichever Kyosho Ultima design you choose, you'll be in impressive company. Joel Johnson, Chris McElroy, Scott Montgomery, and hundreds of local racers everywhere have filled their trophy shelves by making an Ultima their choice. But there's still plenty of gold to be won. Drive the Ultima designed for your style of competition – and get yours!

The Kyosho Ultima swept First, Second and Third Places at the 1987/1988 IFMAR World Championships.

For an inside look at the hottest Kyosho R/C models, send to the address below for your free copy of the Kyosho Mini Catalog from Great Planes.

DISTRIBUTED TO LEADING RETAILERS
NATIONWIDE EXCLUSIVELY THROUGH

GREAT PLANES™
MODEL DISTRIBUTORS COMPANY
P.O. BOX 4021, CHAMPAIGN, IL 61824-4021

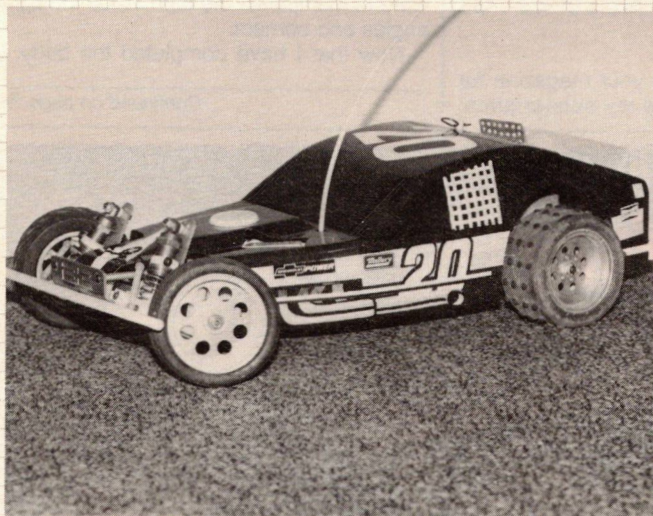
© 1989, Hobbico, Inc.

READERS' PAGES

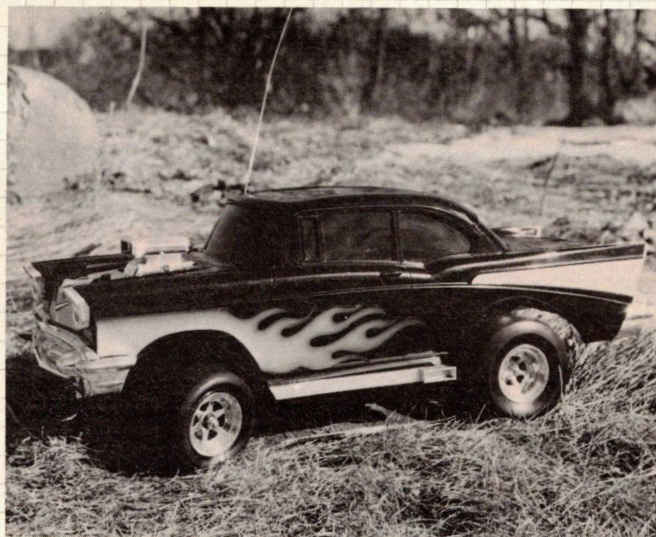


Chris Tooley, of Liverpool, New York, gets himself a free subscription to *R/C Model Cars* for this shot of his RC10 that has, according to Chris, aerodynamic advantages due to interior panels that create downforce, making the car handle better. The three-piece body is tough and realistic. The car is raced on carpet, asphalt, and dirt ovals and road courses in Syracuse. Good work, Chris.

Now that RP editor Del Bagshaw is back at work, we've expanded our Readers' Pages to help get as many of your photos printed as possible. If you'd like to see your photo here, send it, along with your name and address and a little info about your car to: Readers' Pages, 898 W. 16th St., Newport Beach, California 92663. Sorry, photos cannot be returned. But wait: you may win a free, one-year subscription to *R/C Model Cars* simply by sending in your car's picture! What could be easier!!



A Kyosho Raider is the first car owned by Art Villoira, who wins a free one-year subscription for this stocker powered by a LeMans 05 motor with a Kyosho speed control and Futaba radio hooked on. The body work took Art four hours, and it looks it! Way to go, Art.



"Offroad running with Richard Leum, using a '57 Chevy that has a 360 LeMans motor, and an FX-10 all-terrain unit with independent suspension. Richard Leum, Tampa, Florida."



An RC10 for NASCAR Modified racing is from John Dickinson, of East Hampton, New York, who says his car has Fox rear wheels and adapters, Kangaroo rear tires, and CRP adjustable wheels.



This photo of a Blackfoot tiptoeing through the white stuff is from Buck Davis, of Canada, where you can find plenty of this stuff lying around a most of the year. The truck has a stock 540S motor, and gets around good.

IF YOU'RE READY FOR AN AGITATOR...

... But maybe your budget isn't, you don't have to settle for less. Get into an AGITATOR "JR" and get outstanding performance and handling at a surprisingly low price. And, when you're ready to step up again, you can upgrade your "JR" to a full 3-shock AGITATOR!

CHECK THESE FEATURES:

- Graphite Rear Axle
- 5 Bearing Rear End
- Race-proven AGITATOR front end
- Fully Adjustable coil-over shock
- Precision Delrin Components
- Superb on Oval or Road Course!



★ Conversion Kit to Full AGITATOR Available!

AGITATOR "JR"

Kit #1003; w/5 bearing rear-end. Kit #1006; Basic model w/bushings.

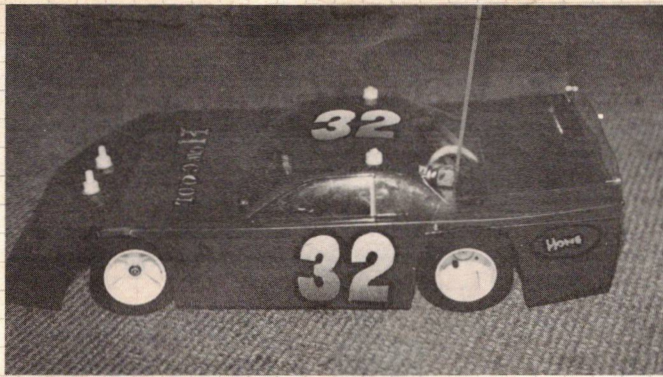
ADVANCED
RACING TECHNOLOGIES

460 Cypress Ln., Suite F, El Cajon, CA 92020 (619) 441-8595

PARAGON
Racing
MOTORS



For catalog send \$2.00 to: **Paragon Racing Products** Dept. MC
690 Industrial Circle So. • Shakopee, MN • 55379 • (612) 496-0091 • Fax # (612) 496-0191



Modeled after Denny Nyari's stock car which races at New Paris, a local track near car owner Doug Birky, of Elkhart, Indiana, this BoLink Invader has a Firebird body from Parma, an Eliminator 10 front end, and a Novak speed control.



Bill Wheeler, from snowy Maine, says cars back East must run faster than California cars because the cold weather keeps the batteries cold! Bill's Ultima has placed second in his first two stock races.



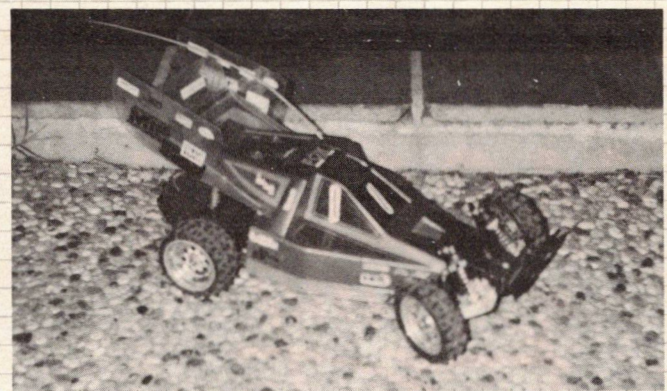
Cody Fitterer, of Livingston, Montana, sends this photo of his Kyosho Raider with a 240ST motor. Cody plans on racing it in Bozeman soon.



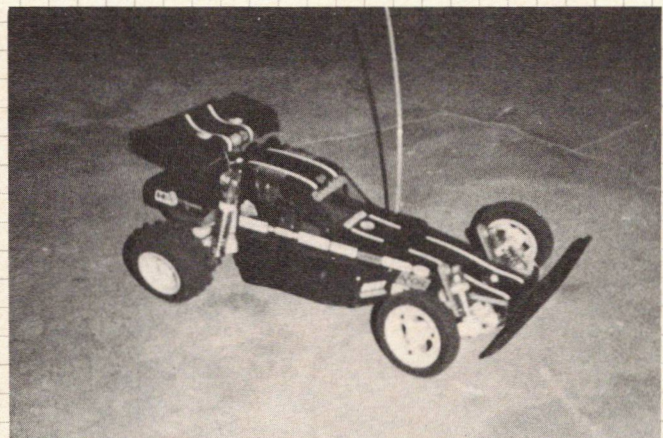
"Please publish this picture. It is a Big Bear with tinted windows, a Tamlya Hornet speed control, Technipower motor, and Kermit the Frog at the wheel. Your friend, Chris Cluff." Chris, here's a free subscription for you and Kermit.



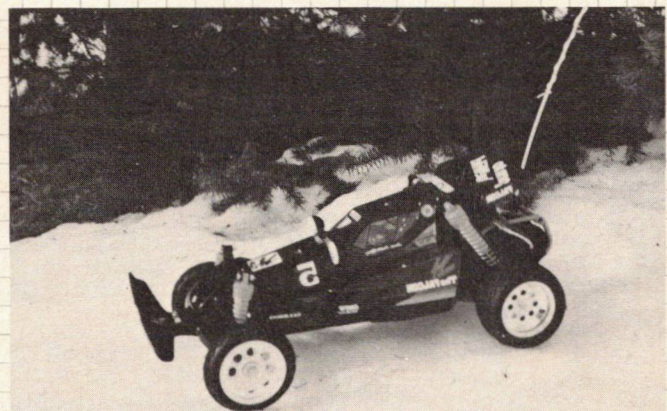
Chris Butera, of Ormond Beach, Florida, races once a week with this Falcon powered by a modified LeMans 360 Gold. He uses a Futaba radio and put a hot Parma Porsche 962 body on his converted dirt car.



This Fox with a Magnum Jr. radio, Novak speed control, Race Prep stock motor, Thorp diff, rear Oplon House shocks, RC10 front end, and Fox plated wheels has been raced twice, and won once. Congratulations to Jason Wipf, of Harlingen, Texas for this hot car.



Ryan Walton, of San Diego, California, says his RC10 was a Christmas present, and he added some new Pro-Line tires and real netting for the windows. The car has full ball bearings too.



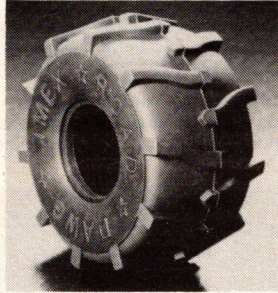
This Falcon from Peter Beuner, of Waldoboro, Maine, has a SPA 240WS motor, a Novak NES-1X speed control, ball bearings, and a 19-tooth pinion. To accent the red and black paint job I chose Fox gold-plated wheels and Pro-Line waffle-tread tires. Nice car, Pete!



imex
TOP DAWG TIRES

We Give You the Real Thing in 1/10-Scale Quality Radio-Control Replacement Parts. See These and Our Complete Line of 50 R/C Scale Tires at Better Hobby Shops Everywhere.

TRUCK-PULL TIRE



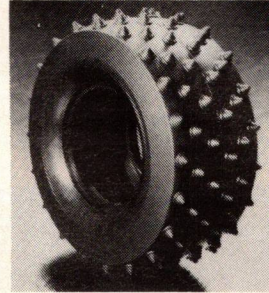
Item 7590
(Fits Lunch Box or Blackfoot)
Reg. size\$20.00 pr.
New club size\$28.00 pr.

MONSTER TRUCK TIRE



Item 7591\$20.00 pr.
(Fits Blackfoot)

MONSTER SPIKE TIRE



Item 7629\$18.00 pr.
(Fits Blackfoot)

MONSTER PADDLE TIRE

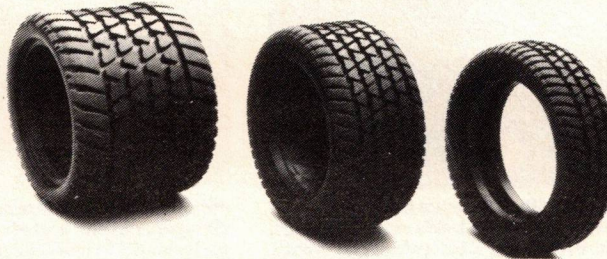


Item 7589\$15.00 pr.
(Fits Blackfoot)



CAT PIN SPIKES

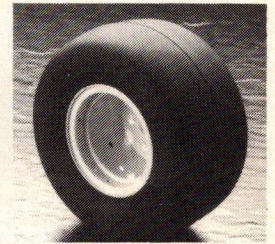
Front #7637\$9.00 pr.
Rear #7636\$10.00 pr.



OLYMPIC TREAD

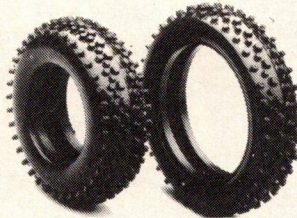
Fits Bru-Line rim system with adapters for RC10, Kyosho and Tamiya.

Front #7592\$12.00 pr.
Rear #7593\$12.00 pr.
Wide Rear #7594\$15.00 pr.



SLICK TIRE

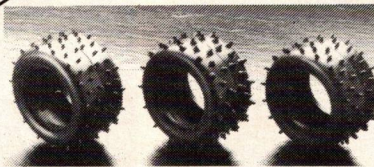
Fits Blackfoot or 2.2-inch rim.
Item 7628\$15.00 pr.



FRONT SPIKES

1 1/2-inch Rim #7631\$7.00 pr.
2-inch Rim #7630\$7.00 pr.

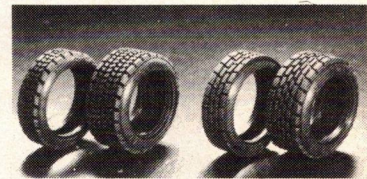
NEW



LOW PROFILE BLACKFOOT MONSTER SPIKES

3 Styles:
Mini Spike #7580\$13.00
Cat Spike #7581\$13.00
Q-T Spike #7582\$13.00

(Available in soft, medium and hard compounds.)

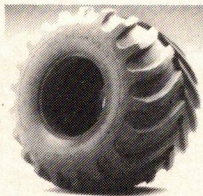


STREET TIRES

2.1-inch fronts and 2-inch-diameter rears. Real rubber. \$12.00 a pair.

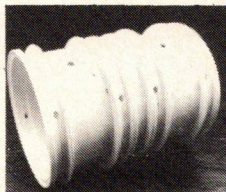
NEW

1/10-SCALE R/C LARGEST



\$28.00 a pair

TIRE JUMBO CRUSHER



\$14.98 a pair

Fits IMEX Jumbo/Dual Rim for Blackfoot/Monster Beetle
Front Chrome\$14.98 pr.
Rear Chrome\$14.98 pr.

NEW

CHROME CLOD BUSTER RIM



\$15.98 a pair

NEW

BLACKFOOT RIMS

Chrome Front\$8.98 pr.
Chrome Rear\$8.98 pr.
Hot Pink Front\$7.98 pr.
Hot Pink Rear\$7.98 pr.
Hot Lime Front\$7.98 pr.
Hot Lime Rear\$7.98 pr.
Hot Blue Front\$7.98 pr.
Hot Blue Rear\$7.98 pr.
Hot Orange Front\$7.98 pr.
Hot Orange Rear\$7.98 pr.
Hot Yellow Front\$7.98 pr.
Hot Yellow Rear\$7.98 pr.

NEW

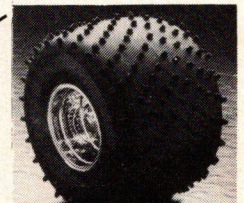
CLOD BUSTER DUAL TIRE AND RIM SET



The ultimate in big-wheel action.

\$49.98 a pair

NEW



CLOD BUSTER SPIKE TIRE

(Widest spike available.)

\$28.00 a pair

"KEEPING YOUR HOBBY AFFORDABLE"



IMEX Model Co. Inc., 53 Trade Zone Court, Ronkonkoma, NY 11779
516-981-2804



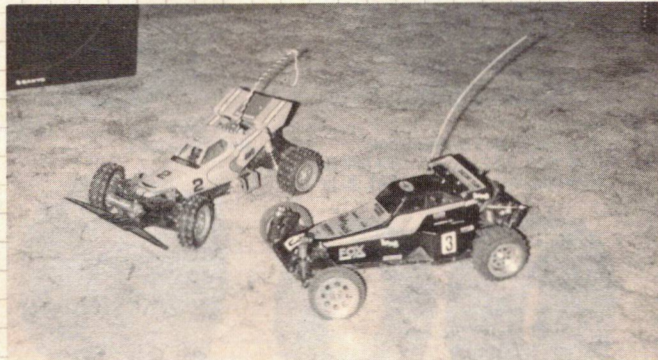
This Big Bear can take most cars in its class and still beg for more, according to owner Chad Rush, of Clarinda, Iowa. Chad has a stock speed control, two-stick radio, and lots of tender loving care for his Bear. Here's a free subscription to go with the hot Big Bear, Chad!



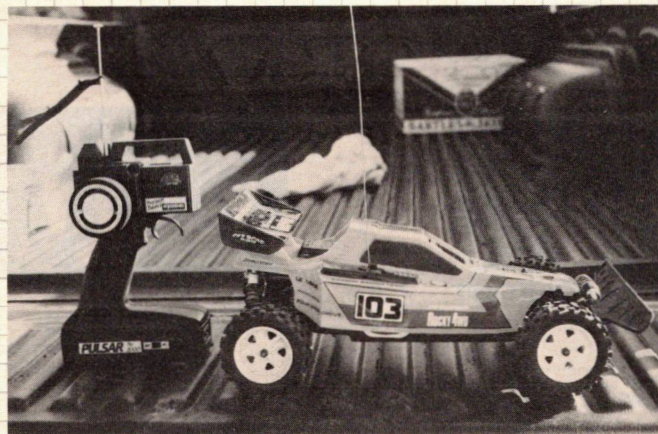
"This baby used to be a Big Bear, but now it's a Kodiak. With the add-on rear she climbs up and over everything with two stock 540s. I have dual 8.4 packs flowing through with a working snowplow. Corey Walker, St. Thomas, Ontario."



This vehicle began as a Tamiya Frog, but with some extra parts and a lot of work, it now sports a Parma Chevy Stepside body, a LeMans 240ST motor, and it rips, according to Chris Jones, of Pacifica, California. Chris credits his pal Bill for the red and gold paint. Here comes a free subscription to you, Chris!



John Thomas' wife Suzanne sent this photo of his two hot cars, a Boomerang (stock) and a totally modified Fox. The Fox has hot Trick conversion parts, an RC10 steering kit, Novak speed control, Alirtronics radio, Thorp ball diff, Kyosho Platinum shocks and a modified Twister motor. Surprise, John!



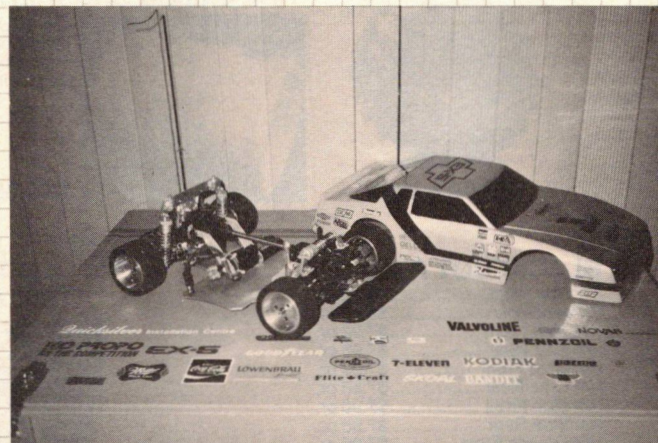
This Kyosho Rocky 4WD buggy has ball bearings and a Kyosho Pulsar radio. It belongs to 12-year-old Tony Ohlman, of Emporia, Kansas.



"I love your mag. This awesome RC10 was built, painted, decaled, and driven by me, Todd Murphy. It's powered by an Associated offroad stock motor, with a LeMans 480S coming soon. This is the best hobby I've ever tried, and I'm going to stick with it. Todd Murphy, age 13, Lockport, Illinois."



A modified Kangaroo has a Diamond power motor with an 18-tooth pinion and a custom-painted body painted by Abiu Hernandez' brother. The 'Roo has Pro-Line rear tires, and it wins for Abiu a free subscription!



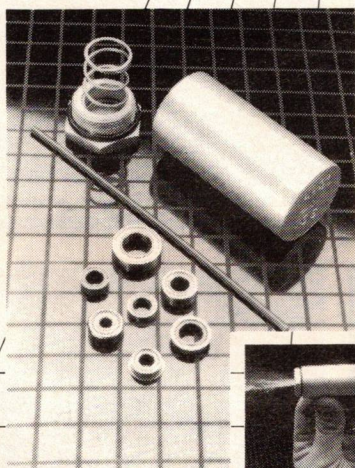
An MRP '57 Chevy Monte Carlo body is mounted on this much-customized Bigwig 4WD car. It has a custom-turned aluminum driveshaft and rims, and a hand-built aluminum chassis and shock system. Speed is unbelievable with a Trinity Oval motor. It's from Tim Cantin, of London, Ontario, Canada.

MCS

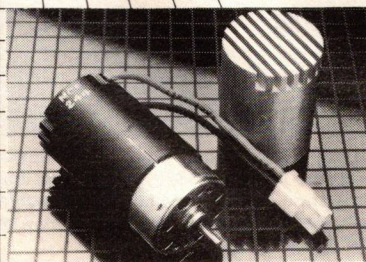
PRODUCTS



Portable Parts Washer
#8000



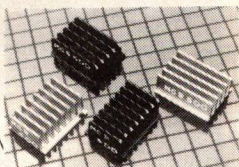
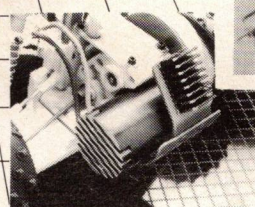
Bearing Cleaner
#6021



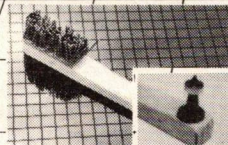
Motor Cover Heat Sink
#244



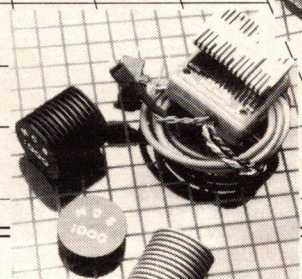
Speed Control Heat Sinks
#1000 B #1000 C
#2000 B #2000 C



Bond On Heat Sinks
#400 B #400 C
#500 B #500 C



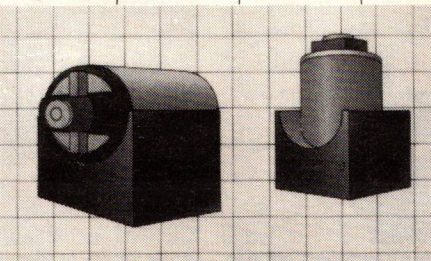
Ugly Stick
#1111



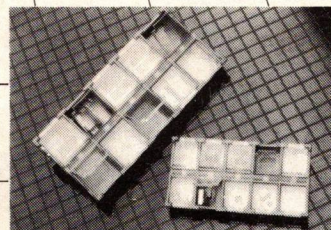
NEW PRODUCTS



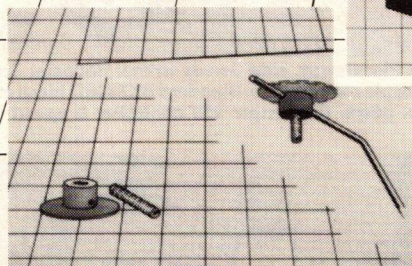
Dog Bone Straightener & Alignment Tool #3000



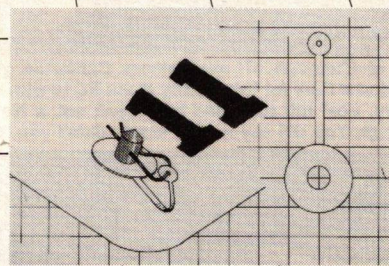
Motor Block
#5000



Parts Boxes
#1028 small
#1029 large



Wing Buttons
#1051 small
#1052 large



Nylon Tie-Down
#7070

Available at these fine distributors:

A K S DISTRIBUTING • EMERY DISTRIBUTING
E R I • GREAT PLANES
HOBBY DYNAMICS • HORIZON HOBBY



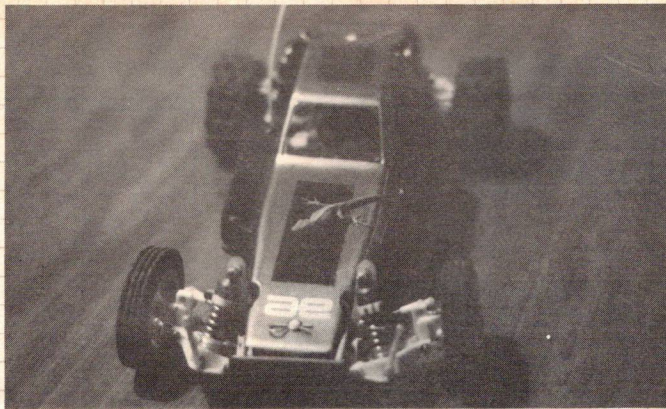
A Subdivision of MCS Products Inc.
502 Price Dr. • Lewisville, TX 75067

H R P DISTRIBUTORS • POOR BOYS HOBBIES
R C S DISTRIBUTING • RPS DISTRIBUTING
SPEED & SPORT • UNITED MODEL DISTRIBUTORS

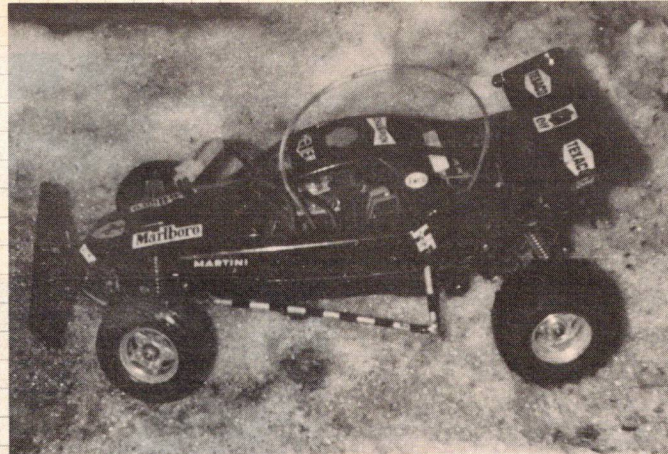
Catalog Available

FAX (214) 436-2261

Made in the U.S.A.



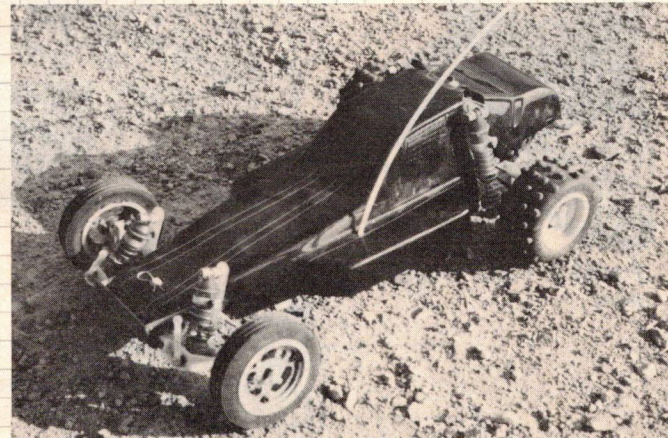
"This is my RC10 with bearings and a stock Trinity motor. The metallic blue, black and red trim is the best part. All my friends like it and now they are begging their moms to buy them one. By the way, that's my crew chief Dino on the hood. Jay Chenoweth, Marlon, Indiana." Hey Jay—Dino wins a free subscription to *R/C Model Cars!*



This modified Road Runner, powered by a LeMans 360 Gold motor, is from Gerard Veenendall, of St. Catherine's, Ontario, Canada. It has full bearings, says Gerard.



Jon Tota, of Long Island, New York, says his Monster Beetle tears up the mud (*oh, really??*) with a LeMans 360 Gold motor, T.N.T. stabilizer blocks, MRP body, and a Futaba radio. Clean up your act, Jon.



A completely stock RC10 from Chad Frysinger, of Roanoke, Indiana, who writes to tell us that his paint job was courtesy of Phil's Hobby Shop in Ft. Wayne. It's going to be raced as soon as it gets over its headache from a head-on with a basketball goalpost at full speed. Yeeoww!!



Chris McCullough, of Lake Elsinore, California, gets a free subscription to *R/C Model Cars* for this mostly stock RC10 with a Team Losi Prime Time battery, Losi diff tube and bell crank set, a Novak speed control, and bearings. You did say mostly stock, didn't you, Chris?



Andy Smith, of Piscataway, New Jersey writes: "Monster Beetle. Glossy black & candy apple red paint job. Standerd RX540SD black motor. Parma Limited Edition gears. Challenger 250 controller & speed controller. It moves."



Paul Olsen, of Schenectady, New York, sends this shot of his Rockbuster with a sealed gearbox diff, an Attack-R receiver (brand new), a strong ABS resin chassis, and an RX540SD motor. The nice Parma '33 Ford body was painted by 12-year-old Paul, who did a great job.

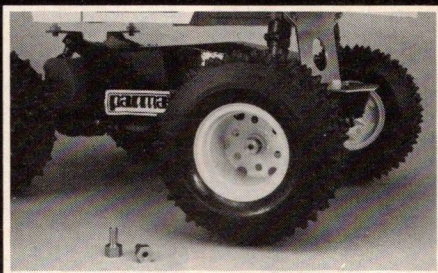


This RC10 powered by a super stock RevTech motor has won two out of three races for J.T. Roy, of Lakeside, California. Good ol' J.T. has just been bumped up from novice to 2WD Stock class. Congratulations, J.T.

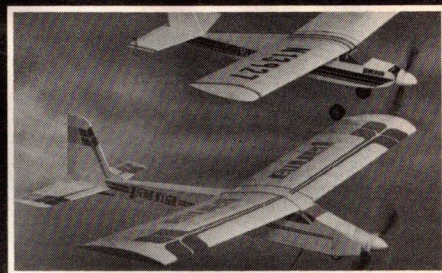
25 YEARS OF WINNING SERVICE TO THE HOBBY INDUSTRY



#10254 Cobra Body \$19.00
 #10450 Body Mounting Kit \$ 6.50
 Named as one of the top 10 R/C bodies in the world. The Ford Cobra is molded in clear lexan and can easily become a convertible by trimming off the roof, side and rear windows. The Cobra fits any 1/10 scale chassis with the use of a Parma adjustable body mount kit. See it at your local Parma dealer.



#12604 Monster Front Wheel Adaptor Pr/\$6.25
 Parma proudly announces monster front wheel adaptor nuts. Now you can "stamp out" the local competition with any 2 WD Tamiya car, and other makes. See your local Parma dealer for details.



#25000 Aero-Tiger Basic Kit \$ 59.95
 #25100 Aero-Tiger Deluxe Kit \$160.00
 #25500 Aero-Sprint A.R.F. \$149.95
 Parma takes to the air with these two sport/trainer type electric air craft. On top is the Aero-Tiger, perfect for those who enjoy building a precision kit as much as flying one. It comes in both basic and deluxe versions. Also shown is the Aero Sprint. This plane shares the same gentle flying characteristics as Aero-Tiger but all major assemblies come pre-built. It's Almost Ready to Fly! Look for it at your local Parma dealer.



#10625 Winston Cup 6x8 \$4.00
 #10639 Baja 6x8 \$4.00
 #10640 Oval #2 6x8 \$4.00
 #10653 Mr. Gasket 6x8 \$4.50
 #10661 Mr. Goodwrench 6x8 \$3.50

Parma continues to be the leader in colorful self adhesive mylar decals. Shown above are five new releases for 1/10 & 1/12 scale. Winston Cup, Baja, Oval Racing #2, Mr. Gasket and Mr. Goodwrench. Race into your local Parma dealer today and ask to see our entire line.



#1964 1/12 Olds NASCAR Body \$11.00
 #8012 Adjustable Body Mount \$ 5.50
 Parma is proud to introduce its 1/12 scale NASCAR '88 Olds. Available in clear. Parma combines excellent detail as well as superb aerodynamics. It fits all 1/12 scale chassis with the use of a Parma universal 1/12 body mount kit. Now available at your local Parma dealer.

parma NEW PRODUCTS

No.9



#17031 Front Wheels Pr/\$15.00
 #17131 Rear Wheels Pr/\$20.00
 #17950 Front Hubs Pr/\$12.50
 #18051 Rear Hubs Pr/\$13.50

From Parma's full line of accessories include these funny car wheels and hubs for 1/10 scale. The chrome plated wheels will fit Parma's Pro Panther 10 Series funny car and other makes. The hubs are precision machined from solid aluminum to fit Parma's funny car. See them and other accessories at your local Parma dealer.



#17310 98 Tooth \$4.00 #17311 102 Tooth \$4.00
 #17312 106 Tooth \$4.00 #17313 110 Tooth \$4.00
 Parma unveils their own 64 pitch spur gears! Molded out of tough nylon composite material, they're supplied in white (but can be dyed any color). An exclusive drive ring carrier/grease pocket design allows for smooth differential operation.



#10266 '50 Ford Custom Coupe Body \$19.00
 #10450 Body Mounts \$ 6.50
 Parma's line of classic bodies includes this '50 Ford custom, chopped coupe. It fits most 1/10 scale cars, with the use of a universal adjustable body mount kit. Look for this, and many other great Parma bodies at your local Parma dealer.



#1356 Valvoline 9x12 \$6.00
 #1355 Havoline 9x12 \$6.00
 #10638-A Fluorescent 6x8 \$3.50

Parma's line of self-sticking mylar decals welcomes three new editions. In the 1/4 & 1/8 scale category are, Valvoline and Havoline. For 1/10 & 1/12 scale it's the fluorescent version of the ever popular endless line look for them all at your local Parma dealer.

PARMA'S MOTOR SERVICE FOR ANY MAKE MOTOR

ONLY \$12.00

Parma motor technicians will give you More Kick In Your Can.

- Disassemble & clean entire motor.
- Computer balance your armature.
- Diamond true your commutator.
- Remagnetize your magnets.
- Dyno-test for maximum R.P.M. and minimum amp draw.

PLEASE INCLUDE EXTRA FOR FOLLOWING

- New Motor Brushes\$3.50 pr.
- New Motor Springs\$2.00 pr.
- New Motor Bearings\$6.50 ea.
- New Armature\$30.00
- We pay shipping inside N. America
- Outside N. America add \$3.00 postage

ARMATURE SERVICE ONLY

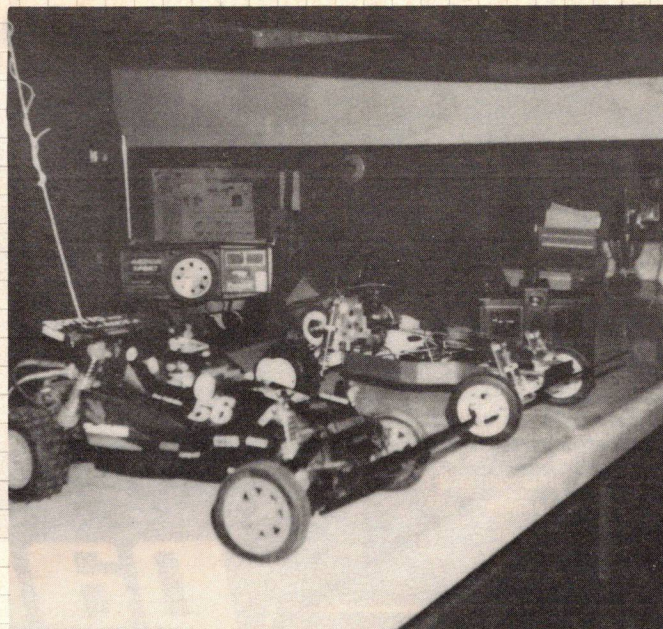
- Armature tune-up
- Inside N. America\$5.00
- Outside N. America add \$1.00 postage

SEND \$2 FOR A FULL SET OF COLOR CATALOGS & 1/10 BODY POSTER

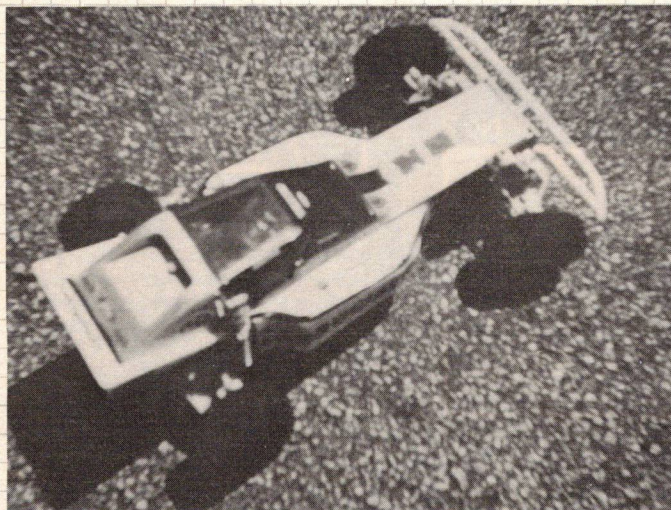
* Parma Regrets that we cannot supply individual orders on a retail basis. For parts and information, contact your local Parma dealer.



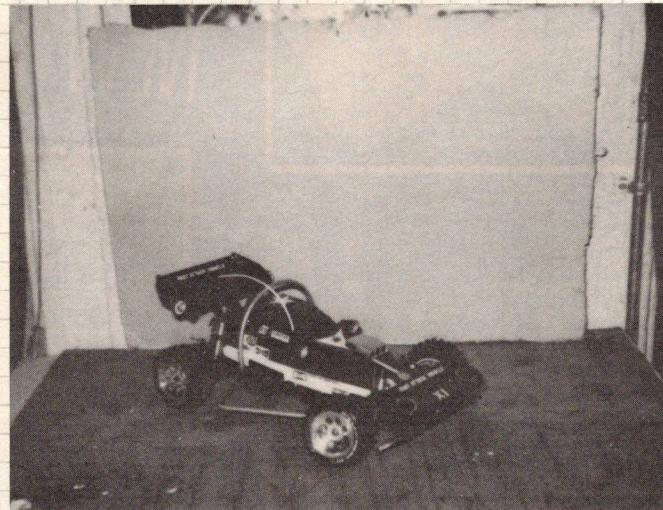
"This is a stock Lunch Box catching some awesome air!! Jason Percy, of Willimantic, Connecticut." A free subscription for this rad shot goes to Jason!



Chris Thornton says he likes the mag; it's cool. He sent this shot of his RC10 with a LeMans 480 Gold motor, and has a Falcon with a LeMans 360ST motor and ball bearings. Chris lives in Crown Point, Indiana.



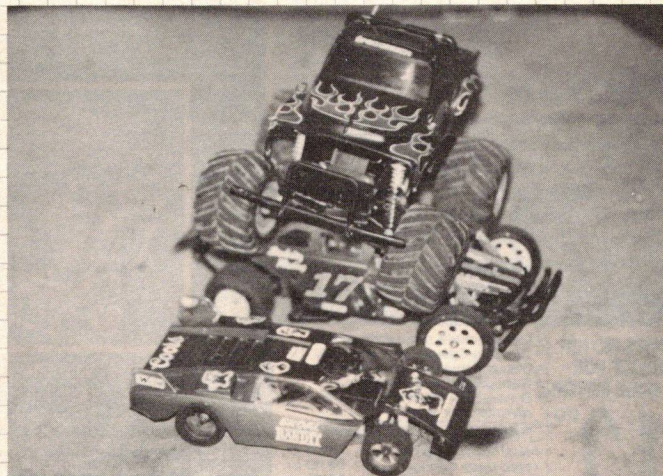
"My name is Bryan Davis and I live in Atlanta. I'm 14 and here are a few shots of my self-built, self-painted RC10. The hop-ups I've added (out of my own pocket) include a Twister motor, Parma body, Hot Trick steering linkage, and 7.2-volt battery pack. It can tear it up with my friends Robbie and Jason's Optima."



"My Transworp OptiFrog is an Optima Mid with a Frog body and front Frog wing. It has working headlights, turn signals, and homemade roll & nerf bars. The car has a Race Prep motor, Futaba speed control, bearings, and Gold shocks. It goes Worp 89.1. That's very fast to you and me. D. Gutheim, NY, NY."



"My two-year-old Hornet has been fixed up with a new body, decals, ball bearings, the works. It runs good. It has an RS-540S motor. It has oil-filled shocks. I have sent you pictures. I hope you use them. I am from Huntsville. Tommy Niemann."



This lineup of cars is courtesy of Sean Westhafer, who hails from Pottstown, PA. Sean says his Wild One has a Race Prep stock motor and has the coupe body. The Raider has a '33 Ford body and a Revolution Insane motor. The two Grasshoppers have Revolution stock motors, and the 12L has a Lamborghini body. The Midnight Pumpkin really flies, says Sean.

25 YEARS OF WINNING SERVICE TO THE HOBBY INDUSTRY



- #10658 4x4 Manufacturers \$4.00
 - #10669 Buick/Oldsmobile \$3.50
 - #10670 Chevy/Pontiac \$3.50
- New decals from Parma! It doesn't matter if you're a Buick/Oldsmobile, Chevy/Pontiac or Ford buff; Parma has a decal sheet for you. See the complete line at your local Parma dealer.



- #10290 '89 Corvette ZR1 \$19.00
- Shown above is the latest Parma body, the 1989 Corvette ZR1. This sleek 1/10 scale body is formed in clear lexan with the crisp detail Parma is famous for. See it today at your local Parma dealer.



- #10657 Mobil 1 \$3.50
 - #10676 Coke \$3.00
 - #10656 Shell Oils \$3.50
 - #10677 California Raisins \$5.00
- More new decals from Parma! Shown are Coke, Mobil 1, Shell Oils and California Raisins. Silk screened in bright bold colors, these decals are sure to make your R/C bodies look like a course winner. See the entire line of mylar decals at your local Parma dealer.

parma NEW PRODUCTS

No. 11



- #10672 Magoo's Hot Rod \$4.50
 - #10679 Motorcraft \$4.50
 - #10671 Racing Tires \$3.50
 - #10641-D Oval #3 Diecut \$5.00
- New from Parma; diecut decal. Shown is the Oval #3 multi-sponsor decal sheet, die-cut for easy application. Just peel and stick, it's that simple. Also shown is Magoo's Hot Rod, Motorcraft and Racing Tire decals. Ask to see the complete line of Parma decals at your local hobby shop.



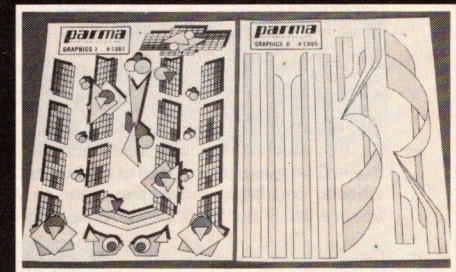
- #10274 '74 Chevy Nova \$19.00
- Parma announces a new street body. This '74 Nova is reproduced in 1/10 scale, with plenty of detail for realistic appearance. It will fit most 1/10 cars with the use of a Parma universal body mount kit. See this and our complete line of lexan bodies at your local Parma dealer.



- #11209 Matched Sanyo SCR's 24/\$120.00
 - #11210 Matched Sanyo SCE's 24/\$150.00
- Attention raceways, clubs and serious racers. Parma is now offering you a chance to buy bulk matched Sanyo SCR's and SCE's. These batteries come loose, two dozen to a box, with a certificate of rating signed by the battery technician who matched them. Ask for them today. They are available through any Parma dealer.



- #12118 Clodbuster Chrome Wheels Pr./\$20.00
- New from Parma. The perfect touch for the perfect truck. These chrome wheels are direct replacements for the Clod Buster. See these and many other exciting products for your monster truck today at your local Parma dealer.



- #1361 Graphics #1 Checkers/Shapes \$7.00
 - #1365 Graphics #6 3-D Ribbon \$7.00
- Parma releases two of their very popular graphics decals in 1/8 and 1/4 scale. These striking fluorescent decals are sure to be just the ticket to make your latest bodies look like a winner! See them at your local Parma dealer.



- #10675 Pepsi Cola \$3.50
 - #10673 Gatorade \$3.50
 - #10674 Hawaiian Punch \$3.50
 - #10655 Turtle Wax \$4.50
- New decals from Parma! Shown are Pepsi, Hawaiian Punch, Gatorade and Turtle Wax. Silk screened in bright bold colors, these decals are sure to make your R/C creations look like a winner! See all Parma's decals at your local Parma dealer.

PARMA'S MOTOR SERVICE FOR ANY MAKE MOTOR

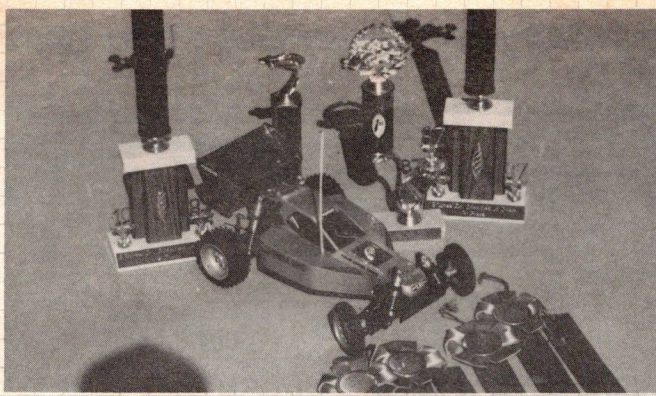
ONLY \$12.00

Parma motor technicians will give you
More Kick In Your Can.

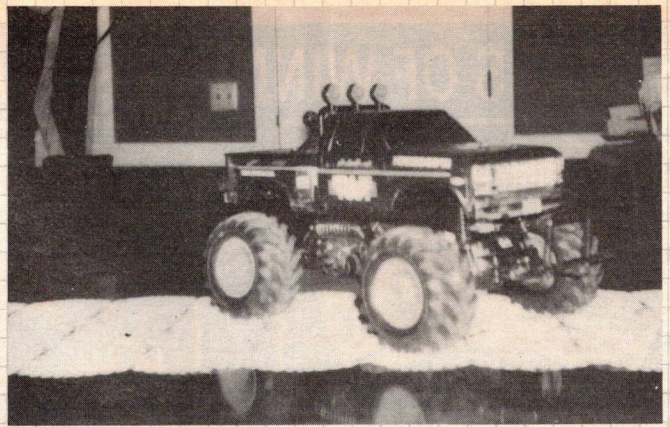
- Disassemble & clean entire motor.
 - Computer balance your armature.
 - Diamond true your commutator.
 - Remagnetize your magnets.
 - Dyno-test for maximum R.P.M. and minimum amp draw.
- PLEASE INCLUDE EXTRA FOR FOLLOWING
- New Motor Brushes\$3.50 pr.
 - New Motor Springs\$2.00 pr.
 - New Motor Bearings\$6.50 ea.
 - New Armature\$30.00
 - We pay shipping inside N. America!
 - Outside N. America add \$3.00 postage
- ARMATURE SERVICE ONLY
- Armature tune-up
 - Inside N. America\$5.00
 - Outside N. America add \$1.00 postage

SEND \$2 FOR A FULL SET OF COLOR CATALOGS & 1/10 BODY POSTER

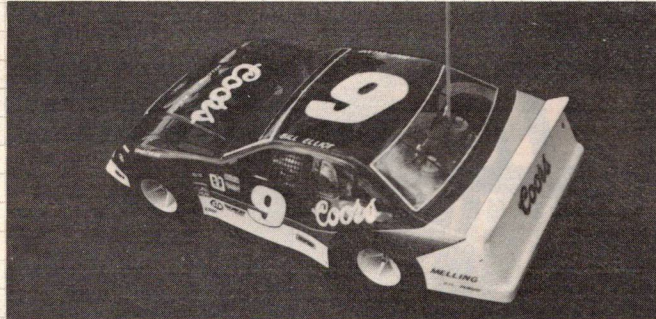
* Parma Regrets that we cannot supply individual orders on a retail basis. For parts and information, contact your local Parma dealer.



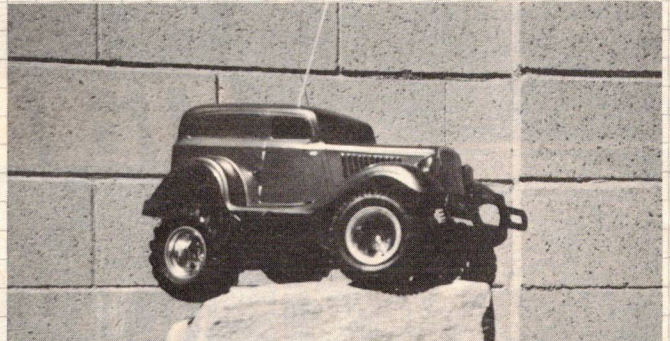
An Optima Mid with a Novak 1X speed control, Kyosho Platinum shocks, swing arm axles, Pro-Line rears and RC10 front tires, is the work of Don Garner, better known as "Big Daddy" Don Garner, who says his car is easily twice as fast as last year's car with a Trinity modified motor installed. The trophies and ribbons came from last year's undefeated season, says Big Daddy.



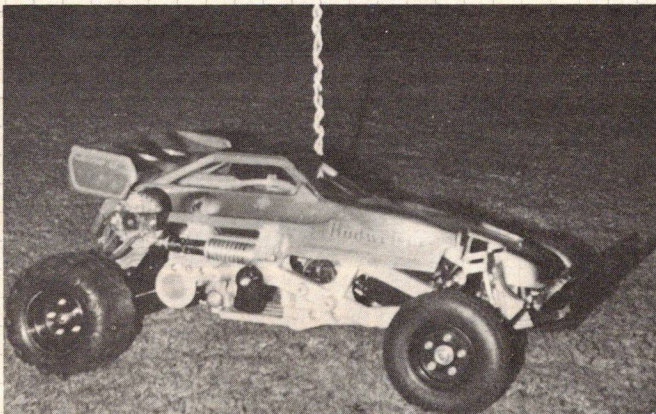
Crushin' Keith Rutt, of Lancaster, Pennsylvania, says his brand new Black-foot has full bearings and a stock motor, and he loves to crush cars and anything that gets in his way, but he loves the magazine more. Watch for Crushin' Keith's Monster Beetle, coming soon.



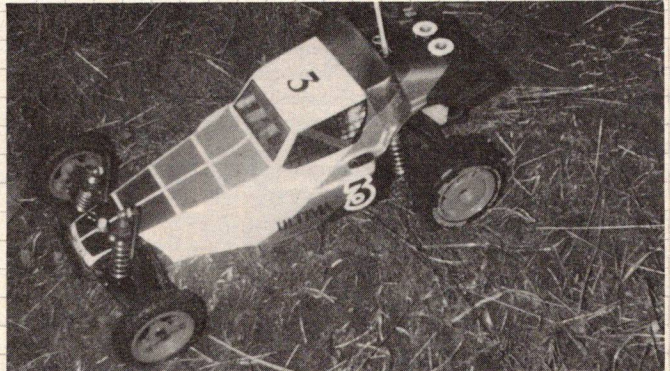
A Tamiya Fox for offroad and onroad racing is shown here with its BoLink T-Bird body mounted. Owner Ken Ivanovitz couldn't get any Coors decals, so he copied the letters from a Coors beer can. Everything is handpainted except for the little sponsor decals, says Ken, who wins a subscription for this nifty number.



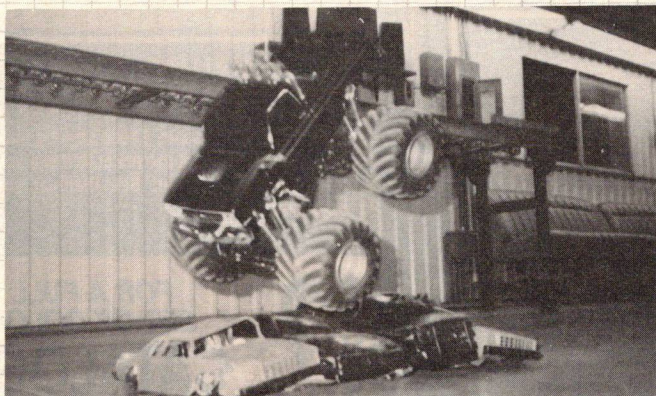
Here's a clean '41 Ford Delivery Panel truck, with a pearl coral paint job and a cloth canvas top, just like the real one. The truck isn't stock, but the owner, Gary Hamm, of Buena Park, California, will only say that the local police radar tagged it at 29 mph.



Steve Gregg sent this photo of his first car, a Frog by Tamiya with Pro-Line wheels, bearings, and power from an AYK GZ-480. Paint job was by Steve's pal Steve Ralph, of Livonia, Michigan.



Chris Goede, of the Willamette Valley R/C Racers in Salem, Oregon, says his Kyosho Ultima has been hopped-up with a Trinity graphite chassis, Trinity shock towers, Trinity stock motor, Associated shocks, Kyosho rear tires and Pro-Line fronts. Chris says he's usually in the top three in the B-main.



Mike Burleson, of Atlanta, Illinois put this truck together himself. It has eight oil-filled shocks with adjustable springs, eight coats of black paint which was baked on, with five coats of clear on top of that. Mike runs a 4000 mAH battery pack for longer run time, and with all the add-ons, his truck now weighs 10-1/2 pounds!



"If you want a tuff and fun truck the Big Bear is the one to get. I plan on racing my Big Bear in July at RCRC Speedway in Oklahoma City, Oklahoma. Trevor Wiseman, Edmond, Oklahoma."

HO/RC HOBBIES, INC.

New 1989 Indexed RC10 & TRUCK PARTS CATALOG

Save 10 - 40% on 10th Scale Radio Controlled Car Parts

A \$200.00 value for just \$5.95 + \$2.50 shipping and handling

RC-10 (6010 w/ BEARINGS)	\$149.95	FX - 10	\$49.95
RC - 10L (GRAPHITE)	\$149.95	MIDNIGHT PUMPKIN	\$99.95
TQ - 10 (w/ BEARINGS)	\$224.95	BLACK FOOT	\$89.95
YZ - 10 (w/ BEARINGS)	\$249.95	CLOD BUSTER	\$214.95

For these Great Prices just purchase any radio combination (limited quantities available).

HO/RC - Graphite 4WS or 2WS, Front Wheel Drive RC-10 Conversion Kit - \$199.95

HO/RC - Graphite 4WD (4WS or 2WS) Conversion Kit - \$299.95

TO ORDER CALL: (716) 244-4606 to order via VISA or Master Card, Am. Ex., Discover 12 - 8 EST. Mon. - Sun.

HO/RC Hobbies, Inc. • 982 Monroe Ave. • Rochester, New York 14620 All Sales Final
Want Free RC or Splatball Equipment, Trade in Your Old Nintendo Cartridges.

Used Nintendo Cartridges Available From \$19.95

GET THE BEST EQUIPMENT THE FIRST TIME!

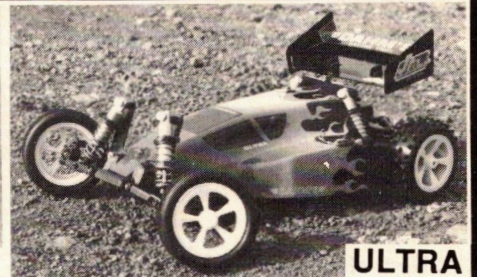
DAHM'S
Racing Bodies



NEW YZ-10 BODY - THE RAZER!



WARRIOR



ULTRA

EXPERIENCE THE EXCITEMENT!™

THE RAZER™ - DAHM'S SHARP NEW RACING BODY FOR THE YOKOMO YZ10, PRO RADIANT, AND OPTIMA-MID STRETCH DESTROYS THE COMPETITION WITH STRIKING AERODYNAMIC STYLING AND HIGHLY EFFECTIVE MOTOR COOLING VENTS. THE RAZER™ IS SHOWN WITH THE NEW HEAVY-DUTY RAZER POWER PAN™ (LEXAN UNDERBODY), INSTANT-TINT™, AND BIG FIN WING™ (BI-LEVEL WING KIT). THE ULTRA™ RACING BODY IS SHOWN ON THE JRX2 WITH THE ULTRA POWER PAN™, INSTANT-TINT™ (WINDOW TINTING FILM), BIG FIN WING™, AND TURBO COOLER™ (HIGHLY EFFECTIVE HEAT SINK). THE ULTRA'S RACE-PROVEN DESIGN ALSO FITS THE OPTIMA, ULTIMA, RC10, AND OPTIMA-MID. THE WARRIOR™ RACING BODY IS SHOWN ON THE RC10 WITH THE WARRIOR™ POWER PAN™, TURBO COOLER™, POWER WING™, INSTANT-TINT™, AND LASERFIRE™ STRIPPING TAPE. THE WARRIOR'S RACE-WINNING DESIGN ALSO FITS THE ULTIMA, OPTIMA, BULLET, TQ10, AND CAT. ASK FOR DAHM'S RACING BODIES AND ACCESSORIES AT YOUR LOCAL HOBBY SHOP OR RACE TRACK. SEND \$1.00 FOR DAHM'S CATALOG AND COLOR DECALS.

DAHM'S RACING BODIES

P.O. BOX 360, DEPT. M, COTATI, CA 94931-0360 USA
(707) 792-1316

DEALER AND DISTRIBUTOR INQUIRES INVITED

DISTRIBUTORS: AKS DIST., BAY CITIES., BRP DIST., ERI, J.D. R/C DIST., R&R HOBBIES DIST., RCS DIST., SPEED/SPORT, TMS PRODUCTS, WKL

Dear Answerman,

I have two questions. First, I haven't got a decent car (in my opinion, a Turbo Hopper isn't a decent car), but I'm looking into buying an FX10. I want to know if there is a better beginner's car than the FX10.

Secondly, my dad wants me to get a road racer because all the real tracks we have are carpet and asphalt. But, in my backyard I have an offroad track and I like it better than the others. I would like your opinion on what kind of car you think I should get.

I buy your magazine off the shelves and plan on getting a subscription as soon as I get a car. I love the magazine. Thanks for your time.

Chris Pallischeck
Penn Yan, New York

A. The Futaba FX10 is a good beginner's car for the money. There are better cars in its category, but most are priced higher than the FX10. I really can't blame your dad for wanting you to get a road racer; as much fun as running around in backyard is, there's nothing quite like racing against other cars and drivers. If you can find an offroad track in your area, I suggest you give it a try. You'll see what I mean.

Dear Answerman,

I have the Pegasus. I was wondering about how to make my car go faster. The motors I want are the Twister or Reedy stock. Which one do you think would be best for my car? My car will only run about five minutes before it runs down. I don't have ball bearings, either. R & A said that would help.

Ben Adams
New Carlisle, Ohio

A. Ben, either of the motors you mentioned would be a fine choice, as both are considerably faster than your Pegasus' original motor. R & A was right! Ball bearings would definitely help extend your car's running time.

Dear Answerman,

I am planning on getting a Turbo Optima Mid SE sometime soon and plan to hop it up to the limit. I was hoping you could give me all of the information available on all the hop-up parts and improvements necessary to make it able to compete with the world-class modifieds, even though I may never get to that level. I must say that you have done an excellent job with this magazine and it is one of the best I've seen.

Darren Casey
Stroudsburg, Pennsylvania
P.S. I found Del for you. He's on page 37, about an inch from the left of the middle of the page.

A. Darren, there are so many aftermarket parts available for the Kyosho Optima Mid that we just can't list everything. However, the Mid SE is loaded with a ton of Option House goodies and I hope you'll take the time to run the car in its stock

form. This way, you'll have a better idea of any improvement you might want to make and which part(s) to get to do the job. Thanks for the info on Del. I heard he was in Bangladesh trying to persuade the locals to open up a chain of McDonald's.

Dear Answerman,

I am very interested in R/C cars. I like the Lunch Box, but less expensive and 4WD. I've looked everywhere. Can you tell me something like a Lunch Box? I'm only 7-1/2.

Patrick Crisafulli
Marietta, Georgia

A. Patrick, 4WD monster trucks tend to be more expensive than the 2WD variety. They are also a bit more complicated to build and operate. I'd strongly suggest that you start out with a 2WD truck like the Lunch Box.

Dear Answerman,

I bought an R/C Thundershot two months ago and the tires are already worn down, even though I've only ran it five times. The width of the back tires is 1-1/4 inch and the front width is 1 inch. I prefer spikes or just regular car tires for concrete driving. One time I was driving it through some water as slow as possible. From then on if I run at top speed it will start clicking, then stop. If I fool around with my transmitter it will just start up and go. What's wrong? And how can I fix it?

James McDonald
Jackson, Missouri

A. James, it certainly sounds like your car is suffering from an electronics-related problem. My advice is to take the car to a hobby shop that specializes in R/C cars and have them repair the car. Another alternative would be to have the authorized factory service center do the work. As for tires, spiked and offroad-type tires should only be run on dirt. I'd suggest a foam-type or treaded rubber tire for running on concrete surfaces.

Dear Answerman,

I'm confused. I have one non-toy R/C car, and plan on getting an R/C plane and the Blackfoot. I'm confused on what if I mess it up while putting the Blackfoot together. Does it have good instructions? And when are you going to do an article on the Blackfoot? I've put together one R/C car, but it was onroad, entirely different from the Blackfoot.

Shawn Smith
Springvale, Maine

P.S. Your mag is the best!

A. Shawn, like all of the Tamiya car kits, the Blackfoot comes with an excellent assembly manual. The kit was engineered for newcomers to R/C cars, so you should have no trouble putting the truck together. However, it may be a good idea to have an experienced R/C car builder help you along. We hope to have a "Foot review in the very near future, so stay tuned!

Dear Answerman,

Your magazine is really GREAT! I learn a

lot from it. Your series on painting really helped someone like me who would rather walk barefoot on shattered glass than paint my Lexan bodies. But, to get to the point. Does Kyosho make dual wheel adapters for their monster trucks? And if so, how much are they? Thanks again for a super magazine!

Jedd Huntley
Verona, Wisconsin

A. To my knowledge, Kyosho doesn't make dual wheel adapters for their monster truck line, and the only dual wheel adapters I've seen on the market have been for the Tamiya monster trucks. However, judging by the rate of growth in the popularity of monster trucks, it should be just a matter of time before somebody makes those adapters.

Dear Answerman,

My father might buy me a Yokomo YZ-10. I would like to know the suggested retail price of the car.

Dan Wicker
Grayson, Georgia

P.S. I made a subscription for the #1 R/C car magazine while I was writing this!

A. Jeez, Dan, what did you do to deserve all that? Not only are you getting a world-class offroad car, but you'll be reading the best R/C car magazine in the world as well! The Yokomo YZ-10 lists for about \$399.00. Congrats!

Dear Answerman,

I am one of your monthly magazine readers and I have some questions for your Answerman:

1. What's the difference between Modified Class and Stock Class?
2. What do I need when I race in Modified Class or Stock Class?
3. Is an SCE 1700 mAh battery needed to be re-matched after race or discharge?

Thaw Yin Lap
Sabah, Malaysia

A. Okay, here are the answers to your questions:

1. The biggest difference between the Stock and Modified classes is the motor requirement. In Stock, you must run a 27-turn armature motor in "stock" form, i.e. the motor cannot be tampered with internally. In Modified, you may run any ROAR-legal motor regardless of the armature wind, and the motor may be taken apart, or "opened," to facilitate any modification.

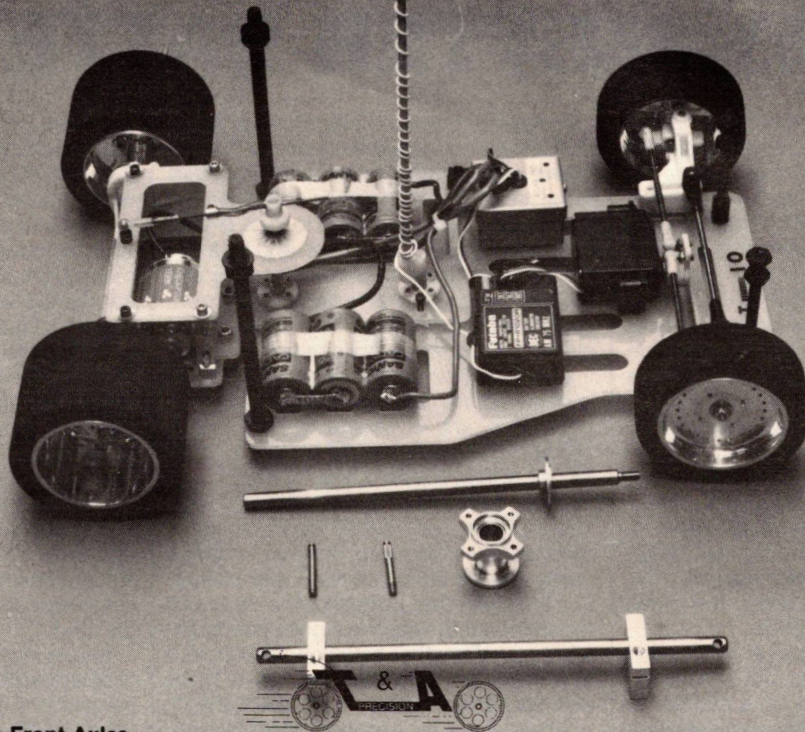
2. In addition to the modified motor, a seven-cell battery pack is also allowed in Modified.

3. Because of its inherent sensitivity, the 1700 SCE batteries should be re-matched after several races. This will ensure top performance from each pack.

TRANSFORMER 10

12L Conversion Kit
From T&A Machining

NEW!
Go 1/10 Scale!



Also available: 1/10 & 1/12
Titanium Axles • Superlight
Aluminum Wheel Adapters • Front Axles

Write for more information

T&A Machining, 2286 Via Burton St., Anaheim, CA 92806 (714) 758-0498

Now you can turn your
1/12-scale car into a hot
1/10 road racer with the
new Transformer 10
Conversion Kit.

PARAGON *Racing*

INTRODUCES...



...THE ANSWER!

Jump Jets!

Finally, the shock dilemma has been solved! Every off-road track has a wide variety of bumps, jumps and moguls and choosing the best-suited shock oil has always been a compromise. No longer! After two years of research the Paragon team has developed the revolutionary Jump Jet, a progressive rate variflow dampening device. As your shock compresses the Jump Jet gradually restricts the flow of oil via a tapered needle. This allows you to glide over small bumps as well as not bottom out while entering, exiting or landing from a large jump. You'll wonder how you ever drove without 'em! Jump Jets will work in Associated, Kyosho and other popular shocks.

For catalog send \$2.00 to **Paragon Racing Products Dept MC**, 690 Industrial Circle South, Shakopee, MN 55379, (612) 496-0091 FAX: (612) 496-0191

Patent Disclosure Document Submitted

TRANSMITTER BATTERIES

Transmitters are also important to the R/C car hobby; an extremely important part, yet probably the single most overlooked electronic component in the chain. In a way this is something of a compliment to the transmitter, it being so reliable that it simply goes on doing its job race after race, not even letting its feelings get hurt by unknowing owners whose attention is directed only at whatever batteries and motors happen to be "in" this week. Well, stick with us, we are about to give some well-deserved attention to the R/C transmitter. Not all of it actually, though the theory and practice of the transmitter has been covered in early columns of this series. We are now going to concentrate on the transmitter batteries, which might not be quite as important to the average driver as the car batteries, but think about it: if the transmitter's batteries go dead, you aren't going to finish the race either!

Incidentally, the kids down at the parking lot will probably always refer to their transmitter as the "controller," and in a manner of speaking, I guess that is not completely incorrect. However, to the serious R/Cer, starting back in the fifties, it has always been "transmitters." I don't see any real need to change that, do you?

On to transmitter batteries, their function, selection, and maintenance. Their function is obvious: to provide the electrical power required by the electronic circuitry within that plastic case. Some of the power stays within the enclosure, doing its work when you manipulate the controls to convert your

mechanical inputs to electronic signals. Some of it is converted into a different kind of power; radio frequency energy, which travels to the receiver carrying your commands. It is a good idea to train yourself to think of your R/C electronics as a system, and so avoid the common habit of always blaming any malfunction on the same component, generally the speed control. Your transmitter is also a part of the system, but only one part.

On the selection of batteries, your choice is often dictated by your original choice of equipment, and of course by your hobby budget. And aren't you glad I chose not to call all of this "the care and feeding of . . .!" Anyway, most entry-type systems, and even some of the more advanced ones, come sans battery of any type. They do include a spring-loaded dry-cell holder, with instructions stating that only alkaline cells are recommended. Which is a good time to remind you of another common misnomer: a single unit is a "cell"; it takes two or more cells connected together to make a "battery."

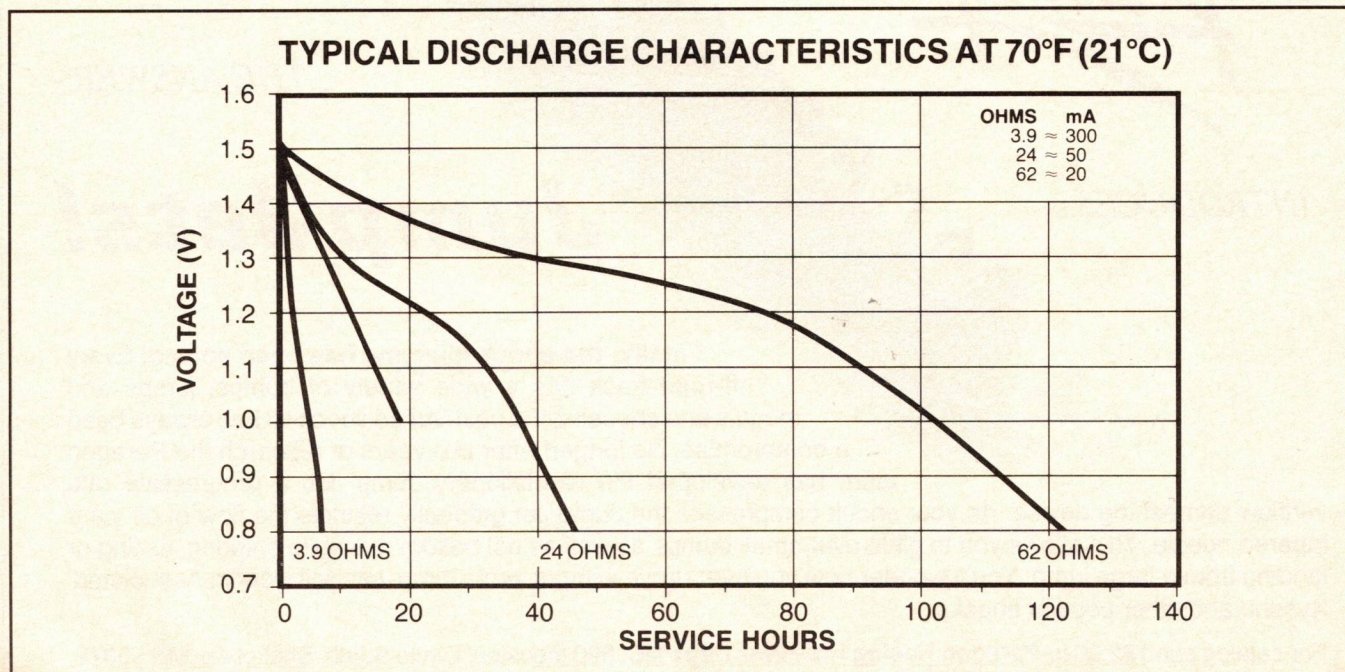
Now I don't recommend those dry-cell holders or dry cells at all, for reasons which will develop as we go. But regardless of them, dry cells are in common use, so let us discuss their pros and cons. In the first place, they have been known to leak! Even the makers admit that, in a roundabout way, generally by offering to replace your flashlight should it be damaged by a leaky cell. For that very reason, it is a good idea to inspect such cells for leakage periodically; at the start of each driving session, when you

are checking everything else, (right?) would be a good time. The leakage will start around the positive cap, and might be just a trace of white powder or fuzz, but which will rapidly spread and eat its way in a manner somewhat resembling those late-night monster movies. If the transmitter is not be used for any period longer than a week, the cells should be removed completely.

The holder itself can be a problem, even the best of them. Those spring contacts are far from the best method of making electrical connections, and have caused the demise of more than a few radio controlled models of all types. It takes only a trace of corrosion on one of the spring contacts to turn an otherwise dependable transmitter into a completely untrustworthy one. Only properly soldered batteries and connections will result in near trouble-free operation in this critical area.

Before we proceed further into the subject of battery selection, let's take a look now at a transmitter's actual power requirements. As you know, there are transmitters and there are transmitters, but except for the exotic PCM equipment, most of them are remarkably similar under the skin. Therefore the power requirements will also be similar. Not exactly alike, mind you, but similar. We chose the Futaba Magnum Jr., as being representative, since it is easily the one seen in greatest numbers.

The Magnum Jr. is one of those that comes equipped with a drop-in dry cell battery holder, which when loaded with eight



The life expectancy of the popular Duracell Alkaline AA cell under various load conditions. The straight line has been added to indicate this cell as used in a Futaba Magnum Jr. transmitter. Please see this month's column for an interpretation of this data.

How does Roger Mears relax?

... off-road—of course!

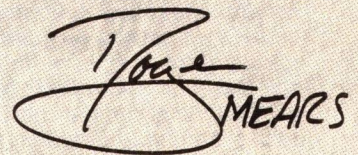
When Roger Mears works or plays off-road he wants the most trouble free equipment available. Like his class 7 mini truck, the Jac-Rabbit is the ultimate in dependability. With its rugged construction, fully independent suspension, and easy starting gasoline powered, 1.2 horsepower engine, the Jac-Rabbit is designed for hours and hours of off-road fun. Its long wheelbase, extra-wide track, and low center of gravity make it handle like a full-size racer. Its 40 mph plus top speed covers acres of rugged desert terrain in a flash. With 3 inches of ground clearance and oil filled coil spring shocks, no obstacle is an obstacle.

A simple pull on the recoil starter, brings Roger's quarter scale radio controlled racer to life. The centrifugal clutch and fully enclosed all steel gear drive transmit the awesome power to the huge rear tires. Quick change gear ratios, 6:1 (standard), 5:1 and 7:1 (optional) let you dial the power to any track or terrain. Fully sealed and greased ball bearings are standard equipment. Specially designed dual disc brakes stop this giant on a dime.

Almost 3 feet long, more than 1½ feet wide and a full one foot high, the Jac-Rabbit looks and acts like the real racer it is. The 22.5 cc Zenoah 2-stroke engine runs an hour on a tank of gas/oil mix. Engine features include fan cooling, solid state magneto ignition, pump carburetor and quiet tone muffler with off road spark arrestor.

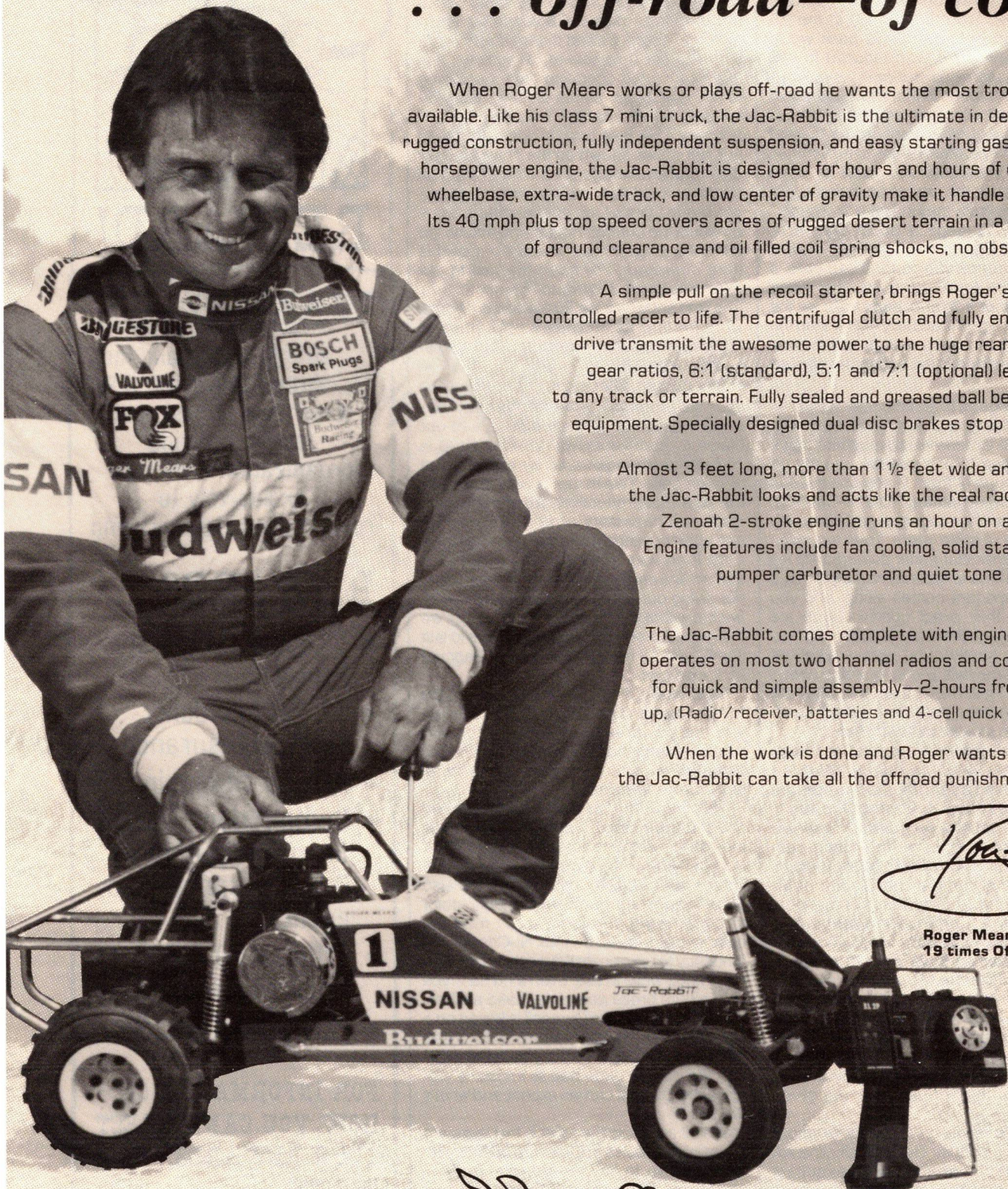
The Jac-Rabbit comes complete with engine and hi-load servo. It operates on most two channel radios and comes pre-assembled for quick and simple assembly—2-hours from the box to start up. (Radio/receiver, batteries and 4-cell quick charger not included.)

When the work is done and Roger wants to unwind, he knows the Jac-Rabbit can take all the offroad punishment he can dish out.



MEARS

Roger Mears,
19 times Off-Road Champ



DEALER INQUIRIES INVITED



Jac-Rabbit

Radio Controlled Off-Road Racer



1400-C EAST SAINT ANDREWS PLACE, SANTA ANA, CA 92705 (714) 546-3045

RADIO WORKSHOP

new cells provides twelve volts. With twelve volts applied, antenna out, the current consumption is 125 milliamps. Since in my opinion, Ni-Cd's are the only way to fly, er, run, I also checked the current drain at the 9.6 volts that an eight-cell Ni-Cd pack would furnish. The drain is then reduced to 100 mils. There is some difference in the radiated power; I'll get around to that shortly. Actually, 9.6 volts is still within the range at which this and a couple of other transmitters I tested give a "GO" indication on the battery meter. These little meters are too small for us to expect much in the way of precision out of them, but generally they indicate "in the red," (the "NO GO") range at about eight volts. Using this as a guide, the meter is then telling us that replacement time for these cells is when they are down to one volt. That is one volt per cell, or a total of eight volts for the battery. This figure is actually higher than the battery manufacturer's ratings, which state .8 volt as the discharged voltage for alkaline cells.

Which brings us to another poor feature—or two—of this type of battery. Good quality alkalines are expensive, so much so that if you are active to any degree, you will go through enough of them in any one season to pay for a set of rechargeable Ni-Cds from which you can then expect to get free racing for a couple of more years. Then too, even when the transmitter meter doesn't quite tell you that it is time to replace your alkalines, if anything important comes along, and you can't judge their exact condition, you are forced to change them for reliability reasons. Incidentally, whether you replace alkalines when the meter tells you to, or a little ahead of time, don't just chuck them out. They still have some useful life in less critical applications such as your transistor radio.

Now, what can we expect out of a fresh set of alkalines in our Magnum Jr.? Well, like most everything else in life, alkaline cells are not all created equal. At least not if we are to believe the manufacturer's claims. There are standards for such things, real firm believable standards established by a body known as ANSI (American National Standards Institute) nationally, and IEG (International Electrotechnical Commission) internationally. Now I'm sure that quite valid information could be obtained if we were to compare different cells under the standards established by these agencies, but we don't get to see the results of such comparisons. What we do get to see turn out to be more claims than anything else, though given enough time and experience we generally turn up what works best for us under our given conditions.

The claims mentioned vary! for example, the extremely popular Duracell alkaline AA cell, one which has earned an excellent reputation for itself, is rated by the maker as having a capacity of 2100 milliamp-hours, further qualified as loaded at 24 ohms down to 0.8 volts at 70 degrees Fahrenheit. That gets us right down there, doesn't it? But for accurate comparisons, all of the factors that affect a test have to be taken into con-

sideration. Refer now to the chart shown, which is furnished by the Duracell company for its MN1500 size AA cell. Notice first that the service hours shown are based on a useful voltage down to 0.8 volt. In our application at which we find it desirable to consider the cell unusable at 1.0 volts we can expect reduced operating time. According to my calculator, at the 24-ohm load, 50 milliamp drain charted, we can expect 8 hours or 17% less time. Incidentally, those current drains shown on the chart are calculated at an average of 1.2 volts. The actual current would vary during the test, as according to Ohm's Law, as the voltage drops so would the current. Notice also that as the current drain decreases, the ratio of available time improves. For example, using the examples given, 300 mils is 15 times 20 mils. The time shown for the 20 mil load is 7 hours, while the time for 300 mils is not 7 times 15 (105) hours, as one might expect, but actually more than 120.

Once again deferring to my trusty calculator, still programmed for Ohm's Law, I deduce that the effective resistance of our Magnum Jr., which draws 125 A (125 mA), is 76.8 ohms when powered by eight 1.5 volt alkaline cells. This in turn breaks down further as a load of effectively 9.6 ohms to each single cell, necessary in this case so that we can apply our findings to this particular chart. That load was added on the chart as a straight line ending at 1.0 volts; my calculator not giving out with one of those wavy lines. But it is still valid info, according to which, we can expect a set of Duracell alkalines to last some 18 to 19 hours in the Futaba Magnum Jr. transmitter.

Incidentally, if you like to psyche out the competition (and who doesn't), tell them that you are powering your transmitter with Alkaline-Manganese Dioxide cells, which is actually the correct complete name for all high quality "alkalines."

That then is the Duracell AA battery when used in the Futaba Magnum Jr. Actually though, this is not the so-called bottom line. If the chart is anywhere close to accurate, the figures my calculator has spit out are also close to accurate; but there is a major factor to consider yet. Alkalines, as do most dry cells, and to a lesser degree, Ni-Cds, have a tendency to rejuvenate themselves if given a rest period while in use. Even a human-type ten-minute break seems to make a difference. The chart from Duracell is based on a continuous discharge cycle, and in R/C use, with its more off-than-on use cycle, the battery life can be expected to increase significantly. So what can we expect, and what's the point?

Well, if anything, the point is that there are too many variables in the entire operation to ever be able to say, or estimate, in days, weeks, months, or in race heats, just how long a set of alkaline cells is going to last you. But, if you can't accept that fact, at least now you know why it isn't available to you with perfect accuracy. The answer is really nickel-cadmium batteries, and we'll cover that next month. •



REWARD!

WANTED . . .

. . . all R/C racers and fans for membership in R.O.A.R., America's largest and fastest growing organization dedicated exclusively to remote control auto racing

REWARDS . . .

- \$1,000,000 Liability Protection
- \$1,000 Accident / Medical Insurance
- REV-UP Magazine
- Competition License for participation in R.O.A.R. sanctioned events
- Official R.O.A.R. rules/regulations
- PLUS MUCH MORE!

FOR INFORMATION ON HOW YOU CAN COLLECT YOUR REWARDS, WRITE . . .

R.O.A.R. Information Center
P.O. Box 1536
Lawrenceville, GA 30246-1536

AWESOME



**When Talking Awesome Performance In RC Drag Racing...
Only One Name Comes To Mind**

MK *Engineering*

M.K. Engineering, builders of the fastest 1/6 scale Top Fuel Funny Cars and Dragsters available on the market today.

Each kit comes precision machined to exacting tolerances with all the nuts, bolts and hardware to give you the thrill and excitement of real Drag Racing.

M.K. Engineering offers such standard features as 4130 Chrome Moly Tube Frame, Billet Aluminum Wheels, Adjustable Clutch, *Fiberglass or **Aluminum Bodies, OPS or Rossi .60 Engine.

Optional accessories also available from M.K. Engineering to make your car really blister the asphalt. • High speed lean-out systems • Racing Carburetors • Button Switch for 3 channel radio • Parachutes • Wheelie Bars • Starters • Run Boxes just to name a few.

So visit your local hobby center for full parts and accessories, and for more information on how to get the fastest 1/6 scale Dragsters and Funny Cars in production today.

2 CHANNEL RADIO REQUIRED/3 CHANNEL RECOMMENDED
***DRAGSTERS ONLY **FUNNY CARS ONLY**

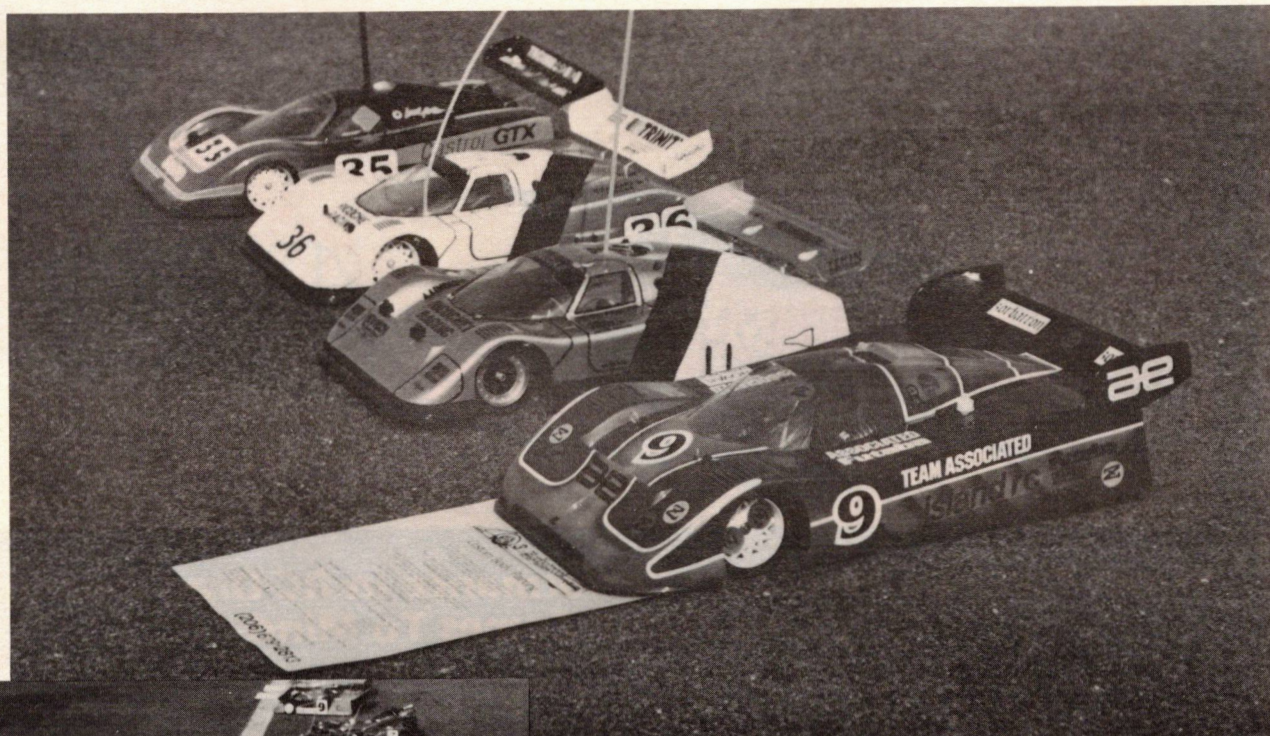
MK
Engineering

**THE FASTEST PRODUCTION RC CARS
IN THE WORLD!**

DEALER INQUIRES WELCOMED

60-U Corbin Avenue, Bay Shore, NY 11706 • 516/242-4641

SCALE BODIES AND THE DELTABOLASSOLAZER



Above, these Jaguar GTP-bodied cars represent what's hot in full-scale auto racing. At left, this concourse lineup at a recent onroad event shows more than a few CanAm-bodied cars. The real CanAm cars have been extinct for many years.

I've always believed that the majority of R/C racers are aspiring full-size race car drivers who find in this wonderful sport of ours an outlet for even the wildest of imaginations. I know you've heard it before, but it truly is "the closest thing to real racing." I also believe that R/C racing should emulate real-life motorsports as much as possible, and that includes promoting races that use replicas of cars that make up the contemporary racing scene.

For years the most popular body styles for road racing have been the Associated Elfin (1/10 scale) and Toj (1/12 scale). I have no problem with the fact that racers find these bodies aerodynamically effective and are therefore *the* bodies to use. But isn't it time we raced other body styles? The real Elfin and Toj disappeared from the racing scene over twelve years ago, and if the cars were still around, the only type of racing they'd be eligible to compete in would be the vintage and historic races. Is this the type of racing we want to emulate?

If you've been watching ESPN, you'd know that NASCAR, IMSA, Formula One, CART, and Trans Am are "what's hot" in auto racing. Picture a group of nitro-burning 1/8-scale cars clad in Indy car bodies screaming

Hobbico™ **DURATRAX™**

Built-In Quality for Road-Grabbing Performance.



Increasing your car's performance doesn't have to cost a lot of money. Start at the bottom: with your tires.

High-quality **DuraTrax** tires, with continuous innovations in tread design, bring you the perfect tire for the best grip, wherever you race, in spike, rib, paddle, slick, and special tread patterns. DuraTrax even offers replacement tires for monster trucks – in designs that open up more roads for you to conquer.

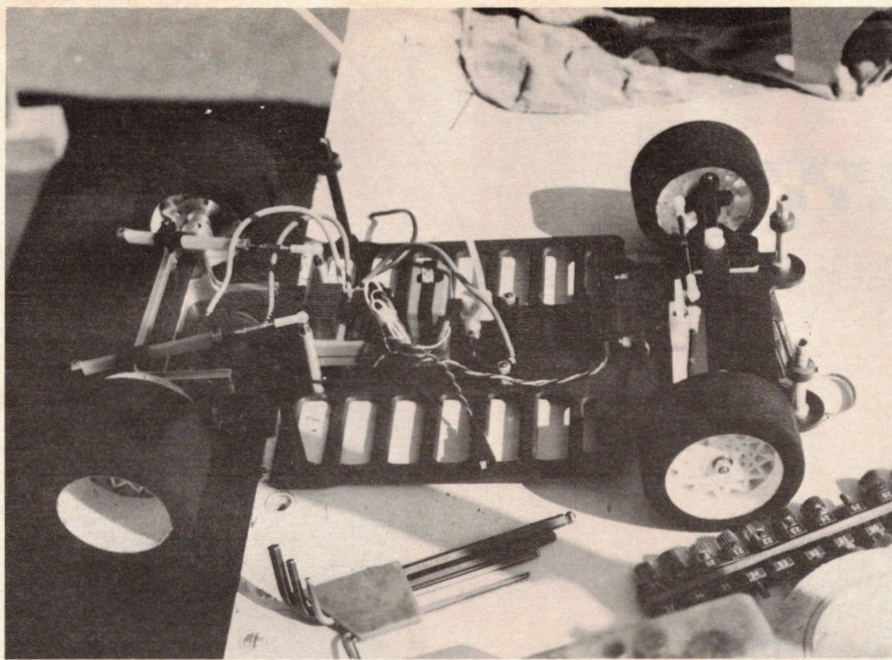
All DuraTrax tires are made of 100% rubber, with exacting wall thickness tolerances of .002 inches to reduce wear. DuraTrax tires fit directly onto all intended cars so no modifications are necessary. For the cost of one pair of tires by other manufacturers, you can buy two or three pairs of DuraTrax tires. . .and be ready to match your car to any racing surface you encounter!

For the best performance at a low price, get the tires engineered to be the best. Get Hobbico DuraTrax.

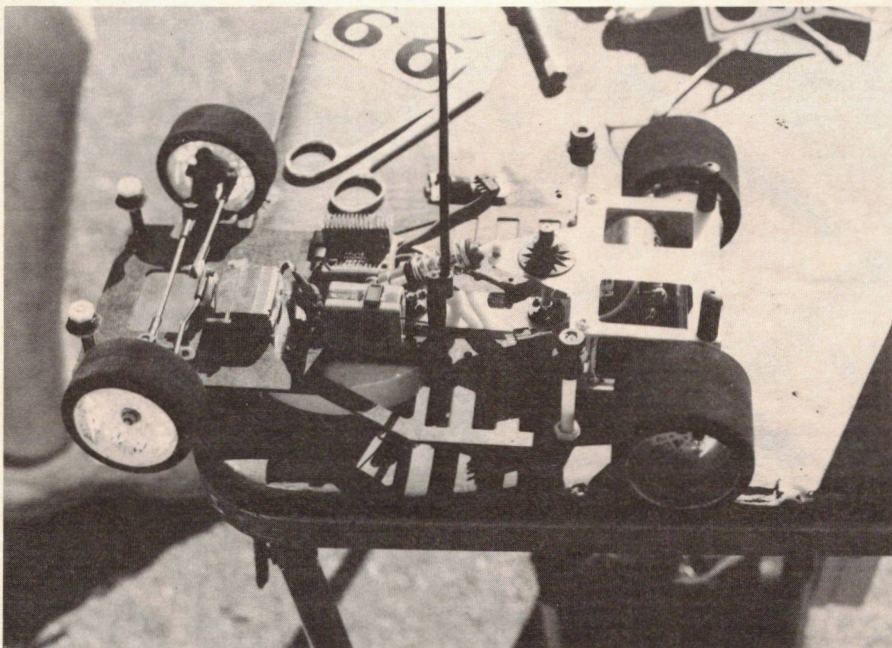
Hobbico™
DURATRAX™

DISTRIBUTED TO LEADING RETAILERS
NATIONWIDE EXCLUSIVELY THROUGH

 **GREAT PLANES™**
MODEL DISTRIBUTORS COMPANY
P.O. BOX 4021, CHAMPAIGN, IL 61820



Roger Moore's latest scratchbuilt racer features a graphite chassis with twelve battery cell slots.



Mark Anderson's 10L clone began life as a CompositeCraft Lynx.

around the track. Or how 'bout this: seven or eight 1/10-scale electric cars in IMSA GTP bodies dicing for positions. Shades of Indy or LeMans? You can't get any more realism, trust me.

The purists may cry foul. "But the cars won't be as fast," they may say. Hey, let's face it, going slow is the "in" thing in real-life motorsports, too. Remember the turbo-charger ban in Formula One and the restrictor plate in NASCAR? Slower doesn't always mean bad racing. In fact, NASCAR has found that slowing down the cars has made the racing much closer and more competitive.

Although it's highly unlikely that the Elfin and Toj domination will come to an end, I hope that we'll see more races like the Futaba Grand Prix, which requires the use of GTP-style bodies, and the Thunderdrome event, which will continue to run a class of

cars using Indy car bodies (Tamiya's Road Wizards). As for me, I'm getting ready to strap myself inside a brand new Jaguar XJR9. Wanna join me?

THE DELTABOLASSOLAZER

Back in the late seventies, when 1/12-scale racing was at the height of its popularity, it seemed like everyone was into scratchbuilding. Even I managed to get in on the fun with one or two feeble attempts. One project that I remember quite well was a car that other members in my old club in Michigan had designed. It was nothing more than a rectangular slab of graphite with Associated RC12E (now there's an old timer!) front and rear end parts bolted on. The car was the essence of simplicity, but a bear to setup and even more difficult to drive. After a couple of frustrating races, I simply gave up on the stupid thing and reverted to my less

innovative but much-better-handling 12E.

You don't run into too many scratchbuilt cars these days. Even in the relatively new category of 1/10 scale onroad, you'd be hard-pressed to find anything but factory-designed race cars. I suppose the availability of so many competitive out-of-the-box cars is the reason why scratchbuilding is not as popular as it once was. Also, given the minimal success of scratchbuilt cars in actual competition it makes one wonder about the race car know-how of the scratchbuilder. Do they really have a better idea, or do they just want to have something different, something with which to stir up a little excitement in the pits?

Well, if something "different" was all Roger Moore wanted, he certainly could have taken a different route than his latest creation. You see, Roger is a skilled machinist as well as a darned good race driver. And he knows a thing or two about R/C cars, which explains why his home brew creations fare rather well on the track.

Roger's newest car is a 1/10 onroad racer that might best be designated the Deltabolassolazer. As you may have guessed, it's a composite of what Roger deems as the best features of the current offerings in 1/10 onroad. The rear end of the car consists of a Delta power pod, which has been extensively lightened, and a Lazer Lite-like silicone-tube damping system. Light, simple, and no more shock-oil leak, sez Roger. The rear suspension is borrowed from the BoLink Eliminator series, complete with the mini radio tray over the T-bar. Up front, Associated 12L arms (the new 3-point arms) are used along with a graphite cross brace. Everything's mounted on Roger's own graphite chassis, which allows him to strap on up to twelve battery cells! Sounds like the ultimate setup for the R/C Thunderdrome Insane Run, doesn't it?

Roger isn't the only scratchbuilder in my club. Another guy who does it on his own, albeit on a much smaller scale, is Mark Anderson. Mark is first and foremost an R/C boat racer. And unlike Roger Moore, who has the tool and resources to build a car from the ground up, Mark's machining ability is limited to what he can fabricate using his old hobby mill and drill press. But then again, his objectives aren't that ambitious. All he wants, he says, is a good-handling car. And if he isn't happy with his store-bought car, he'll just modify it until it does what he wants it to.

True to his theory, Mark's present car is a heavily modified CompositeCraft Lynx. He decided to build the car after his sponsor, Pacific Northwest Scale Hobbies, told him that the Associated 10L he wanted wouldn't be available for at least a few months. Mark took the specifications of a 10L prototype he saw at a club race and adapted the design to his CC Lynx. As you can see in the photograph, all that's been retained from the original car is the chassis plate and the rear motor/axle blocks. The rest of the car has been "associated," if you will.

Although Mark's car is merely a substitute for the real thing, I can honestly say that the car handles extremely well. In fact, out of the many CompositeCraft-based cars in our club, Mark's is probably the best handling. Not bad for a boat guy. . . .

Intro- ducing

ONE WHEEL DRIVE «GAS»

OFFERED AT
THE INSIDE
EDGE OF
\$1,000

new

EURO-RACER
FEATURES
INCLUDED

● [BLUEPRINTED]
OPS-MONDIAL 3.5CC
ENGINE WITH FLY-
WHEEL INBOARD
OF CLUTCH

● DWA BLOCK
STARTER AND
WORK STAND

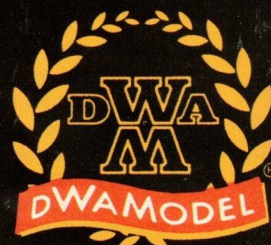
● STEERING KIT
[SUPERSQUALO]
"PUT THIS ONE
ON THE TRACK,
AND IT WILL
EAT ANYTHING
IN SIGHT,
EVEN ITS
OWN KIND."

R/C

1/4 SCALE

SUITABILITY REMINDER
This model is high-powered,
and design-stressed for
superbike competition. It is
not for the inexperienced
builder.

As the first
Americans ever
to compete in the
CHAMPIONATO EUROPEO,
we are so driven by the Italian
made DWA COMMANDO, we have
agreed to importing the racebike
to the US.



INQUIRE WITH US area 407 628-1610
including

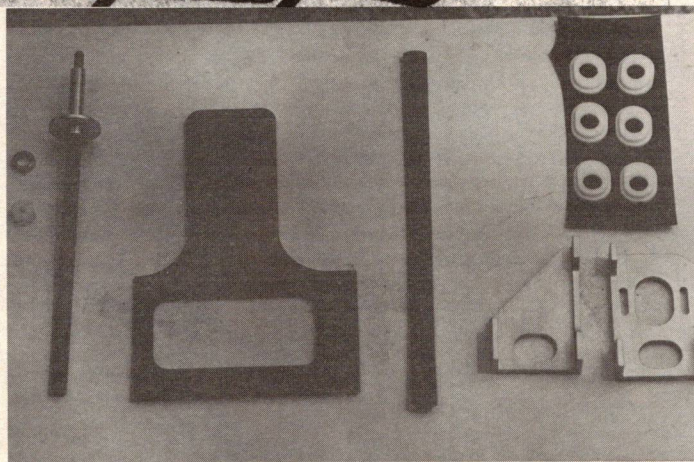
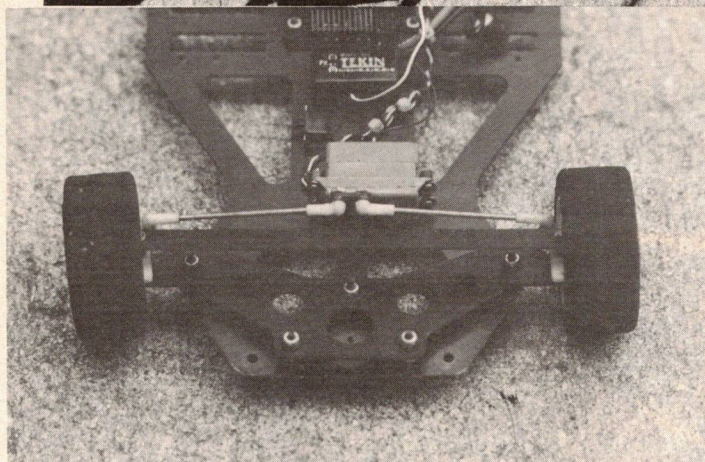
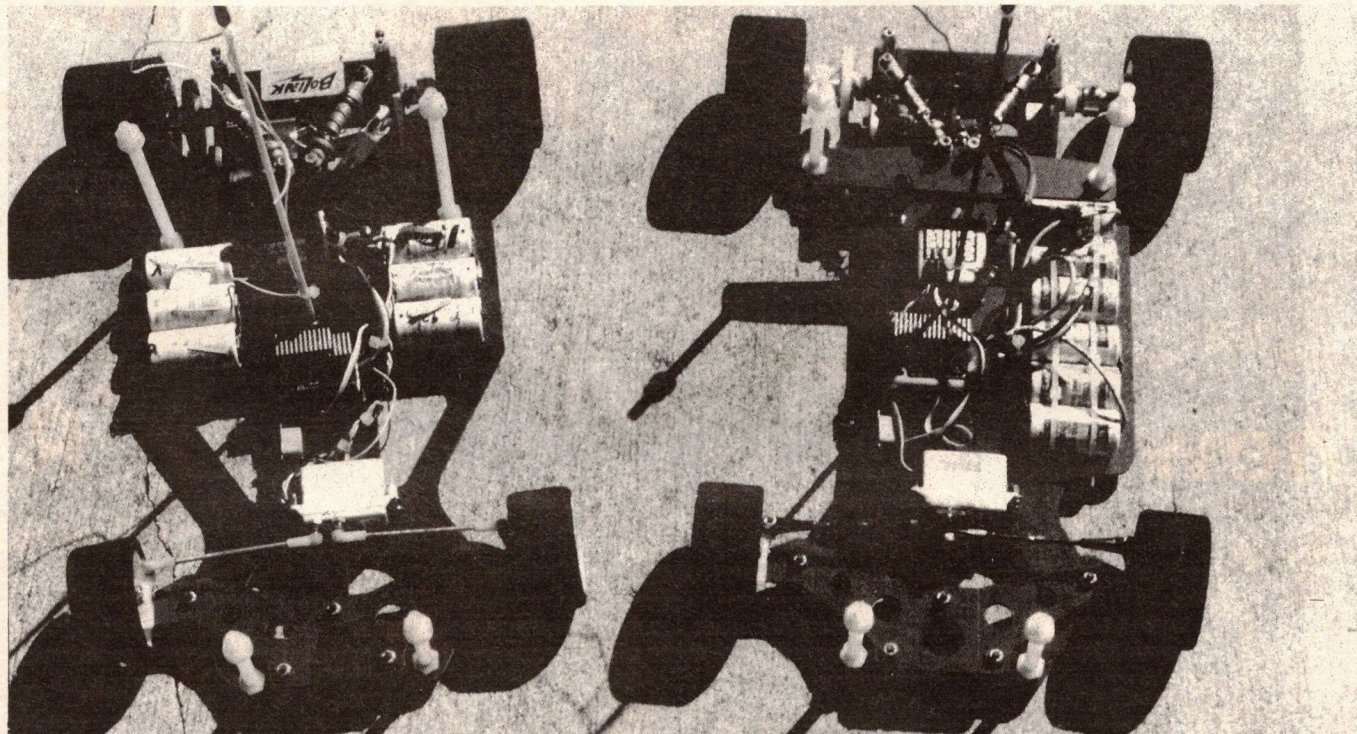
parts ~ service

LIVE PERFORMANCE

235 WEST PARK
WINTER PARK, FL 32789

Photo courtesy of LIVE Performance

PARTS FOR THE ELIMINATOR



As the summer racing season gets into full swing, onroad racing is competing head-to-head with the offroad racers. In the Southeast, concrete ovals are the current thing, and the addition of new tracks are making it easier to find places to race within a reasonable traveling distance. While the 1/10-scale cars seem to be the scale of choice, the 1/12-scale racers are starting to show up at the local oval tracks as well. Most tracks have classes for the offroad cars to run on the concrete ovals. There are also new aftermarket parts available to improve the performance and appearance of your onroad racer.

One of the better onroad cars is the BoLink Eliminator 10. And they keep producing parts to improve the performance of an already good racer. One of the biggest new parts being offered is the 1/10-scale "LTO" (left turn only) chassis. Other new additions include a graphite "T" plate, graphite kingpin brace, adjustable ride height motor pod, a new graphite differential, and two new 1/10-scale bodies, the 1989 Thunderbird and the LeBaron. The LeBaron is dressed up with a sheet of BoLink's NASCAR decals.

The LTO is shown in comparison with the standard Eliminator 10. You can see in the photo that the LTO has all six of the batteries

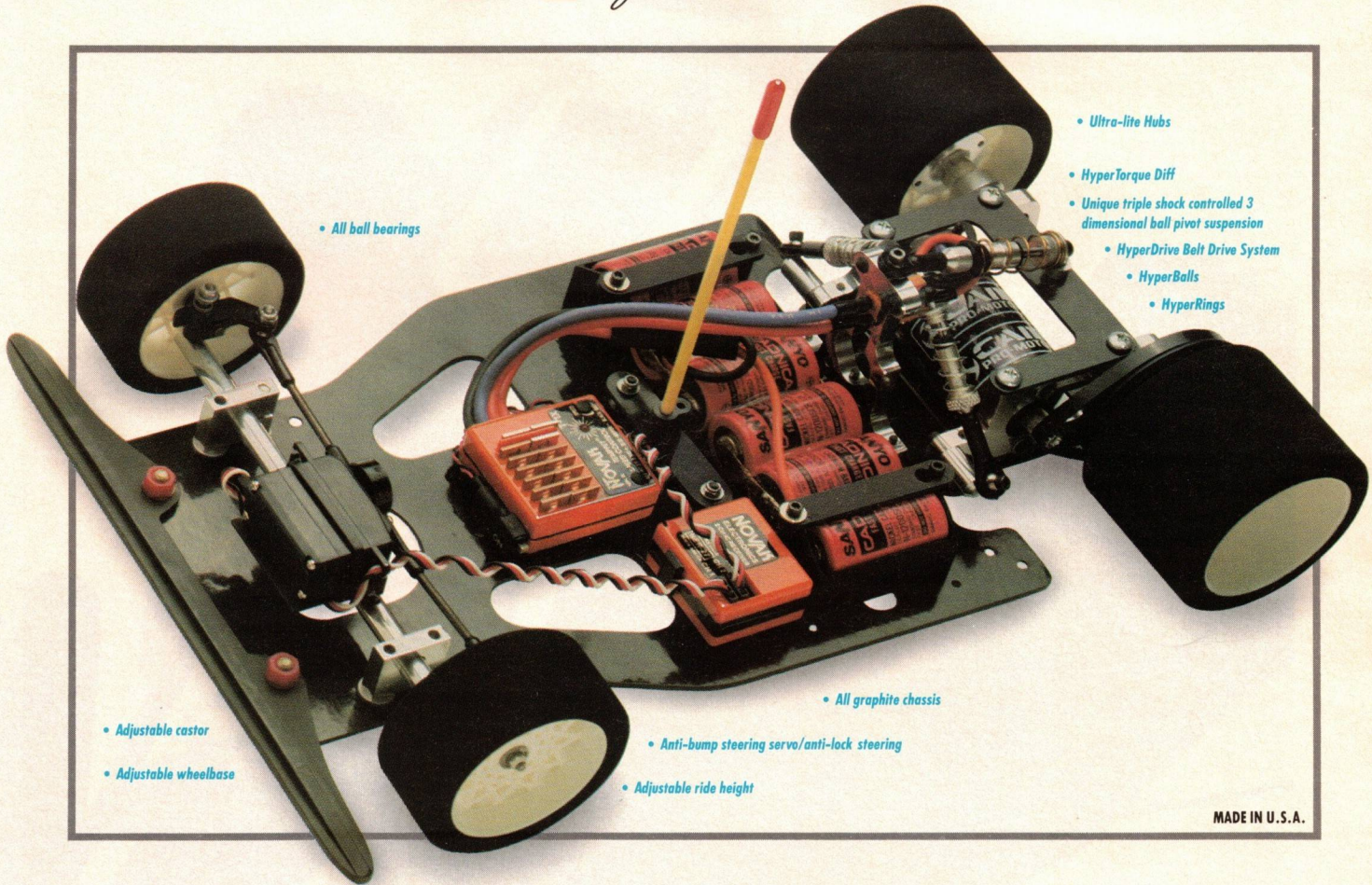
mounted on the left to offset the weight of the car for oval races. The front end of the cars are exactly the same. A new rear body mounting system is also used on the LTO. In fact since the picture was taken, I have installed this same type off rear body mounting system on my standard Eliminator 10. The LTO gives you a car maximized for the oval tracks while the standard Eliminator 10 provides a car for either the ovals or road courses. The LTO chassis uses the same motor pod as the standard Eliminator. The weight bias of the LTO can be further dialed-

Continued on page 72

LAKE WHIPPOORWILL INTERNATIONAL SPEEDWAY CHAMPION!

Hyper 10™

By G.S. Industries



• All ball bearings

- Ultra-lite Hubs
- HyperTorque Diff
- Unique triple shock controlled 3 dimensional ball pivot suspension
- HyperDrive Belt Drive System
- HyperBalls
- HyperRings

- Adjustable castor
- Adjustable wheelbase

- All graphite chassis
- Anti-bump steering servo/anti-lock steering
- Adjustable ride height

MADE IN U.S.A.

The most technically advanced 10th scale race car in the world!

Hyper 10. The race car that's stunning the world with one record breaking performance after another.

- Car comes complete as an exact duplicate of the Ralph Burch winning ride.
- No options to buy. Everything included less body and electrics.
- Makes 42 oz. race weight minimum without modification.

Available Factory Direct. Also:

DISTRIBUTED TO LEADING RETAILERS
NATIONWIDE EXCLUSIVELY THROUGH



Send \$3 for our new Hyperdrive Racing Systems catalogue. MC and VISA accepted.



Hyperdrive™
Belt Drive Systems

3210 Howard Nickell Road • Fayetteville, Arkansas 72703 • Phone (501) 444-8200 • FAX (501) 444-8402





Team Losi's first entry in the dirt wars is headed for the Winner's Circle

BY VERNON LEWIS

The long-awaited JR-X2 from Team Losi is here. The Team Losi crew have been racing and winning with the prototype(s) of this car for well over two years, making the JR-X2 a hot commodity even before it was on sale!

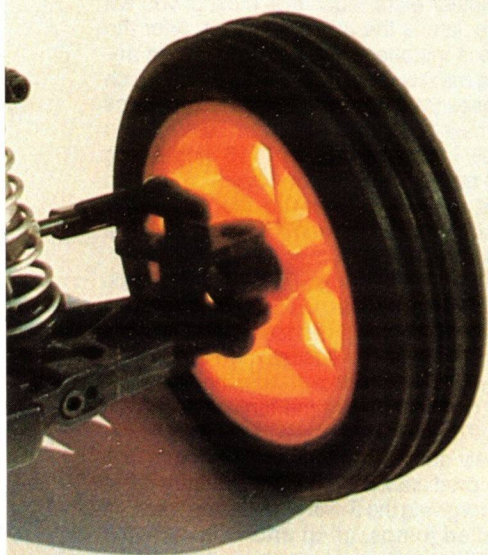
Although Team Losi is well-known for their high-quality modified racing motors, machine cut gears, and other racing accessories, this is their first effort in manufacturing a complete kit. The JR-X2 comes factory sealed in clear plastic to minimize missing parts. Upon opening the box you are greeted by a neatly packed kit with sub-packaged component bags alphabetically marked. An extremely comprehensive and easy to follow instruction booklet that calls out each bag to open for each area of assembly should be read thoroughly before beginning. Bag (A) is the basic chassis components, bag (B) is the transmission bag, and so on until completion of your JR-X2.

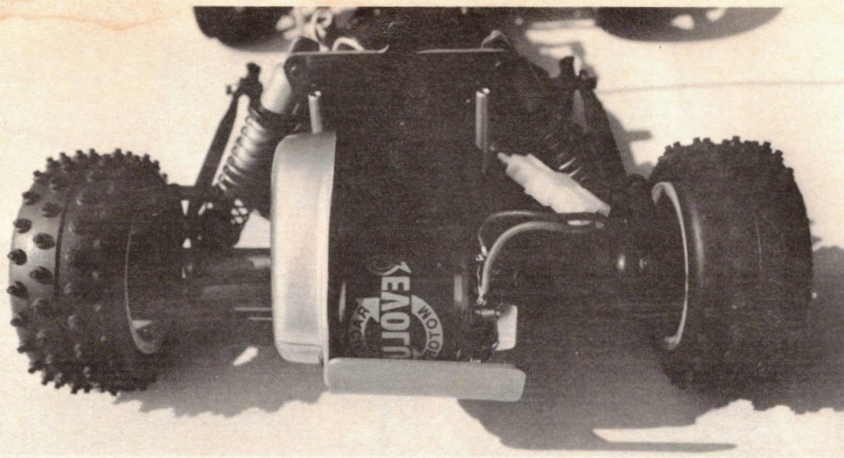
Each component bag, (A through G), builds in sequence. Each part needed to complete each segment of assembly is in-

cluded in its own bag. This makes assembly easier and eliminates the possibility of confusion over what length bolts or parts to use.

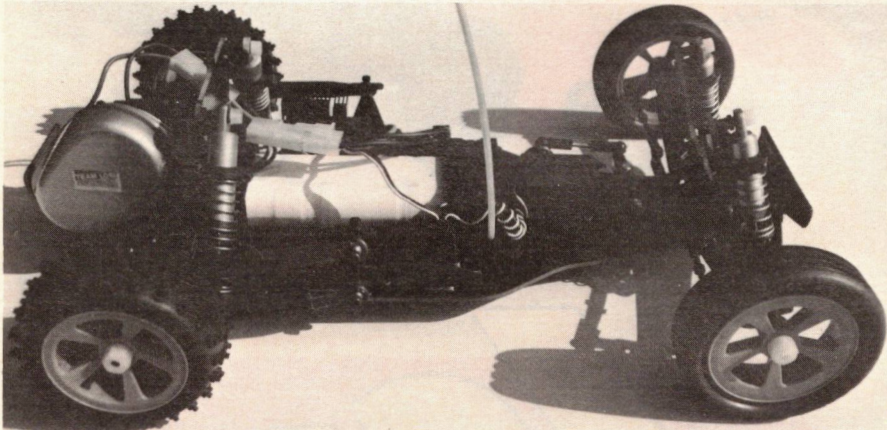
Bag (A) is the basic chassis components. This includes both the front and rear bulkhead/shock mounts, the side link mounts and the battery cup. The battery cup offers the unique feature of two self-locking stays and a hinged top/cover that eliminates the need for straps or clips. I was impressed with the high-tech graphite chassis and the quality anodized aluminum screws used in many places. (Pay special attention to the length screw used for each area in this section.)

Bag (B) was opened with fear in my heart as this is the dreaded transmission bag! This is usually where you run into problems and time-consuming head scratching as you try to figure out where you went wrong. Boy was I surprised! The parts all fit nicely. There was no pounding or pressing. (Be careful inserting the bearings as they will slip in easy if they are aligned straight with the holes.) The toughest part was stacking the small, coned washers in the proper sequence and wiping





The JR-X2's rear suspension uses five individual links, two trailing, two lower side, and one adjustable upper side/camber links. This setup offers strength and flexibility, as well as ample travel without binding.



The stick-type battery pack sits longitudinally in the chassis, resulting in a narrower chassis with good balance and low center of gravity.

the grease off my hands. When finished, I could not believe how free and smooth the transmission felt. The double row of 48-pitch molded gears meshed perfectly with no tight spots or noise. The assembly of the universals was also easier than anticipated.

“Before running my JR-X2 I read the tuning tips by Gil Losi Jr., designer of the car.”

The JR-X2 does not use “dog bone”-type driveshafts but rather a splined sliding shaft with full U-joints at either end. After finishing the first one, the rest went quite quickly. The Team Losi wrench included in the kit made installing the finished subassemblies a snap.

Bag (C) was the rear suspension which is one of the really unique features of the JR-X2. There are five individual links, two trailing, two lower side and one adjustable upper side/camber link. All links are ball- or shaft-mounted for smooth movement. It appears this configuration offers extreme strength and flexibility as well as a tremendous amount of travel without binding.

Upon the final assembly of this rear suspension I noticed another unexpected

touch. The adjustable upper rear camber/link was a left/right threaded turnbuckle unit. This was later found to be true of all the adjustable linkages! I found the easiest way to thread the heavy-duty rod ends on the shafts was to just start them, snap them into their already installed balls and use the wrench included in the kit to “adjust” them to length.

Bag (E) is the shock bag, probably the second most worrisome part to assemble on any car. The shocks used on the JR-X2 are incredibly simple. Instead of a bunch of O-rings, spacers, tiny washers, and cups, the folks at Team Losi have pre-assembled all the necessary parts into a simple factory-welded cartridge. This cartridge also houses a spring and piston that allows for the volume compensation as the piston and the shock shaft move into the oil-filled body of the shock. At first I noticed a bit of leakage at the shaft but this soon subsided. In a subsequent conversation with Gary Kyes at Team Losi, I found this was due to overfilling. It seems that excess shock fluid bleeds out through the compensation chamber. I was also advised to make sure that the cartridge was tightened up extra tight, then backed off and tightened normally. This allows the two mating surfaces to seat correctly and minimizes any leakage around the threads.

Bag (F) was the wheels and tires. Both front and rear tires are real rubber racing tires and as I found out later are excellent for most offroad race tracks. The wheels are

bright orange in color. Deep grooves locate the tire on the rim, and then it is glued in place. I had been warned about the front wheels cracking around the bearings. The Team Losi customer service man explained that if I washed out the front bearings and re-oiled them I wouldn't have a problem. He was right. I was also told that this would not have to be done in future kits.

Bag (G) is the wing and items needed for final assembly. I was really intrigued with the neat wing mounts. By turning them 90 degrees you can adjust the wing fore and aft then lock it in position by rotating the locks back to their original position. Another nice touch is the pre-bent wing wire. I can't tell you how much wire and time I have wasted trying to bend a wing wire. It was little touches like this that made assembly enjoyable.

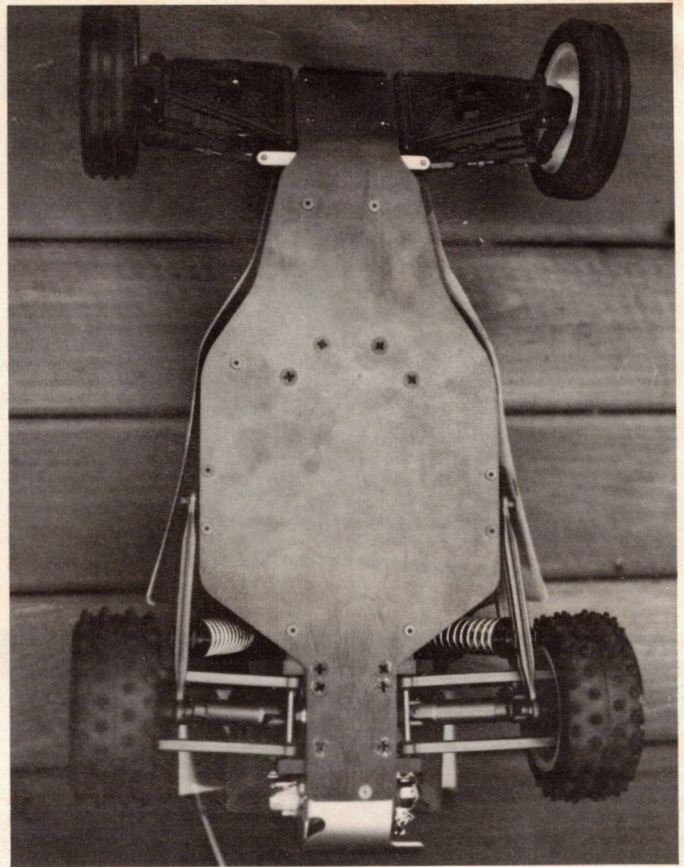
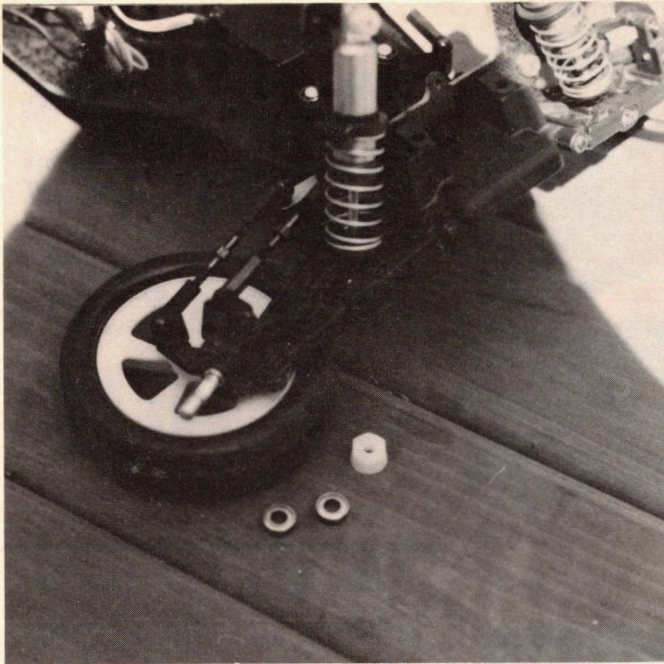
The JR-X2 body is made of clear lexan which is standard in R/C racing. I used Pactra lexan paint to finish mine. (Be sure to look at the *How To Paint* articles by Mike Ogle for tips that will put you ahead of the concours competition at your track.) The radio installation is very simple. The steering servo and receiver mount with double-sided sticky tape included in the kit. I used a Novak NER-2X receiver one of the smallest on the market today and, with Bob Novak's experience behind it, one of the best. I also used a Novak NESC-T4 speed control and a Novak NES-1A servo with one of the fastest transit times of any servo. A motor is not included in the kit so I picked up a 05 stock Team Losi motor. The extremely small Novak receiver speed control and servo made radio installation a snap as was the adjustment of the speed control.

Another extra touch that most of you will appreciate is the antenna mount. After the radio is installed you can remove the antenna mast by snapping a plastic ring which releases the mast from its base. This keeps the mast from getting bent or destroyed in transit. I used a piece of 1/16 inch spring steel and some Hot Stuff Super T (CA) and glued the antenna wire to the end of the spring steel and pushed it through the tube. Works like a charm.

Before running my JR-X2 I once again read the comprehensive section on tuning tips by Gil Losi Jr., the designer of the car.

Using the handy illustrations, I made several adjustments prior to running that I am sure helped achieve the fantastic results I saw. The car accelerated straight and extremely quick. The cornering was solid and very predictable. I was really surprised at how forgiving the 5-link suspension was as it handled jumps, chop and varying track conditions with ease. In short, it made me look good.

The bottom line is the JR-X2 is a complete package for an out of the box race car. The quality is excellent every thing is drilled correctly. All the parts are there. The parts are bagged and lettered to coincide with each section of the instructions which makes for simpler assembly and fewer lost parts. The instructions are great and the helpful technical/setup information from Gil Losi Jr., one of the most experienced and winning racers today, make it hard to beat. Now if I were the only racer out there with one I could really clean up!



Above, the steering mechanism uses a pivot-supported aluminum rack that minimizes bump steer, making the car track well on uneven terrain. At right, the smooth underbelly of the JR-X2 is clean and unhindered. Below, the JR-X2 during a shakedown run after assembly. The ground clearance is a real plus on the JR-X2.

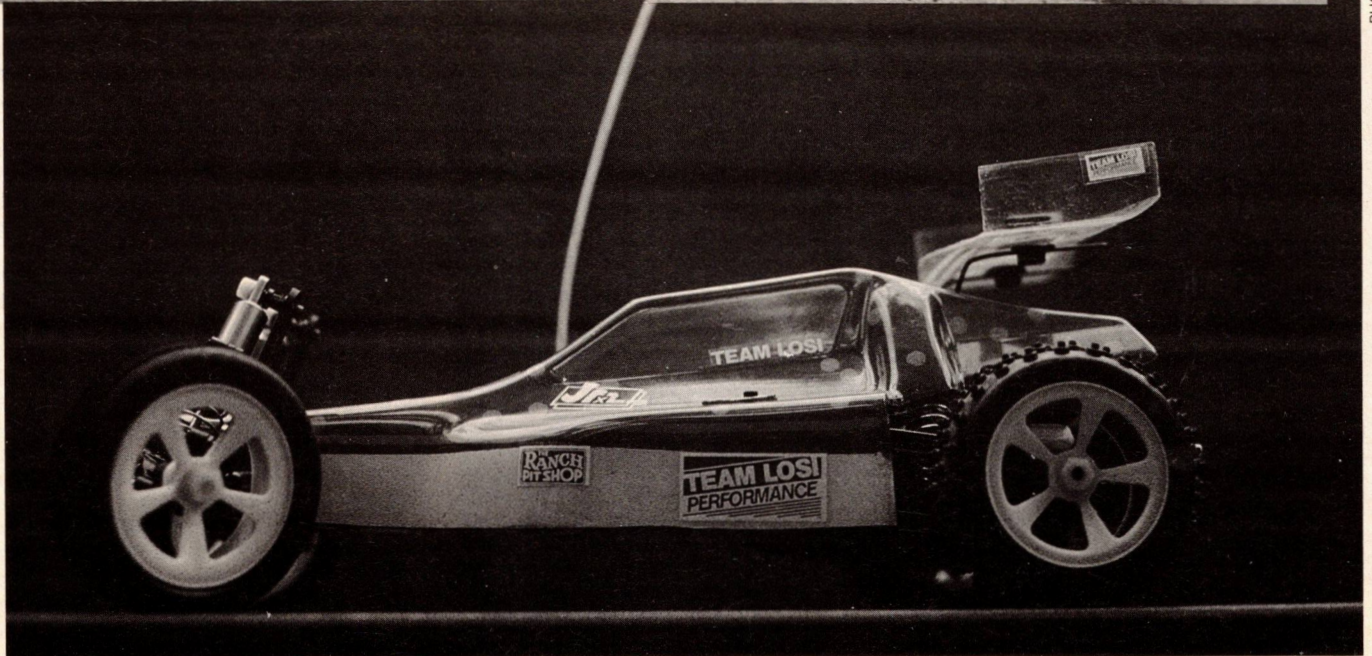
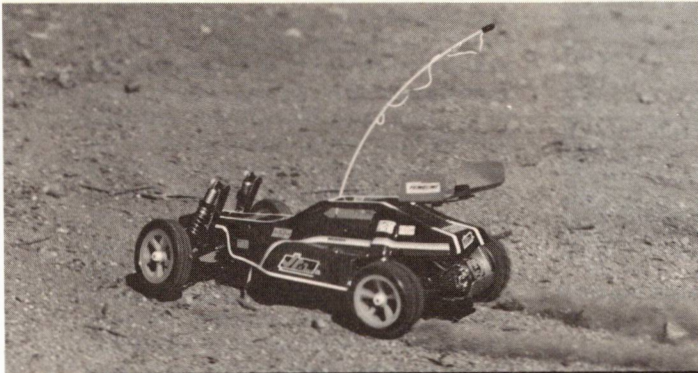


PHOTO: JERRY ADLER

R/C MODEL CARS QSAC WESTERN REGION CHAMPIONSHIPS

The QSAC series moves to El Cajon, California for a weekend of racing action

BY JOHN RAHE

The beautiful and well-organized Cajon R/C Raceway, in El Cajon, California, was the site of the QSAC Western Region Championship for quarter-scale cars held on the Fourth of July weekend. An entry list of nearly 70 cars in three classes included such heavy hitters as Jay Halsey, Gary Kyes, Chris Rahe, Steve Cheek, and Mike Schmidt from Texas, just to name a few. Cars and drivers came from everywhere for this one; Texas, Arizona, Nevada, Virginia, Vancouver, British Columbia, and of course, California. The day of the race was Sunday, with open practice Saturday, but racers started hitting the track Thursday trying to get the jump on their competition. The track and facility were in excellent condition, thanks to Norm Sullivan and crew, who completely repainted the whole place knowing that he would have "out-of-towners" to impress. Norm wanted to put his best foot forward and it showed. Everyone thoroughly enjoyed this great quarter-scale complex and the hospitality of the people who operate it. I overheard a number of out-of-state drivers saying, "Now, why can't we have a track like this?" I say, you can but it takes a lot of work.

Saturday found everyone trying to get in some practice time, trying to find the right combination for Sunday's events. The frequency pins were at a premium since most of the cars were operating on 27 band but all the drivers were courteous in letting the next fellow have his turn. The fast guys on Saturday appeared to be Lance Love with his brand new Quickdraw car, and Dale Smith (WCM) in the sprint class. In the supermodifieds, Chris Rahe and Bill Gilmore (Raco Super II's), Dale Smith and Mike Schmidt with WCM Supers, were all lapping in the very low, and sub-seven second area. The track record was 7.13. Chris Rahe, Ted



Gary Kyes drove his Alves sprint car to a first-place showing in the A-main.

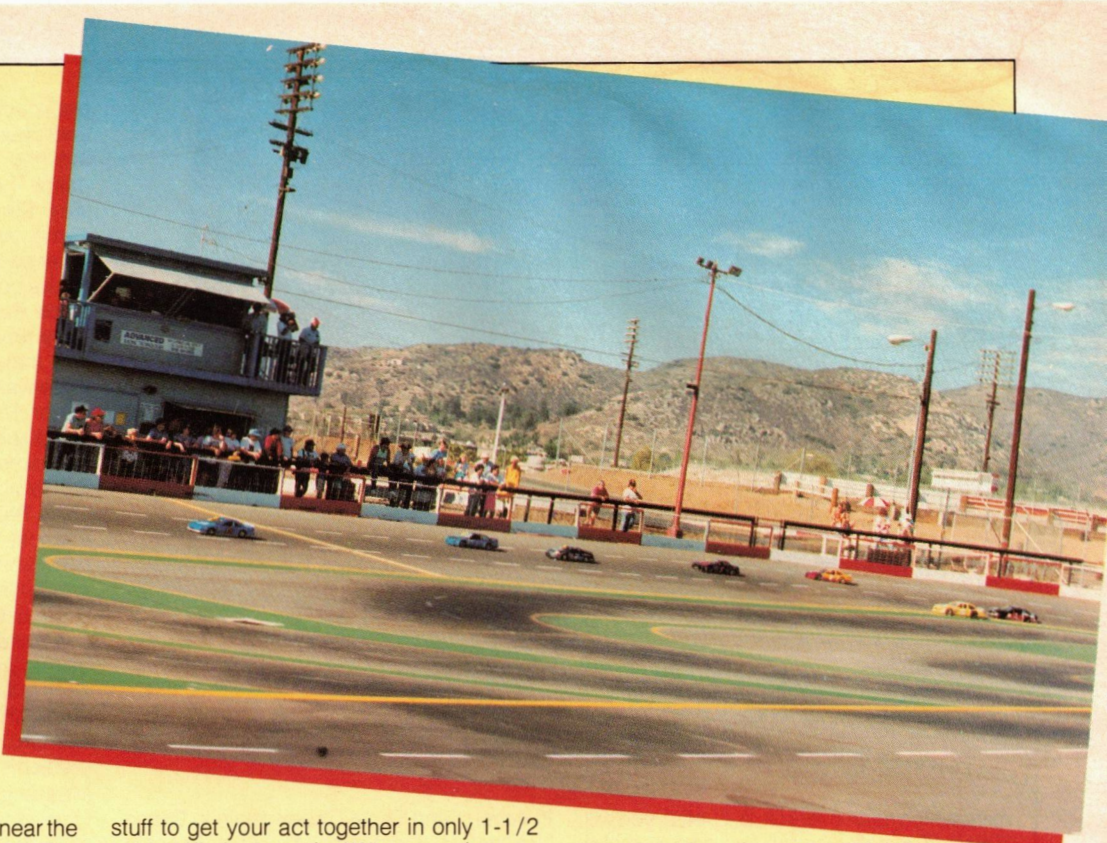


The Raco house car of Chris Rahe was competitive all weekend, but carburetor woes took him out of the 200-lapper.



Dale Smith shattered the track record with a 6.812, but finished second to Kyes in the sprint feature.

El Cajon R/C Raceway is no doubt the best facility for quarter-scale racing in the country. There's 1/10, 1/8, and 1/12 racing here too. In the background to the right sits the El Cajon Speedway, site of full-size racing action throughout the summer.



McKay, and most of the others were near the Grand National track record as well. The Grand National Class at this track is extremely competitive and it not uncommon to have the entire A-main qualify within a few tenths of a second.

Jay Halsey was having some handling problems with his Raco Grand National Saturday, but we all knew come Sunday he would somehow have them worked out and be going toward the front. The traction this weekend was unusually good and the track was putting the B & L, Racecraft, and Diamond Back tires to the supreme test. Steve and Carroll Cheek, from WCM, were amazed at the "bite" even in the heat of the day.

This race saw a number of new cars and innovations. Raco's new supermodified II's were everywhere. The Quickdraw Sprint car officially made its debut with their factory group present. Lexan Grand National bodies from B & L Racing products were beautifully painted (inside), WCM's new supermodified body came out, and Diamond Back tires officially came to the West Coast. The influx of new cars and after market items was impressive and is testimony that quarter scale is strong and getting stronger.

Saturday night, at the Cajon Raceway, is quite an experience. You have to be there to believe it. Since many of the racers bring their campers and motor homes and stay right at the track, you virtually race, or bench race, all night. The track usually is open after dark when Norm turns on the lights and barbecues are cooking up some great stuff. Jim Halsey's steaks were the thickest I've ever seen! Even the racers who leave the track after practice is over usually come back later to review the day's activities at least one more time.

Sunday morning was at fever pitch as there was only 1-1/2 hours of practice for 70 cars. The Alves Manufacturing crew showed up with Gary Kyes and Joe Alves. It must be nice, Joe, to have enough confidence in your

stuff to get your act together in only 1-1/2 hours of limited practice! When practice was over the intensity was at an all time high. Now it was time to get serious for qualifying! The Grand National cars were up first and, sure enough, Jay and Jim Halsey had pulled off their expected miracle. Jay's qualifying time of 7.804 put him in fifth in the field, a tick off of fast qualifiers Chris Rahe, and Eric Greco, who had identical times of 7.531. Dale Smith was the fastest sprint car at 6.812, with Gary Kyes second at 6.976—both breaking the track record. Mike Schmidt's 6.921, and Chris Rahe's 7.031 also broke the track record in the supers. Mike's 6.921 is the first super to break the seven-second barrier at El Cajon. Lance Love's 7.181 was just .05 seconds off the record of 7.13 in his first attempt at supermodifieds.

For those of you who don't know how

quarter-scale racing works, I'll briefly explain. But one thing is for sure, it's not easy making an A-main. The system is get up to make you work for everything you get. Just because you had a good qualifying doesn't mean you're in the big race, it only shows the other guys how fast (or not fast) you are.

Qualifying is similar to what you've seen at any full-size car race; a single car on the clock for the fastest single-lap elapsed time. Each car is allowed four laps on the clock. The fastest lap of the four is your time for the day. This time then determines your starting position in either one or two rounds of heat races. In the case of two rounds, as in El Cajon, the starting order is inverted for the second round. The combined finishes for the heat races, usually 20-30 laps long, deter-



Norm Sullivan, owner of the El Cajon track, is also the proud owner of this beautiful Ford Motorcraft NASCAR racer. The body is a highly flexible fiberglass shell fitted over a Raco chassis.



Lance Love's new Quickdraw sprint car ran well all weekend but failed to make the show on Sunday.

mine which main event (A, B, C, etc.), you will start in. Typically, the top two cars from the heats go directly to the A-main, the second two to the B, etc. If you screw up in your heat races you can still bump up out of the lower mains into the A-main—if you run well and Lady Luck is on your side! Once into the mains, the four-lap qualifying time again determines your starting spot. It all sounds complicated but works very well.

As I say, you have to work for everything you get in quarter scale. In the heat races luck plays a big role and the El Cajon event was no different. On the good luck side, Gary Kyes and Lance Love (sprint cars), Chris Rahe and Bill Gilmore (supermodified), and Jay Halsey and Gary Kyes (Grand Nationals) among others were all smiles with direct transfers to the A-mains. The luck was not so good for Dale Smith and Gary Delara (with the Edelbrock house car) in the sprints; Jay Halsey, Steve Cheek, and Mike Schmidt

in supers; and Steve Cheek again in Grand National, as direct transfers just were not in the cards. After their hard work, good driving and, of course luck, most of these guys did get in. Notable fast guys that didn't "make the show" were Mike Schmidt and Steve Cheek in Supers, Jim Brophy in Sprints and a host of good Grand National drivers didn't make the cut, including Eric Greco.

In the 30-lap Sprint Car A-Main, it was Gary Kyes leading most of the way for the win, but Dale Smith and Jerry Epperson pressed him hard after coming out of the B-main and the back of the field. In the supermodifieds, it was Chris Rahe leading wire-to-wire with Dale Smith driving from the back to second in the only non-Raco car and Eric Greco, a hot West Coast driver, driving to third.

The Grand National Main Event was now set to go 200 full-out laps *with pit stops*. It used to be, in a race this long, a driver kind of

backpedaled a little, stayed out of trouble and could expect a good finish. Not so on this day! These guys ran a 200-lap trophy dash! They were all driving hard the whole way. Steve Cheek and Brian Davey (who came out of the C-main) leaned on each other so much that their cars swapped paint colors completely. At the start, it looked like Chris Rahe, Jay Halsey, and Ted McKay were running pretty equal but Steve Cheek was making a charge to the front and Gary Kyes was making headway despite a "lazy" motor. Mike Lonnecker was also having a good race with his Trackside race cars sponsored Raco. Ted McKay had led the first few laps till a bobble let Jay Halsey and Chris Rahe by. Jay led for the better part of the next 100 laps with Chris hanging on his rear bumper. When a yellow came out around 90 laps, Chris ducked into the pits for a much needed splash of gas. Halsey waited one extra lap to come in and paid the price as the green came on before he could get back out, allowing Rahe to take the lead. The lead didn't change for the next 30 or so laps with Chris Rahe's car slowed with carburetor problems, giving the lead back to Jay Halsey. Meanwhile, Steve Cheek and Gary Kyes were sneaking up from behind. Late in the race, Halsey had a commanding lead but Ted McKay had the fastest car on the track. Mid-race problems had put him far back but he was driving his heart out. At the end it was Jay Halsey for the win with Steve Cheek second in a great show of "never say die" driving, and Gary Kyes third after being battered by everyone and everything on the track. Mike Lonnecker's consistent driving netted him fourth with C-main bump up Brian Davey finishing fifth.

After the racing was over, the partying and bench racing started (for most). For the QSAC officials it was more work as the all-important post race tech inspection was their priority. All the cars were weighed and scrutinized for compliance to the rules after which the engines were removed for a closer look. Of the nine engines (top three from each class) checked, one raised the official's eyebrows and required considerable time



Jay Halsey claims his A-main Grand National trophy from the unidentified trophy girl.



Mike Schmidt's WCM super modified car qualified at 6.921, the first super modified car to get into the sixes at El Cajon. Bad luck kept him out of the A-main.



The fine Goodwrench paint job on this GN car won the concours trophy for Jerry Durnall.

and deliberation, causing a delay in the awards presentation. Choosing not to make an unfair and hasty decision, the QSAC officials wisely decided to withhold the sprint car finish results until the questioned engine could be carefully, and more accurately, reviewed. After the review, the engine was perfectly legal but showed the wear and tear of having eaten something foreign and spitting it out, which left abnormal internal markings.

Radio Controlled Model Cars magazine was the primary sponsor of the QSAC Western Region Championships and they should be proud that the weekend was a tremendous success. The contributing sponsors should also be proud to have been a part:

- Raco Modelcraft
- Cajon R/C Raceway
- Racecraft Tires
- Alves Manufacturing
- B & L Racing Products
- Quickdraw Manufacturing
- Helgeson Buick
- Jake's Trophy World
- R/C Racing Center & Hobbies
- Trackside Race Cars/SECO Eng.
- Greco's R/C Sales
- Trackmaster
- J & J Racing
- Novak Electronics



The Sprint Car Concours trophy went to Lance Love after a lot of tough deliberations.

A-MAIN SPRINT CAR

- | | |
|---------------------|---------------------|
| 1. Gary Kyes | Alves Manufacturing |
| 2. Dale Smith | WCM |
| 3. Jerry Epperson | Quickdraw |
| 4. Al Winiger | Scratchbuilt |
| 5. Lance Love | Quickdraw |
| 6. Joe Alves | Alves Manufacturing |
| 7. Gary Delara | Edelbrock |
| 8. Ken Higdon | WCM |
| 9. Steve Skellinger | SECO |
| 10. Rob Russell | Alves Manufacturing |

A-MAIN SUPERMODIFIED

- | | |
|------------------|---------------|
| 1. Chris Rahe | Raco Super II |
| 2. Dale Smith | WCM |
| 3. Eric Greco | Raco Super II |
| 4. Doug Winberg | Raco Super II |
| 5. Lance Love | Raco Super II |
| 6. Russ Escalara | Raco Super II |
| 7. Ken Higdon | Raco Super II |
| 8. Bill Gilmore | Raco Super II |
| 9. Jay Halsey | Raco Super II |
| 10. Steve Ballew | Raco Super II |

A-MAIN GRAND NATIONAL

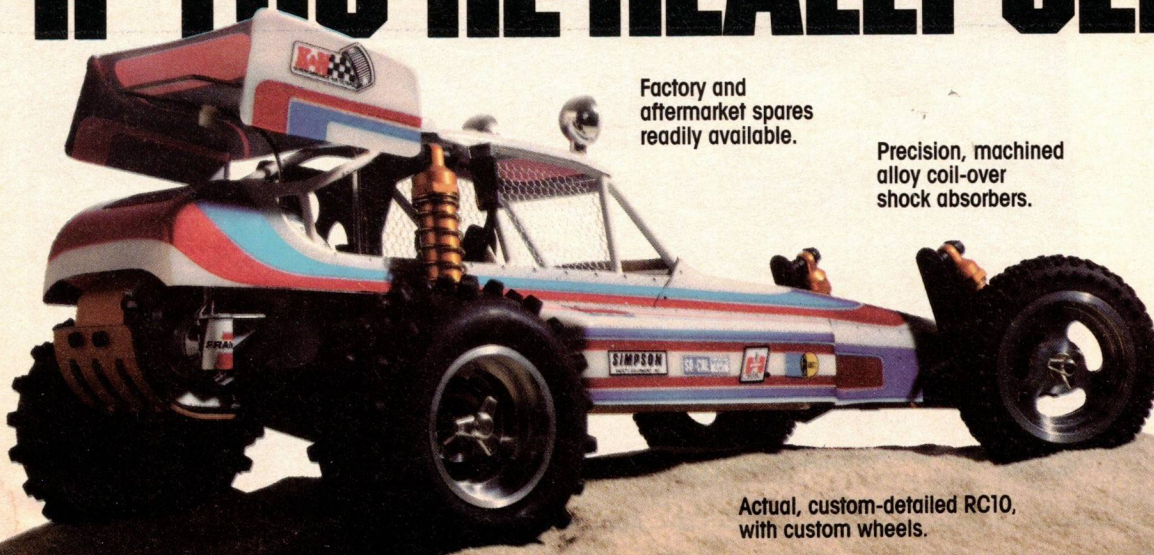
- | | |
|-------------------|------|
| 1. Jay Halsey | Raco |
| 2. Steve Cheek | WCM |
| 3. Gary Kyes | Raco |
| 4. Mike Lonnecker | Raco |
| 5. Brian Davey | Raco |
| 6. Dino Mowreader | Raco |
| 7. Gus Gustafson | Raco |
| 8. Ted McKay | Raco |
| 9. Chris Rahe | Raco |
| 10. John Gilmore | Raco |



Johnny Vance won the Super Modified Concours trophy for his brilliant orange and white paint scheme.



IF YOU'RE REALLY SERIOUS



Factory and
aftermarket spares
readily available.

Precision, machined
alloy coil-over
shock absorbers.



Fully adjustable,
four wheel independent
suspension.

Actual, custom-detailed RC10,
with custom wheels.



ABOUT RACING, THINK BIG.



**AT TEAM
ASSOCIATED
WE ALWAYS
THINK BIG.
AND WIN BIG.**

Like *World Championships*, Team Associated cars and drivers have won an unparalleled six, including titles in 1:12, 1:10 and 1:8 scale competition. No other R/C car manufacturer's team has won more than two.

Associated cars win more than just the biggest races, too. Readers of *Radio Control Car Action* magazine voted the RC10 the 1988 R/C Car of the Year, and by a resounding margin of six to one over the second place car! Thank you very much, readers. *Radio Control Car Action* also held a shoot-out between the RC10 and the next most popular car, and the RC10 came out a winner again!

And at the Reedy Race of Champions (called a re-run of the World Championships because all the drivers from *Europe*, *Japan*, and the *USA* who made the A Main at the

World Championships were present), the RC10 finished first and second.

Racers, readers and dealers all agree. Performance, reliability and readily available spares make the RC10 a big Number One.

Whoops, gotta go now. I want to watch *World Champion Jammin' Jay Halsey* take a victory lap with his RC10.



Associated Electrics
3585 Cadillac Avenue/Costa Mesa, CA 92626

PRO-LINE

RC10 CONVERSION

Tired of being stomped by monster trucks? Here's a kit that'll make your RC10 into a buggy-eater in no time

BY STEVE SAIK

There's nothing hotter at local offroad radio-control tracks than those high-flying monster trucks, which always excite R/C fans, so why not take a proven winner, the RC10, and turn it into a car-crushing, fire-breathing dirt beast? No, I didn't come up with this idea myself; Pro-Line did, and, they make it easy to accomplish with their RC10 Monster Truck Conversion Kit. If you are one of those guys who wishes revenge on incompetent drivers who smash, maim, and brutalize your beautiful R/C car by "accident," well, here's your answer. Turn your RC10 into a monster truck with Pro-Line, and won't those guys be sorry!!

This kit comes with a killer Chevy stadium truck body, ready for your creatively wild painting ambitions. No boxy, wimpy bodies here; just one sleek, ready-to-fly stadium body. Its monstrous front and rear nylon hubs stand ready for you to mount four totally-radical pinspikes. These tires will take you anywhere you want to go. Chrome rims are optional if you're out to create beauty within your beast. Front-wheel nylon bushings and extra-long front axles make mounting your tires no problem. What I really like about this kit is that the rear wheel hubs mount directly on the stock axles without special plastic adapters. The one-piece rear wheel directly fits your RC10's rear axle. Supplied in the kit are long Allen bolts for use in installing the mounting platform on the front and rear shock towers. Unfortunately, my kit only had three usable Allen bolts. When four were called for, the fourth was badly deformed and could not be used. No matter though, because stock Allen bolts on the RC10 will work as well if you don't feel like switching the old shock mount allens. Body mounting screws and clips are just some of the other things the kit features to turn your RC10 into a car-crushing machine.

The written directions were good, and I quickly powered through assembly. However, it is important to make sure each step is followed carefully; there is one particular step to which you should pay close attention. The support post in step 2 needs to be cut at 1-7/8" in height in order to insure a level mounting platform. Beyond that, the rest of the assembly went like cake. In no time, I sent my new Pro-Line Monster Truck out

conquering backyard terrain with the greatest of ease.

"Well, just how do I get my new Pro-Line Monster Truck to handle and run like the author talks about?" Without making any promises, let's start with shock adjustment and mounting placement on the RC10. Some of the same rules of adjustment that work for the offroad handling of the "regular" RC10 also will work for the Monster Truck version. Starting with the rear shock tower, shock mounting holes should be drilled farther to

the center of the shock tower. Basically, drill a hole next to the existing hole, more towards the center, keeping the new hole in line with the old. The drilled holes should be about 5mm from the existing holes and no more than a centimeter apart. In doing this, you will be able to mount the rear shocks in a more diagonal, laid-over position, resulting in the lowering of the rear-end chassis. As many offroad racers and hobby shop owners advise, this is a common step for the improvement of jumping characteristics on the RC10.





Many of you readers probably already know this and have done the same thing on your RC10. Many aftermarket R/C manufacturers sell R/C shock towers that already have holes pre-drilled to accomplish this. Now move the Associated rear shock bottom to the outermost hole on the A-arm. Complete this step for both rear shocks. You will want the shock bottom positioned closest to each rear wheel to make this step clearer. Great, now the truck A-arms should be close to parallel. This will depend on the oil weight in the shocks as well. (I recommend 30 weight.) In fact, you will want the A-arms to sag, bringing the rear end close to the ground. If

the bottom rear chassis bottoms out on landings, then bring the suspension higher up.

Taking a quick look at the front end suspension, many racers and drivers recommend a 20 to 30-weight oil, due to wanting to raise the front end higher off ground than the rear. Usually, a medium-to-stiff front will work, depending on the track. No matter what you're doing to your R/C car, any adjustment is always an "experiment" to get your high-tech machine skyrocketing over offroad terrain. What works for some dedicated R/C'ers doesn't always work for others. My advice is a starting point, and what I found to work. Don't hesitate to set up your conversion truck differently.

To achieve top handling on a race track or whatever challenging terrain you encounter, if you give the RC10 truck conversion the

right tires, you'll be way ahead of the pack. The stock spiked tires which are standard in this kit work very well; but on different types of dirt and under varied track conditions, other tires may give you a winning edge in handling. Have you ever heard of a die-hard hobbyist who had only one set of tires? It's a fact that different tires work well under different conditions. Companies such as Dura-Trax, J.G. and even Pro-Line make a variety of different kinds of monster truck tires to suit your needs, although some tires may require rim changes. You can set up your RC10 truck conversion for optimum performance by matching your terrain with the right tire combination.

So maybe you're ready to try your luck at racing with this red-hot conversion kit on your RC10. Your trigger finger is getting itchy, so you pack up your stuff and head down to the local offroad track. You'll be happy to know that the RC10 truck conversion is one of the most kick-butt, winningest cars on the track today. Numerous trucks race a stock class and a modified class. If that's too fast for you, race tracks usually will put you in the novice class, where you can sometimes bang wheels with regular 2WD racers. By the way, you usually won't get yelled at if you make a mistake and "accidentally" run over a competitor. The popular NORRCA race association has Monster classes for racing, which have grown to new heights in popularity recently. The NORRCA dirt oval race series also runs an Ultra Stock truck race, which is terrorizing modified racing in an oval. For more information regarding details and rules, give NORRCA a call.

Looking back, the Pro-Line RC10 Monster Truck Conversion Kit will power your RC10 beyond the boundaries of the normal 2WD car. This is one solid kit, which is sure to please the buyer whether his racing aspirations are competition crunching or backyard hill climbing. Whatever yours are—have fun with this Pro-Line kit—after all, that's what it's all about!

AGITATOR JR.

BY LARRY FLETCHER

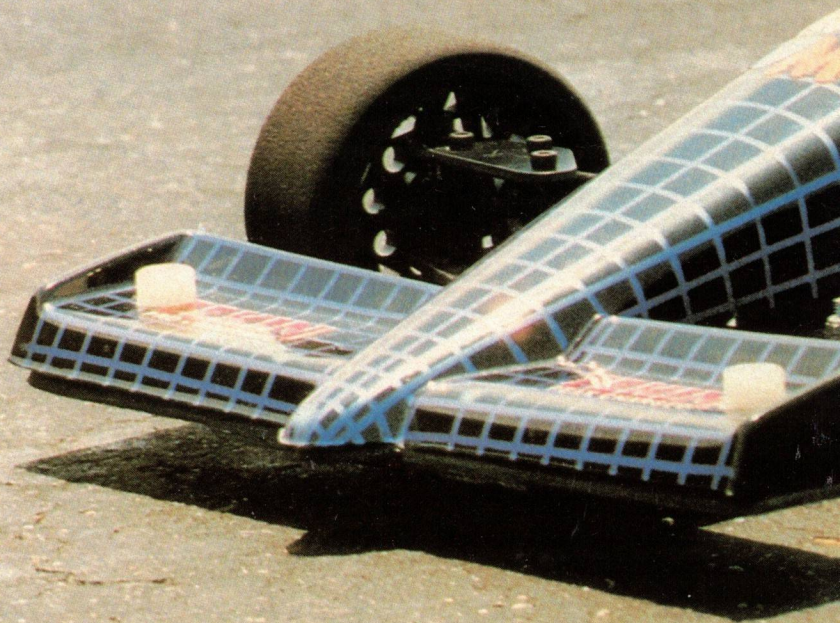
First came the Agitator with its saddle-block front suspension and tri-shock rear pod. It was, and continues to be, a highly successful road racer. Then Advanced Racing Technologies produced a graphite upgrade kit, and the Agitator became the Agitator Pro. Next was the Agi-jammer, with three conversions for the RC10, JR-X2 and Ultima. With this trio, three of the best and most popular offroad cars can begin a new life as onroad gear-class speedsters. All are making their mark on the onroad tracks. But something was missing; a starter car that wouldn't cost too much, but would still be able to get into the A-main. Not one with the same old parts; the Associated 12L front end, the TRC front-beam, or other pieces that find their way on one car or another. That's where the Jr. differs from the competition, and shows its roots. It's the newest member in the family of 10th-scale onroad cars from Advanced Racing Technologies (ART), called the *Agitator Jr.*, and it's a direct descendent of the Agitator. Don't let the Junior fool you; just like Al Unser Jr, the Agitator Jr. will be seen in the Winner's Circle in the months to come.

So what makes the Junior a Junior and how does it differ from the Agitator? Its role is to race side-by-side with the Agitator, but cost considerably less. As the feature list shows, it has most of the things that make it uniquely an Agitator, but still accomplishes its economical purpose.

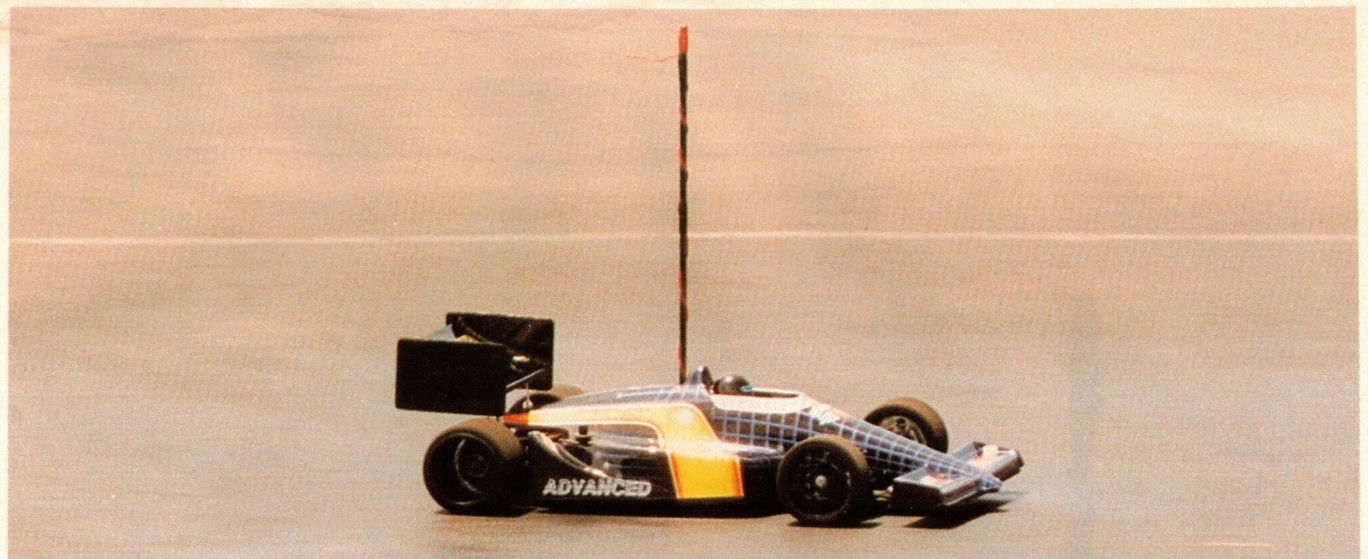
Let's look at the kit! Everything comes neatly packaged and numbered so things go smoothly if you open the bags when instructed. As I've tested other ART cars (Agitator Feb. '89 and Agi-jammer July '89), I take it for granted that each bag will have the correct parts in it, and that they'll be well machined. I thought the Junior might lack that TLC that makes some cars so special. I'm glad to say it doesn't. Most parts are identical to the Agitator's and the ones unique to the Junior are equally well-finished. Although the instructions are complete and straightforward, there are details in the assembly steps that could use better pictures or illustrations. Granted, most of the pictures are there, but the details are tough to pick out, and it's easy to reverse an unfamiliar part, like a saddleblock or pivot ball assembly. The good news is that there are enough Agitators now at most of the tracks, and the local hotdog will love to show off his or her prize possession. Don't be afraid to ask questions.

The Junior chassis, radio tray, T-bar, and front crossbeam are all fiberglass; the rear pod bulkheads are delrin. Everything fits together with virtually no trimming. The only essential sanding is the edges of the battery slots. If you choose to cut some corners, and

*Now you can get into an
Agitator for a lot less money!*







The Agitator Jr., with McAllister's Penske PC-17 Indy car body mounted, gets up to speed on the New Mesa road course in California.

save yourself a little time, you'll end up mumbling at trackside when the fiber tape splits and the batteries pop loose. This bit of sanding actually saves time in the long run.

The front of the Junior has the now familiar saddleblock crossbeam system. I've detailed it in other articles, so all I'll say here is it's unique, reliable, functional, and although this system is ART's exclusively, you may see it on just about any onroad car. ART has made front-end conversions for everything from the Bolink Eliminator to the RC10L. In fact, I think the conversion for the RC10L hit the market almost before the RC10L did. But I digress. . . .

To the rear of the crossbeam lies the radio tray. On the Junior it is flat on the chassis and helps strengthen the fiberglass. The front of

Stormer's PA Dyno

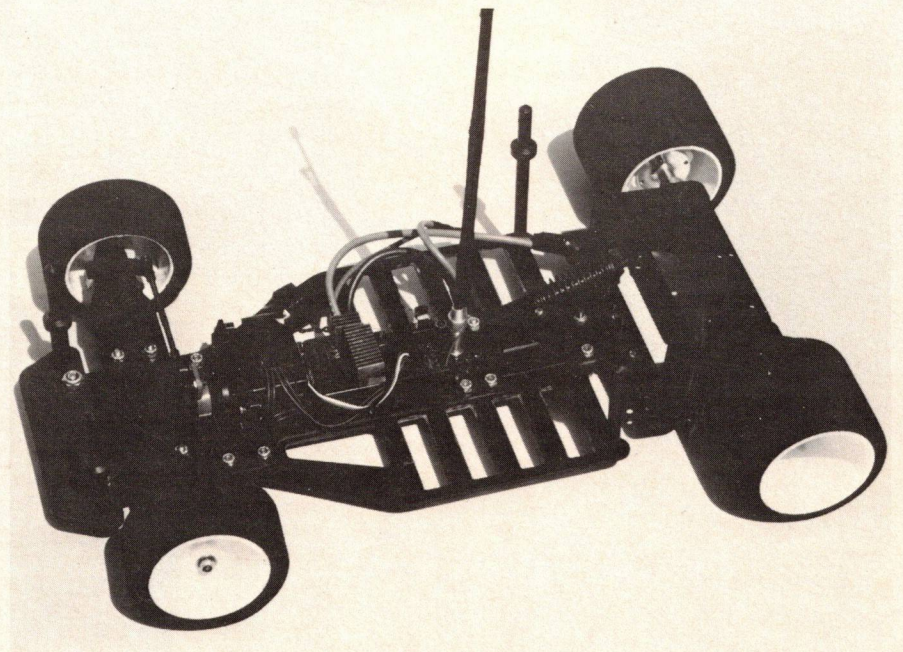
If you're a backyard puddle jumper or you're shooting for the A-main, it helps to know how your motors compare. Since practice time is limited at most races, wasted time with questionable motors can be costly. Stormer Racing has a PA Dyno that can be used to give precise numbers to compare your motors. All you do is hook up a 4-to-7 cell battery pack, a digital voltmeter, select the motor to be tested, and start testing. The motor you're testing drives a slave motor that acts as a test load. With a three-load setting the rpm and amperage of each motor can be recorded. Keeping accurate records of amperage and rpm changes can signal bad brushes or a modified motor that needs rebuilding. Each PA Dyno has been calibrated to the particular slave motor used, since there are variations, to give you the most accurate readings. Naturally, I tested every motor I had, and was pleasantly surprised to find a couple of old ones that measured well. They were rewarded with new brushes and another trip to the race track. If you're interested in the PA Dyno give Bob at Stormer Racing a call at (406)228-4569 or drop them a line at 31 Garden Terrace, Glasgow, Montana 29230. ●

the T-bar is held in place with a cone nut, rubber washer, and a 4-40 nut and bolt. The middle of the T-bar fastens to the chassis by a pivot ball assembly. The side-to-side roll is controlled by the flex of the T-bar. The T-bar connects to the bottom of the rear pod with three cone nuts and rubber washers. The rear pod hinges on three bolts with cone nuts and rubber washers that give the front/rear flex necessary for proper traction and height adjustment. The monoshock mounts mid-ship, with the rear mount being on the top front of the rear pod. It's a precision Kyosho Gold type and comes with several pistons and two different rate springs. One tweak screw on each side of the antenna mount are used in final chassis tuning. The monoshock makes the rear end extremely simple, straightforward to assemble, and easy to fine tune.

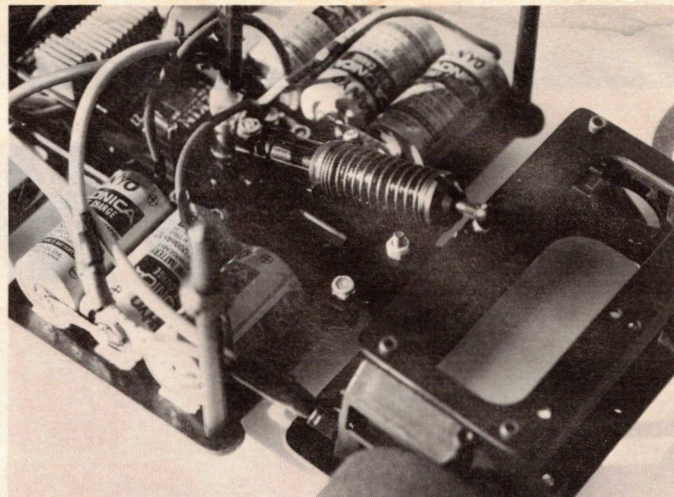
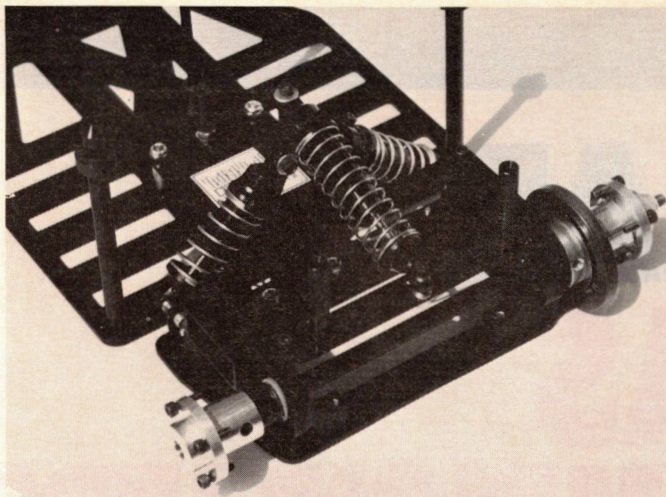
The Junior basic comes with a steel rear axle and bushings. A second Junior model, the one I received, comes with both the full

rear bearings and graphite axle assembly. For the economy-minded the basic kit is the way to go. The bearings are a common-size flanged bearing and can be added at any time. For those unfamiliar with a pro diff, it uses a bearing in the spur gear and two bearings in the right wheel hub. With the additional two rear axle bearings you can see how using bushings is quite a money saver. And that's it for the stock kit.

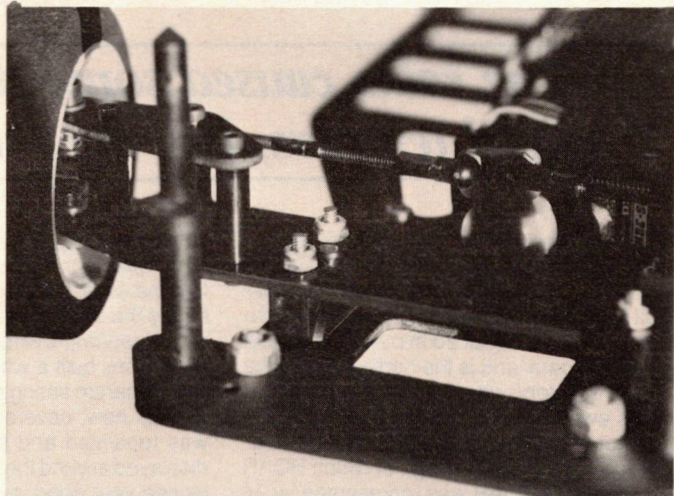
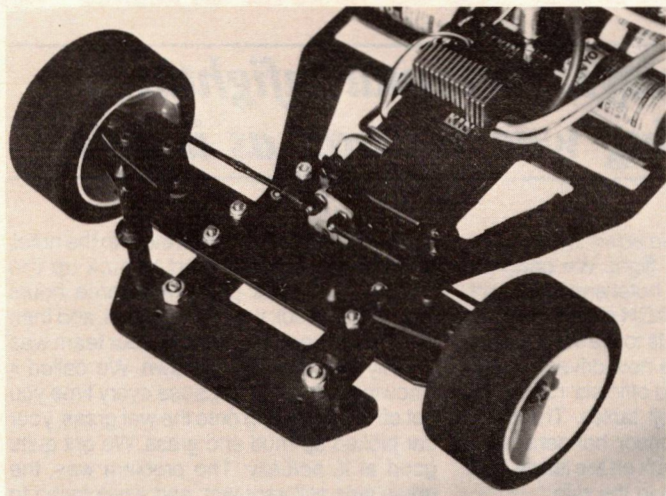
I had heard some great things about the Tekin radios and ESC's so those were my electronics of choice. The Tekin ESC Pro along with the 27 bank FM mini-receiver fit neatly in the Junior. The antenna is the ART 1/10-scale graphite version. The servo I used was a KO PS-301BH. The Tekin radio comes with the best wiring instructions I have yet to see. All on one page they picture the changes necessary to mix different brands of radio, ESC, and servos. I've used it several times already, as I've mixed and matched different electronic brands.



The Junior's chassis at first glance seems to be a duplicate of the Agitator; subtle differences add up to considerable savings.



One of the differences between the Junior and the Agitator Pro is the rear pod's shock assembly. At left, the Pro utilizes a tri-shock setup, while the Junior, at right, has a simple monoshock assembly.



The now-famous Agitator front end, same as used on the Pro Agitator, is featured equipment on the Agitator Jr.

Caster adjustment is easily accomplished by screwing or unscrewing the two locknuts on the cross arm.

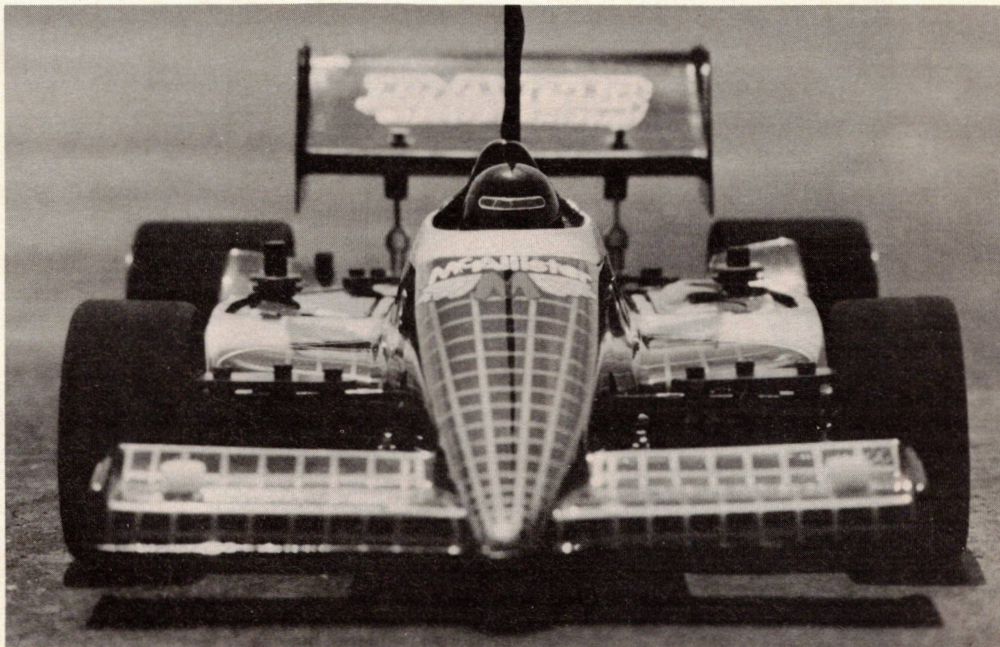
Indy cars have long been my favorite road class, so I chose the McAllister PC17 body. The contours of this body are fantastic, so a special paint job was in order. The best man for the job I know is Mike Ogle, the author of the recent painting series in *RCMC*, and although he doesn't get as much time to paint cars as he once did, he too likes Indy cars. After a bit of bribery, i.e. a Race Brothers wing, he agreed and, as you can see, he created another original. To hold the car's rear-end down, I used a standard Race Brothers wing and painted it with black epoxy paint. To add another new feature, I selected the Minitech wheels and tires both front and rear. They're lighter than any other tires I've use, although I must admit I selected them primarily for their good looks. I cut a front bumper out of Kydex, mounted the body, and headed to the track.

I threw a couple of old stock motors on the PA Dyno (see sidebar) to check out their performance and found the best of the lot. Thus equipped, I headed for regular monthly race at the Ranch. The turnout was light that day, and we got a lot of extra track time. With minor camber and diff adjustments, the PC17 was holding its own against all comers. There were nineteen stock entries and Junior was second qualifier to, you guessed it, an Agitator Pro. Hot-shoe Derek Arita was running his new Agitator for its first real race.

Because of the light turnout, we ran two-heat mains instead of the usual one and after two second-place finishes, the Junior came away with the first-place win. It hardly seems

fair, since Derek had been leading all day, but when he hit a back marker in the last

Continued on page 68



Full-size open-wheel cars are the fastest road racers in the world.

IFMAR GAS WORLD CHAMPIONSHIPS

The rains caused some delays, factional infighting raised tempers, but the racing was as good as it gets

Heemstede, Holland was the site for the 1989 1/8 Gas Onroad World Championships. The MACH club (Model Auto Circuit Heemstede) track is located in Heemstede, which is about 20 minutes southwest of Amsterdam, and is the home track of the Serpent factory, which is located about two miles away. The World Championships are promoted by IFMAR (International Federation of Model Auto Racing), of which ROAR is a member. ROAR was represented by 24 drivers at this race.

It was raining when we arrived in Amsterdam, after our 10-hour flight. We checked into the American-style hotel and then went to see the track. The MACH club had made quite a few improvements to the track for this race. They built a whole new drivers' stand, with separate timing and officials' rooms, as well as new, covered pit tables. The track was repainted and sponsor banners were displayed around the track on the fence. It all looked very good, even in the rain.

The next morning I went back to the airport

to pick up the Burch's, took them to the hotel, went back to the airport to pick up the Swauger's, whose plane was three hours late arriving, took them to the hotel, and then went to the track. It looked like our team was heavily into mowing the lawn. We called it "mowing the lawn," because every time you got off the track and onto the wet grass, your car picked up mud and grass. We got quite good at it, actually. The problem was, the grass was still very wet, and while trying to learn the track, which had all-banked cor-



Intermittent rain caused all the drivers some problems; some more than others. This is where Cliff Lett and Kevin Mercadante had the most trouble with the damp pavement.

COMPETITION

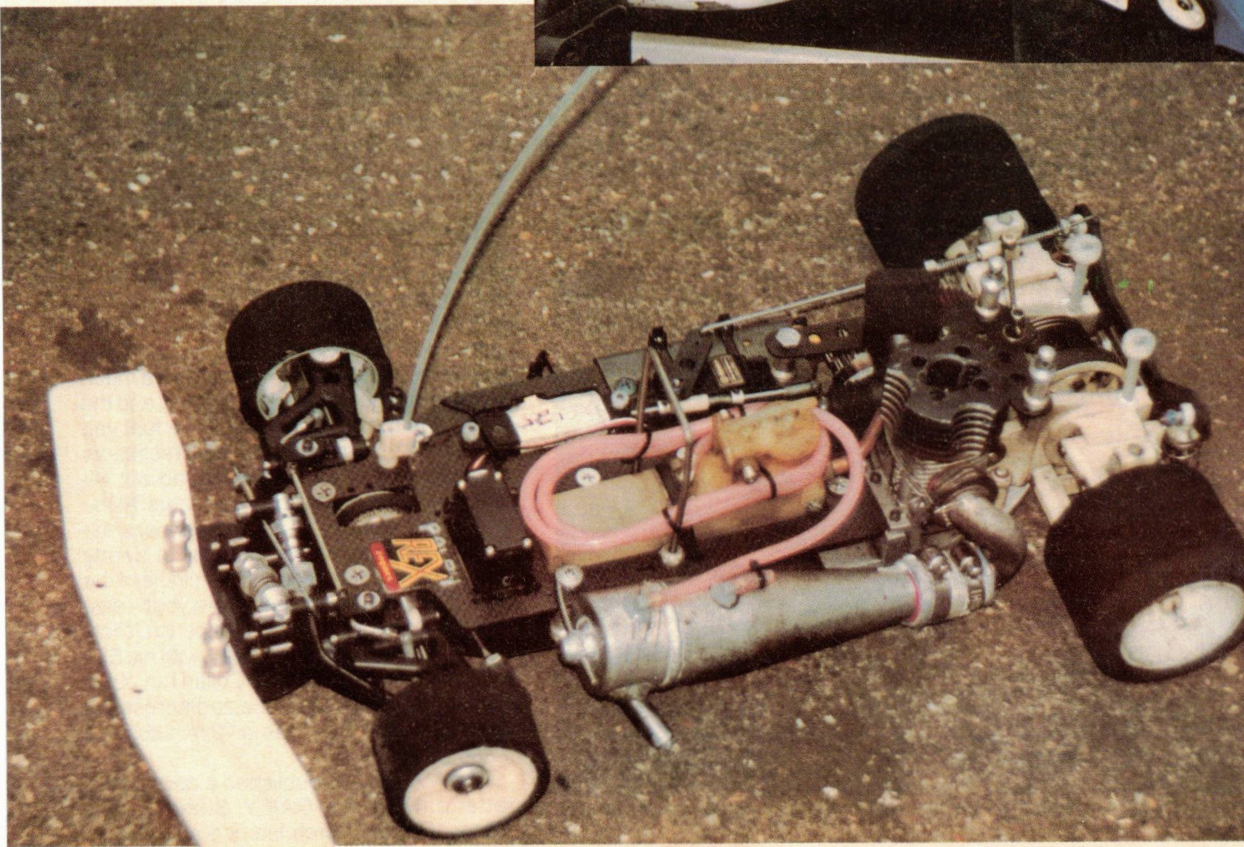
BY GENE HUSTING



ners, it was quite easy to end up in the grass. Once you got on the wet grass, your tires got soaked, so when you got back on the track, it was like being on ice, and then you were back on the grass again. Kind of a vicious circle. As a matter of fact, there were a lot of rumors coming from Holland well before the race, stating that we would never be able to run on this type of track. And at the end of the week, at the awards ceremony, the IFMAR president described the American team as "looking like a bunch of monkeys" on this day, and I dare say we would all have to agree with him. The president then followed with the highest possible compliment about the American performance, but that's getting ahead of the story.

The next day it rained, and we missed some very badly needed practice time. I went shopping for a chair with Rick Davis. We drove all around Heemstede, Haarlem, and Amsterdam looking. It's quite hard to tell what the store you're looking for looks like, and the rain wasn't helping. The only thing we could recognize was the "Golden Arches." Long live McDonald's!!

The next day practice started promptly at 9 a.m., but by 11 a.m. it was raining again. It stopped raining by 2 p.m., and then dried out in about an hour, so we got a few more much needed hours of practice.



Above, Alain Prost's World Championship-winning McLaren-Honda F-1 car is a fitting background for the fastest R/C car driver in the world, Ralph Burch Jr., who adds another Top Qualifier award to his long list of credits. At left, Ralph's TQ car is an Associated RC500 4WD racer, built by Ron Paris, who also built the Rex engine. Note Ron's new muffler, which is not only quiet, but also boosts the engine's horsepower.



The Serpent's home track in Heemstede, Holland, was the site of the World Championships. All of the corners were banked varying amounts.

Right after it stopped raining, I was invited to participate in a celebrity race, which I gladly accepted. Little did I know what to expect. The track was still damp. The cars were 2WD Serpent cars with Corvette bodies and no wings. Get the picture? After a few minutes practice, the race started. I immediately got nerfed onto the wet grass and was half a lap down on the first lap. It felt a lot like trying to drive on ice. The announcer was saying Ted Longshaw was in first place.

I wasn't getting anywhere trying to race, so I just decided to keep it on the track and see what happened. One by one I started passing cars who were off the track. They announced Ted was in the grass, and before he could get back on the track, I passed him to take over the lead and actually won by 3/4 of a lap. This was more like a survival run

than a race. But it was fun, I guess.

We had a little chance to go around the pits, talk to people and look at their cars. We noticed some mufflers on a lot of the Serpent cars that weren't on the IFMAR Approved Muffler list. What happened? An interesting story. Three years ago when Rody Roem came to run at the McCoy race, he wasn't going fast enough to get out of the "C" Main, so Ron Paris lent him an engine, and Rody immediately qualified in the "A" Main. The following year, Rody still wasn't going fast enough at the World Championships in Pomona, so Paris gave him another motor.

In the meantime Ron Paris has developed a very good quiet muffler called AL200, which is submitted to EFRA for approval. Somehow Rody gets the Paris and O'Donnell mufflers, which are supposed to be kept in

confidence by the person, Mr. Grossman, who tested them. How does Rody repay Ron's generosity? He copies Ron's muffler and gives them to the Serpent drivers. It was unbelievable!! I immediately protested the mufflers, and the IFMAR jury agreed that they were not on the IFMAR Approved Muffler list, which was in the official program given to all the drivers. So, therefore, they were not legal and were not allowed to run.

The following day was bright and sunny. There was open practice till 1 p.m. and then controlled practice. This day helped, but what we really needed was the previous three days we lost to the rain.

The next day was the first day of qualifying, and it was sunny. All 120 drivers would get two rounds of qualifying each day for the next three days. The first day of qualifying showed how much trouble we were really in. Hardly anybody could run five minutes without running out of fuel. The same engines that we were running at the Ranch Pit Shop in Pomona, and getting 6 minutes and 45 seconds, weren't even lasting five minutes here. The difference was because this track was so much longer, we were turning a much higher average rpm for five minutes, and the higher the rpm you turn, the more fuel you use. So, by the time we put in carb restrictors to run five minutes, we then found out we were only a little faster than other cars. At the end of the first day Curtis Husting was the fastest American driver, but only in twenty fifth place. Curtis just drove the middle of the track and kept out of trouble. Everybody else ran out of fuel. 17-year-old Lamberto Collari, from Italy, was the fastest today, with his Blitz car, which is made in Italy. Collari ran out of fuel on his last lap, but coasted across the finish line, turning 37 laps in 10 minutes and 12.86 seconds.

The MACH club published a daily newsletter entitled *WC DAILY*. Some quotes follow: "Ralphie Burch learned a lesson on



John Grant, all the way from Australia, won the concurs event with his beautiful Lancia Martini Group C car.



The MACH club built a beautiful new drivers' stand that included a timing room and an officials' room too. The driver on the far right is Re-Pete Fusco, with Mike Swauger and Stefano Colombini to the left of Re-Pete.



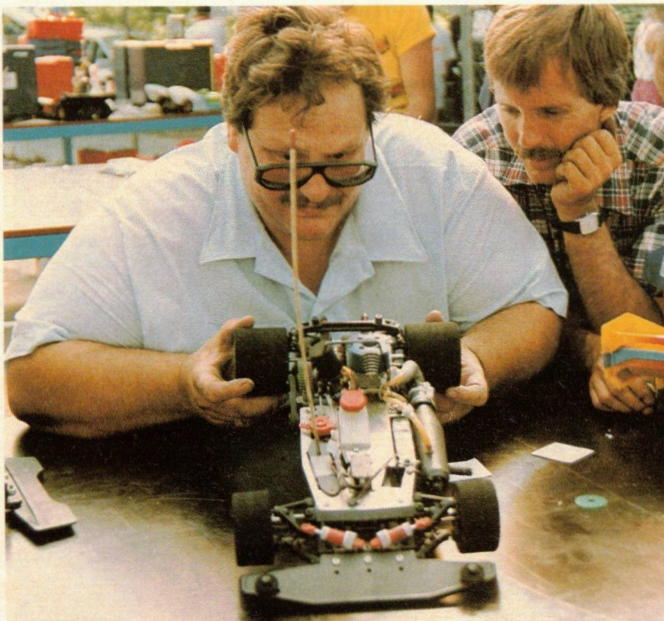
During qualifying, each driver was allowed one mechanic, but in the final, two mechanics per driver were allowed, making the pits quite full.

Tuesday. Like all the other Paris engine users he could not finish the 10 minutes with one pit stop." "Defending Champion Re-Pete Fusco couldn't get things to work yet. He is in 114th position and has only managed to complete eight laps altogether. Maybe things will change tomorrow."

Ralph's lap times the next day were in the 16.0, 16.1 and 16.2 second range with the restrictor. We needed to go faster. When I saw Ralph Sr.'s pitstops were only four seconds long, I got an idea. I got Ralph and Ron Paris together, and I said we're going about this all wrong. For two days the announcer has been saying for the slower cars to move over for the faster cars. So, in Rody Roem's heat, the announcer is announcing how fast Rody is going and all the other cars are getting out of his way, and so he has a clear track and turns an easy 37-10.14.59. The restrictor is slowing us down too much. That has to go. We'll simply make two fuel stops! When I said that, Ron and Ralph both



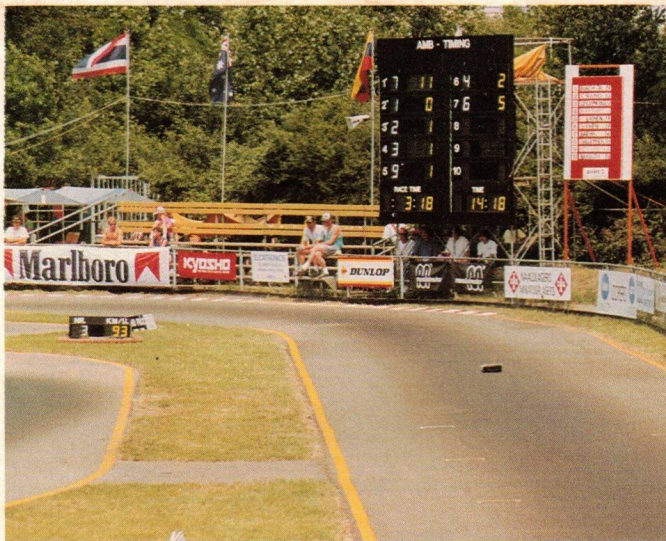
This is the corner at the end of the straight that gave Burch all the problems at the start of the Main. Ralph's car spent a lot of time going in the wrong direction, as the car on the right is doing here.



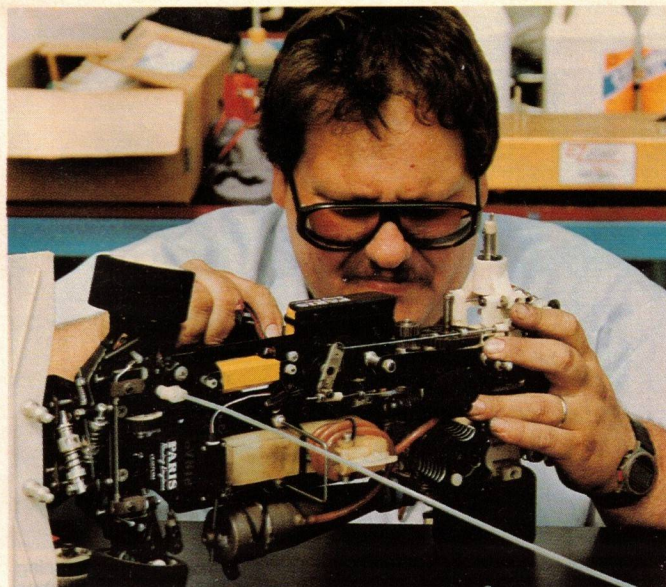
After Collari led qualifying on the first day, Ron Paris and Mike Jones went over to take a closer look at the Italian's car.



Right after Ralph TQ'd, the TV crew came over to interview Ron. Their first question was, "Why do you have the fastest car and engines?"



The MACH club's AMB scoreboard can display all 10 cars' laps and positions. The smaller board to the right displays the 10 qualifying positions. On the left is the high-speed display, showing car number and speed in kilometers.



After it was decided to run the quarter and semifinals in the rain, Ron Paris was busy trying to figure how to keep the water out of the cars.



The new 1989 IFMAR 1/8 Gas World Champion, 17-year-old Lamberto Collari, receives his silver bowl trophy from IFMAR president Ted Longshaw.

looked kind of quizzically at me. Nobody had ever made two fuel stops before. It wasn't the thing to do. Or was it? I said, "If we take the restrictor out, Ralphie will be able to pick up a quarter of a second a lap, he'll be able to make up the second pit stop time in 16 laps, and the next 21 laps he should gain five seconds. On top of that, with the increased speed, the other cars in his heat will start to move out of his way, and he'll pick up a whole lap. On top of that we'll have the whole pit lane to ourselves." Then I said, "Let's show them what Paris power really is and let's show how fast Ralphie can really drive his Associated car!" They both agreed to try it!

I'll let the WC DAILY newsletter tell you what happened next. Quote: "They decided to go for two pitstops, and what pitstops they are. His father must be the fastest pitman here, with a miraculous 20.97 pitstop lap. But he has to refuel twice and loses about three seconds to his rivals. Ralphie drove the car

Continued on page 66

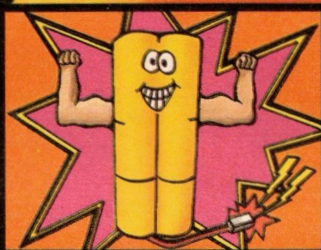


Ralph Burch Jr. accepts his second-place bowl and TQ award from race director Sander De Graaf.



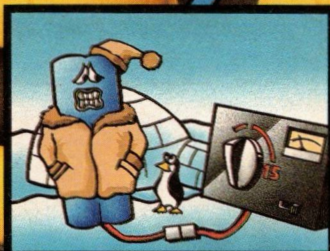
Stefano Colombini, from Italy, qualified third and finished third, driving a very good race to the end.

TRAXXAS MAX PEAK II CHARGER IT'S JUST RIGHT.



PERFECT

The MAX PEAK II charges every pack to its full 100% potential every time. There is no guessing or danger of overcharging.



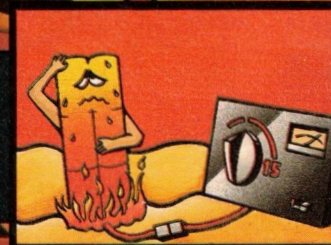
ZERO CHARGE

NOT ENOUGH

A few minutes too little on a timed charger and the battery pack is still cold, not up to its full potential run time.

TOO MUCH

A few minutes too long on a timed charger, and the battery voltage begins to drop causing increased heat and cell damage.



MELTDOWN

ELIMINATE THE GUESSWORK

It is virtually impossible to calculate the exact amount of time to charge Ni-Cd packs because of the huge number of constantly changing variables. Most people resort to guessing and just assume that the standard 15 minutes on a quick charger will be adequate. However, if it's the wrong guess, expensive batteries will be damaged. Or even worse, that big race could be lost!

The MAX PEAK II™ does not "guess." It has sophisticated peak detection circuitry which continuously monitors the battery pack's charge level so that it can never be under or overcharged. Whether the battery is completely dead or almost charged, the MAX PEAK II will supply only the amount of charge that battery needs. In addition, the MAX PEAK II has a buzzer that sounds when the battery

is 100% charged (fully peaked). The buzzer eliminates time wasted on watching voltmeters. After the buzzer sounds, the MAX PEAK II automatically powers down into pulsed trickle charge to maintain peak battery voltage. Two colored L.E.D.s indicate the charging mode. The tiny (3 x 4 in.) MAX PEAK II also features a current adjusting knob for charging 4-7 cell packs, and easily accessible fuse protection against accidental shorts.

Best of all, the MAX PEAK II retails for about \$50 which is a worthwhile investment that quickly pays for itself in longer run times and extended battery life. The MAX PEAK II pulsed peak charger is a must purchase item for anyone who uses rechargeable Ni-Cd packs, and it's available now at local hobby shops.

FOR AC/DC USE . . .

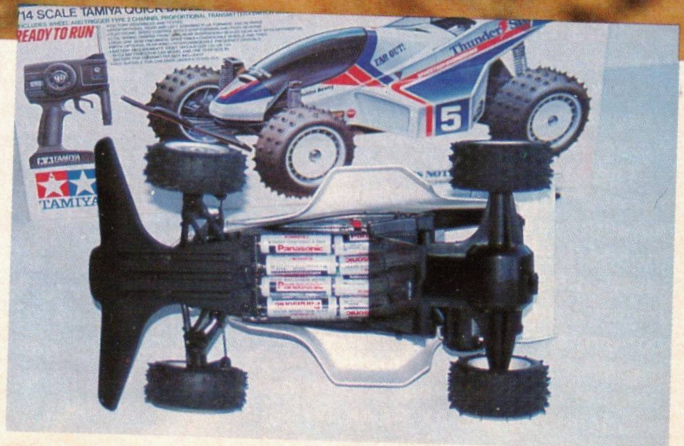


For convenient AC/DC use, combine the MAX PEAK II with the TRAXXAS DC power supply model 3005. This current regulated 13.8V eliminates false peaks and it will supply 4.5 amps constant and up to 5 amps surge current on demand. Auto reset fuse protection makes the 3005 completely safe and impossible to damage by shorting or overloading the outputs. Sugg. retail is around \$60.

TRAXXAS

12150 Shiloh Rd. Dallas, TX 75228

T A M I Y A S
THUNDERSHOT QID



Here's a fast and durable, ready-to-run dirt car that'll give you hours of R/C fun for just pennies

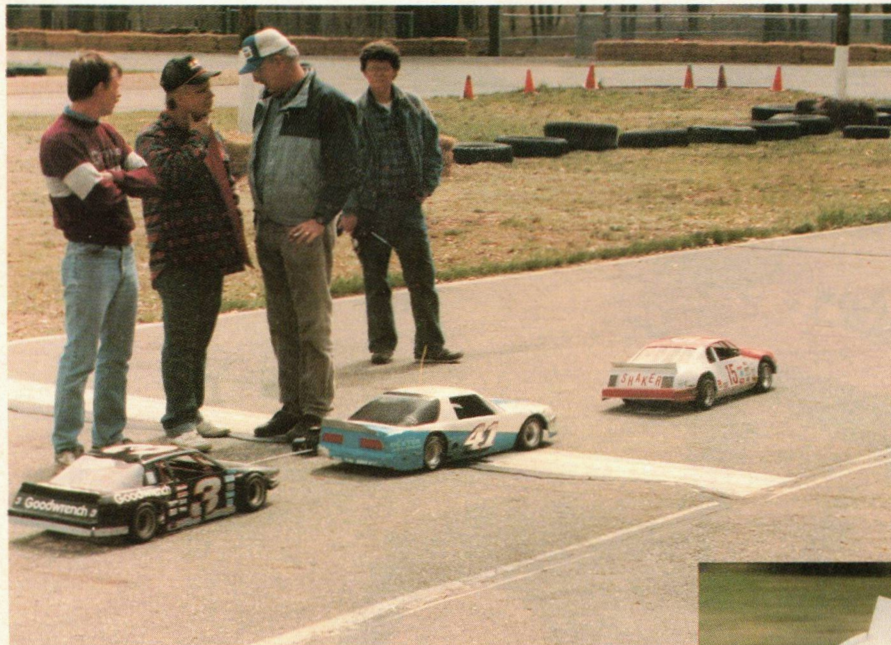


For anyone looking to take their first step into radio control, the new MRC/ Tamiya Thundershot QD would be a smart choice. This 1/14-scale dirt buggy comes as close to being a ready-to-run car as any we've seen. You need only to stick on the decals, attach the rear wing, and put 8 AA pencils in the car and a 9-volt battery in the pistol-grip transmitter, and you're off.

The Thundershot QD (for Quick Drive), unlike the "toy" cars found in department and electronic stores, is a good-looking, well-built little machine, with a host of replacement parts readily available (try that with the R/C Ferrari Testa Rossa being hawked on those obnoxious TV shopping shows) that will keep your buggy running fast and smooth. Pin-spike tires all around mean you'll be diggin' dirt and flyin' over most any terrain with no problems.

Continued on page 69

QUARTER SCALE MIDWEST SERIES



Grand National cars line up for the Midwest Quarter Scale Series feature race at the Michigan Raceway Farm in Lansing, Michigan. The track is a scale 3/8 mile in length. Below, John Druskinis' winning sprint car from WCM was the class of the field.

Quarter Scale racing got off to a great start here in the Midwest with a late April race held at the Michigan Raceway Farm in Lansing, Michigan. This was the first race of the newly formed Quarter Scale Midwest Series. Other tracks participating in this series are located in Plymouth, Indiana, and Machesney Park, Illinois. Four classes are run including Grand National, Sprint Car, Super Mods, and Late Models (ASAs). Each track is built just for racing; no parking lots for these R/C giants! If you've never been to a Quarter Scale race you haven't experienced the ultimate thrill of seeing these thirty-pound machines racing at scale speeds over 110 mph on banked oval tracks. It is every bit as thrilling as going to a full-scale event.

But how did the Quarter Scale Midwest Series get off to such a fast start? People like John Druskinis (Detroit), Jack Hendrick (Machesney), Dave Lee and Stan Smith (both from Lansing), and many others started talking and planning this series. The group formed a board of directors, set up a schedule, acquired tracks, and determined the rules for competition, all in a matter of a few weeks.

Since most readers of this magazine are 1/10-scale electric oriented it might be interesting to note the difference between driving a quarter-scale gas car and a 1/10-scale electric onroad car. Let's also assume only oval tracks are involved. The first and most obvious difference between the two is car response time. Or perhaps I should call this the "reaction" time syndrome. Any of you

racers that cut your teeth in R/C car racing with 1/12-scale know how quick these little buggers respond to the slightest command. Well 1/10 oval cars are pretty darn quick, too. When you pick up the transmitter and pull out onto the track with a quarter-scale car, you enter an entirely different world. First of all, the power to weight ratio for the quarter scale is much closer to full scale than is the electric's power to weight ratio. This means the car reacts to commands in a much more realistic way. Control is smoother and more predictable. (Boy, can I hear the arguments starting now!) Power is also applied to the road in a smoother manner so that the car looks like a full-size car responding to an on-board driver. Because these cars are so much bigger than other R/C scales, they cannot spin out or get loose in the lightning-fast manner that electrics do. Maybe that's why some people say quarter scale is for "older" drivers? The second major difference between the two classes are the body styles you see competing. Electric 1/10-scale oval racing here in the Midwest is dominated by



either wedge bodies or offroad bodies. Any resemblance to full-size cars is purely by accident. In fact, I think I just read in *Rev-Up* that ROAR has acknowledged this and has given up on having a rule requiring scale offroad bodies. But in Quarter Scale all the cars in all the classes are very much scaled down versions of the real thing and all open cockpit cars have very visible drivers. Even the Grand Nationals many times have full-bodied drivers and scale dashboards, etc. In general, I think quarter-scale racing tries very hard to emulate the real world.

There's another area of Quarter Scale that differs from the other scales and that's in the race day format. At most Quarter-Scale events, cars are timed individually and then heats are set up based on qualifying times. Cars are then placed in the main event either by winning their heat race or by bumping up through the lower mains. From a race format standpoint, going to a Quarter-Scale Midwest Series race is just like watching Thursday Night Thunder on ESPN.

Oh, I better not forget the other thing that's

INDY GOES 1/4-SCALE!

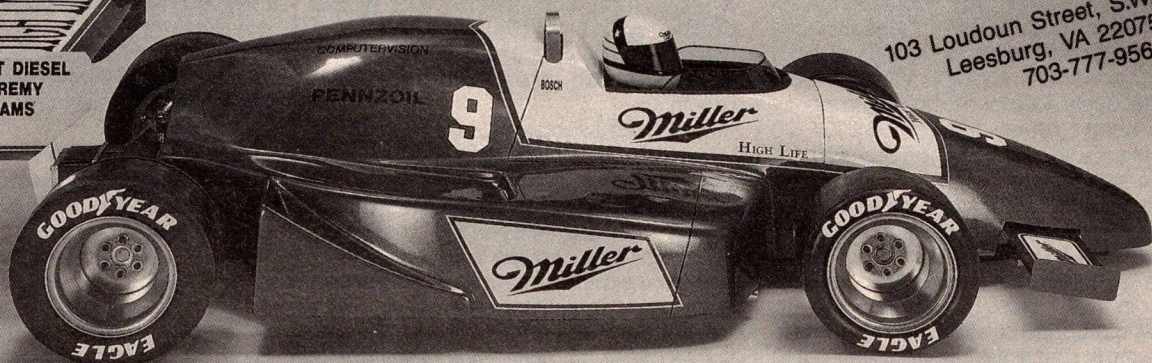
Experience all the excitement of Indy Car racing in quarter scale with Race-tech's all new *Defiant*. The only 1/4-scale Indy racer available, the *Defiant* features fully adjustable, 4-wheel independent suspension, multi-gear quick change rear end, authentic body style with adjustable front and rear wings, and much more.

The *Defiant* stands 10" high, 46" long, 18½" wide and reaches

1/4-scale speeds well over 200 mph. These beautiful, handbuilt cars come fully assembled, with our own high quality Servo Saver included. All that's required is your steering servo, a radio control, and the desire to win!

Race-tech also offers a full line of options and accessories for the *Defiant*. The *Defiant* is available through your local RC dealer or from Race-tech for only \$1,695. To order direct, telephone 1-703-777-9565, or write to: Race-tech, 103 Loudoun St., SW, Leesburg, VA 22075. VISA, MasterCard or C.O.D. payment available.

DETROIT DIESEL
DELCO-REMY
J. WILLIAMS
CARS



103 Loudoun Street, S.W.
Leesburg, VA 22075
703-777-9565

BACK ISSUES

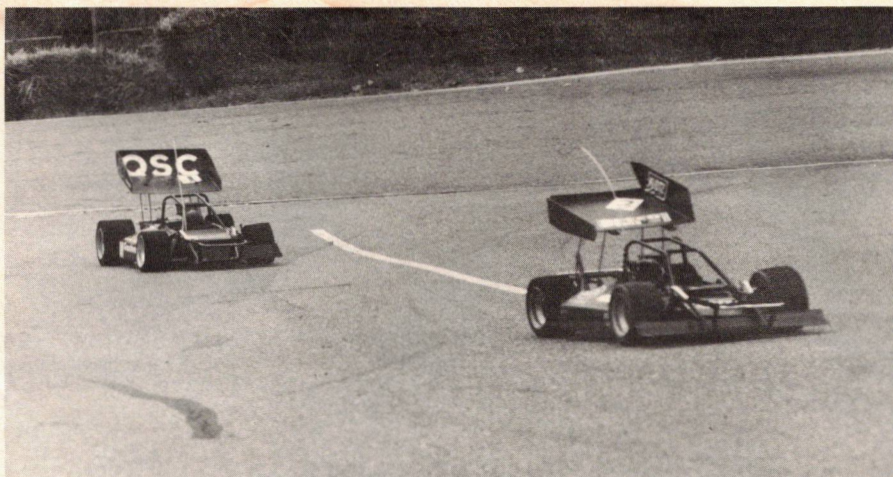
going fast!
Order yours today!



Now you can complete your collection of R/C Model Cars by picking up the issues you've missed. Copies of each issue from Volume 1, Number 1 are still in stock, but you'd better hurry! Each issue is \$2.95, and they're going fast. Order yours today.

Small Print Department: Specify issues desired by volume number and issue. Magazines will be mailed second class, post-paid. Foreign orders (except APO and FPO) must add 60¢ per copy. Allow four weeks for delivery in U.S. If UPS shipment is desired, add \$1.25 minimum for up to two magazines, or add \$1.25 plus 35¢ for each additional magazine on orders for three or more. Remit by U.S. funds drawn on a U.S. bank, or by International Money Order for overseas orders. Master Card and Visa orders accepted, \$10 minimum order, 5% charge. Include card number, expiration, and signature.

Send to: R/C MODEL CARS Magazine, 898 W. 16th St., Newport Beach, California 92663



Dave Lee in the QSC super modified car comes up to challenge Stan Smith. Both cars are from WCM.

just like real racing. Drivers race for cash! I know, this has never been done in R/C and I sure had my doubts that it would be a good idea, but it really has been a plus and not a negative. All R/C racing is expensive but Quarter Scale does tend to gobble up money even faster than my 1/8 gas cars. So, it's nice to get a little money at the end of a race day, once in a while.

You might also be surprised at the percentage of Quarter Scalars who are brand new to R/C. I know it shocked me that the majority of them have never held a transmitter in their hands! This is one of the few racing sports that I can think of where people are trying to start at the top. Of course, not all of you think Quarter Scale is at the top and

I'm sure a case can be made that 1/8 Scale is faster, more sophisticated, etc., or that electric racing is far bigger and better. But one thing is for sure, there is a special attraction to these big cars for both drivers and spectators.

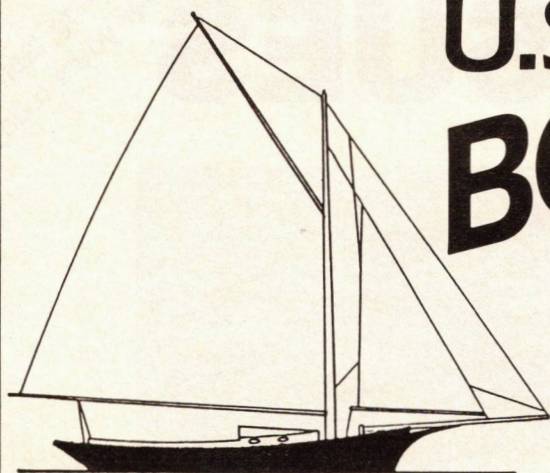
So how did the race in Lansing turn out? It was a big success. The closest racing of the day occurred in the Late Model Class. Lap after lap Marv Thomson and John Druskinis traded the lead. They drove bumper to bumper and door handle to door handle but never once did they cause a spin. It would have ended in a photo finish except for a very uncommon engine flame-out with Marv's car. In the Super Mod Feature, Stan Smith took the lead about halfway through

the race and held off a hard-charging Dave Lee until the final turn of the final lap when Dave, in his typical racing strategy, took the low line through turn four and raced to the finish line just ahead of Stan.

As I mentioned earlier, drivers who do not win their qualifying heat still get a chance to make it to the feature race by bumping up through the lower mains. For instance, Lindsey White finished third in his qualifier. He then finished first in the D-Main and transferred to the C-Main where he came in first. This allowed him to bump up to the B-Main where he again won so he then transferred to the A-Main or Feature Race. So that gives you a real-life demonstration of how the "bump-up" system differs dramatically from the more familiar Heart of America format that is used at most electric races. If you're interested in exactly how this bump-up system works, I have a computer spread sheet made up that gives the complete race day format showing the details for anywhere from one to twenty-two cars in a class. This spread sheet lists every driver/qualifier and the Heat Race/Feature Race line-up. Just let the editor know if you'd like to see an article on this.

Well, the next stop on the Quarter Scale Midwest Series is at the beautiful Machesney Park racing facility. We'll give you another report after that race and maybe have some further discussion on racing for money. In an upcoming column I'll also tell you about some 1/8 scale, four-wheel drive dirt oval racing that's going on in the Toledo, Ohio area.

See you at the track.



U.S. BOAT & SHIP MODELER

THE **COMPLEAT** MODEL NAUTICAL PERIODICAL!

For subscriptions only, call (800) 243-9593

The REAL how-to magazine on all types of model boats and ships; R/C, steam, electric, sail, racing, sport, static and operational scale. Also construction articles on all types, with full-size plans and patterns available, complete with re-print of building instructions.

SUBSCRIBE NOW (Starts with next published issue).

U.S. Only (includes APO and FPO): One year (4 issues) - \$13.95
Two years (8 issues) - \$24.85

Overseas (also Canada and Mexico): One year only - \$21.45 includes postage & handling. Payment must be in U.S. funds, drawn on a U.S. Bank.

Name _____ Sig. _____

Address _____

City _____ State _____ Zip _____

Visa or MIC No. (Add 5%) _____ Exp. Date _____

BACK ISSUES AVAILABLE - Limited supply. \$4.00 per copy. U.S. add 50¢ per copy, outside U.S. add \$1.50 per copy for shipping.

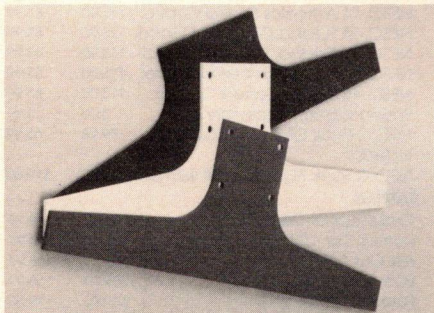
U.S. BOAT & SHIP MODELER, 898 West 16th St., Newport Beach, CA 92663

WHAT'S NEW



'74 NOVA BODY

Parma's hot-looking street rod, the '74 Chevy Nova, has an abundance of detail, making it a sharp number to whip around the neighborhood with. By using a Parma body mounting kit, you can mount the Nova on nearly every 1/10-scale chassis made.



J-CAR BUMPERS

These new bumpers from J-Car Custom Accessories are extra-wide for maximum protection and strength, and come molded in four Kydex colors. Look for them at your hobby shop. They'll fit RC10s, Ultimas, and the new Team Losi JRX-2.



DYNAMITE NITRO STICKS

Horizon Hobby Distributors has some big packs for big trucks, available in 2000 and

3000 mAh capacity to significantly increase the run time of your Clodbuster or other monster vehicles. These 7.2V, 6-cell packs use only quality Sanyo cells, so you're assured of high performance output from these batteries. You can find Dynamite packs at your nearest hobby shop.

CORVETTE 1/10 BODY

New from Parma, this 1989 Corvette ZR1 is formed in clear Lexan to retain the detail molded in to approximate the original silhouette. You can find this body, along with many others, at your Parma R/C car dealer.



CATCH AIR!

With the QRS 1/4 scale stadium off road truck!

- 43" LONG
- 20" WIDE
- 40-45 MPH



SEND \$2 FOR COMPLETE CATALOG



See your Dealer
or Contact QRS

QRS

QUARTERSCALE RACING SPECIALTIES, INC.

257 Garner Valley • Mountain Center, CA 92361 • (714) 659-4785

Advice For Car Modelers: Ram It!

#RED 04 Mars Light - rotating beacon	\$19.95
#RED 19 Car Headlights, 7.2 - 9 volt	10.95
#RED 20 Car Tail & Stop Lights - 9 volt	19.95
#RED 21 Car Turn Lights - Automatic operation	29.95
#RED 23 Real Strobe Light (Xenon) - 3 volt	29.95
#RED 24 RAM Lites - Off road, all aluminum	14.95
#RED 28 RAM Lites w/mounts for Tamiya Roll Bar	19.95
#RED 29 RAM Lites w/fold-away Roll Bar	24.95
#RED 31 3 Way Simple Siren - 3 sounds	19.95
#RED 32 Battery Peak Detector - 4-8 cells	29.95
#RED 37 Simple Servo Setter - adjustable fail safe	19.95
#RED 38 Gas/Diesel Engine Sound & Horn, 4" Speaker	39.95
#RED 39 VW Car Engine Sound & Horn, 2" Speaker	24.95
#RED 40 Gas/Diesel Engine Sound & Horn, 2" Speaker	39.95
#RED 43 Corner Marshall Alarm - the race winner	10.95
#RED 46 Machine Gun Sound Module	29.95

LIGHTS - Ram It!

SOUNDS - Ram It!

FAIL SAFES - Ram It!

• SEE YOUR DEALER • SEND STAMPED ENVELOPE FOR RAM INFO

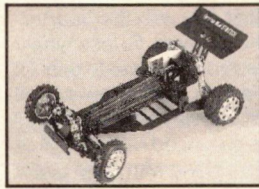
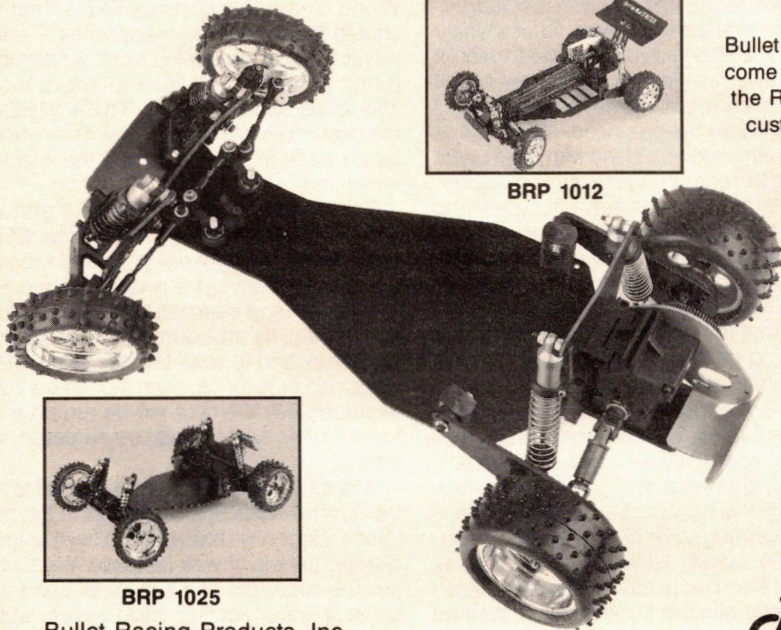
If unavailable locally send check, money order or full credit card info for the cost of the item plus \$2.00 (\$5.00 foreign) for immediate shipment. Include full address for U.P.S. Sorry no C.O.D.

Ram 4736 N. Milwaukee Ave. - Chicago, IL 60630

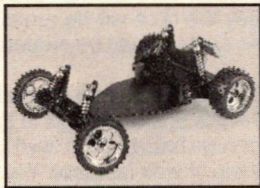
Bullet



Competition Kits



BRP 1012



BRP 1025

Bullet has taken the best of the RC-10 and the JRX2 to come up with the new RC-X2 competition kit. By using the RC-10 front, LOSI's JRX2 tranny, and Bullet's custom graphite components, the RC-X2 becomes one of the most competitive car conversions available today.

Also pictured is the BRP 1025 Ultima competition kit and Bullet's new Optima mid stretch trailing arm kit (BRP 1012). Not shown is the RC-10 competition kit (BRP 1110).

All kits can be ordered with the JRX2 or MIP transmission.

Chassis, towers, heat sinks, trailing arms and telescoping axles are all available separately.

Visit your local hobby shop and ask for Bullet Racing Products.

Bullet Racing Products



Dealer Inquiries Invited

Bullet Racing Products, Inc.
14435 Tomball Parkway • Houston, TX 77086
TEL. (713) 444-2267 • FAX. (713) 444-0438



Hot New Product

Gold Dot Tires

High Traction Low Wear

1/10 1/12 1/8 1/4 Sizes

Send \$1.00 for our catalogs



Manufacturers of highest quality 1/4th, 1/8th, 1/10th, 1/12th scale model racing equipment

Delta Manufacturing, Inc.
27 Racecar Court
Lorimor, IA 50149
(515) 763-2271
FAX ONLY: 515 763 2272



on the very limit and although he was in the grass twice, he still managed to squeeze out a solid 36 laps in 10.07.51, getting him up to thirteenth place!" Those two excursions in the grass cost Ralphie almost a full lap, but there were still two more qualifiers tomorrow. Now we knew he could do it.

The headlines of the next WC DAILY stated, "RALPHIE BURCH JR. TAKES POLE. After struggling all week, Ralphie's team got it together in the fifth round. Although they had to refuel twice, the team was confident to score a 37-lap result. Ralphie had to move through the field, which took him about three laps (high 16-second laps). Then he settled down and started to work on his TQ time with low 16's and high 15's. His first fuel stop lap in the fourteenth lap only took 20.86 seconds and his second pitstop was a record-breaking 20.36 seconds. Considering the average pitstop is 23.5 seconds, Ralphie had only lost two seconds by refueling twice. His TQ run showed his unequalled driving skills, with only three laps over 17 seconds (all 3-17.14!), and nine laps under 16 seconds with a fastest lap of 15.82 seconds. His race average was exactly 16.50 seconds a lap!"

Well, the monkeys were now Top Qualifier. Talk about starting from as low as possible, and then rising to as high as possible, it was a great feeling! However, as a team, overall we weren't doing as well as we knew we could do. Kevin Mercadante qualified in ninth spot. Re-Pete Fusco was twenty first and Cliff Lett was 27th. We really needed those 2-1/2 days of practice we lost to rain. We just weren't quite ready.

muffler came off and he was out.

Mike Swauger ran away with his first final, moved up to the next one, was leading it and got punted off the track.

Curtis Husting was safely in a move-up spot for his next final, when he ran out of fuel on the last lap! I'm sure glad I wasn't pitting him. Maybe I should have pitted him as I did in qualifying.

And now to the last day with the quarter-finals, semifinals and the final. Guess what? After the practice session it started to rain! Of course there was a rain date. However, it was two days earlier! The day after qualifying! When I first saw the proposed rain schedule three months earlier, I, along with John Grant the FEMCA representative, strongly questioned why the rain date was after qualifying and not the day after the finals. What they proposed didn't make a lot of sense. They said it was much more important to have the rain date for qualifying. I couldn't understand this, but that the way they left it. And now it was raining on the day of the finals and we didn't have a rain date.

We were standing in the covered pits watching it rain and the drivers were getting impatient saying it would be better to run in the rain than not at all. I didn't necessarily agree with this thinking, but when they called a Jury meeting to decide what to do (because the stands were full of spectators), they said they had to have a show for them. I didn't agree with this thinking either. We had traveled a whole lot further than the spectators, and this race was held for the 120 drivers and not for the spectators. So in my

take a genius to see what they're up to here. It's that same, "what's best for me and to heck with anyone else" attitude. We took a vote and of course the proposal was immediately defeated, whereupon the whole EFRA contingent of 15 people got up and left the room. I can remember thinking, I wonder what they would have done if I proposed that because ROAR has won twice as many World Championships as EFRA, that we should have twice as many votes. I would never think of proposing such a ridiculous thing, because I believe all three blocs should be treated equally. That's what's in the best interests of our hobby. They shortly came back in the room and the meeting continued.

For every EFRA racer with an attitude problem, there are 10 other normal EFRA racers who simply want to go and race together fairly. They're the important ones. And there are a lot of them who will go out of their way to help. As an example, a racer in England proposed to volunteer to mount pneumatic rain tires for us, even though our rules expressly say the race will be run on a dry track. But he said I should be prepared, so I agreed.

And so when we found out we had to run the quarter-finals and semifinals in the rain, all of a sudden we had a bunch of volunteers offering to help. It was fantastic. We had to pull the receivers and servos all apart and spray a waterproofing liquid inside, which they provided. They also got us some special air filters for the rain and some silicone spray to spray on the whole car. We thanked them by giving them some mufflers and all the fuel they could carry. They were great!

This would be our first chance to see what it's like to run in the rain. It was raining, but not too heavily. Just a steady rain. If you stood out in it for two or three minutes you would be soaked.

So Re-Pete Fusco and Cliff Lett were up in the first quarter-finals. They had put a diff in Re-Pete's car, because they thought it would be better in the rain. Cliff and all the rest of our cars had been running the solid axle. As the race went on, it was apparent Re-Pete had a handful. His car was worse than ever. On the other hand, Cliff's car was great. The very first time he'd ever run in the rain, he sat right on the leader's tail for 20 minutes, and finished about 25 feet behind, to move up to the semi. Running in the rain didn't look too bad.

They ran the first semifinal and then Kevin Mercadante and Cliff Lett were up in the next semifinal. It had stopped raining in the previous semifinal and the track was now damp, but there were no puddles on it. All of a sudden we were in our worst nightmare. Cliff was lapped in four laps. He drove perfect, never left the track, never made a mistake, but he was getting lapped every four or five laps. Kevin gave up simply thinking he couldn't drive on a wet track. Then I looked at the leader's car. He was running foam tires while we were still running the pneumatic tires. After the race we found out there was a tire called Aqua that worked perfectly under these track conditions. However, the tire hadn't been made for 1-1/2 years. You live and learn, but we were learning the hard way.

QUALIFYING POSITIONS

PLACE	NAME	COUNTRY	LAPS	TIME
1.	Ralph Burch Jr.	USA	37	10.10.74
2.	Lamberto Collari	Italy	37	10.12.86
3.	Stefano Columbini	Italy	37	10.13.85
4.	Rody Roem	Holland	37	10.14.59
5.	Jack Ermen	Holland	37	10.15.34
6.	Michael Salven	Germany	37	10.39.04
7.	Juergen Baehr	Germany	36	10.00.61
8.	Thierry Guillemier	France	36	10.01.45
9.	Kevin Mercadante	USA	36	10.03.6
10.	Michele Barnuzzi	Italy	36	10.03.09

The top four drivers have sit-outs for the Final (A Main).

The following morning were the slowest finals and a chance to get some sightseeing in. Ralph Burch Sr. and I decided that this nice sunny day would be an ideal time to go to the beach. So we went to the beach at Zandvoort, and to say that it was an eye-opening experience, would be putting it mildly.

But now it was time to get back to the track for the slower finals. Butch Kloeber finally got his car running fast enough and ran away with his first final, winning by three laps, with 16.2 and 16.3 second laps which would have qualified him into the semifinals. He easily moved up to the next final, but his flywheel had loosened up and he was through.

Barry Grossenbacher was going fast enough to make it to the top four, but he needed a little luck. He was in a terrible qualifying heat, and kept getting run off the track. In his final heat, he was leading by two laps, and the muffler bracket broke and his

way of thinking the only thing that mattered was what was good for the drivers.

A proposal was made to run the quarter-finals and semifinals rain or dry, but the final only in the dry. Because of what our drivers had said earlier, I voted for this proposal. We had 1-1/2 hours to waterproof our cars and practice in the rain. So we immediately got started on Mercadante's, Fusco's and Lett's cars.

There are some drivers and other people in Europe who have the feeling that what's good for me is the only thing that counts, instead of what's good for the hobby is good for everyone. A good example of this is what happened at the IFMAR meeting, which turned into a seven-hour enduro, thanks to the muffler situation and other things. As it stands now ROAR, EFRA and FEMCA each have three votes on all matters. Each block is treated as an equal, as it should be. EFRA proposed that the votes be determined by how many countries each block has. Meaning EFRA would have 12 votes, FEMCA seven votes and ROAR two votes. It doesn't

It took another 1-1/2 hours for the track to dry out, or so we thought, and the final got underway about 6:45 p.m. Ralphie took off from his #1 starting position around turn one and two, down the long straightaway and then turned to go around the bank at the end of the straightaway. However, his car just went straight off into the grass, even though he had full left lock on the steering, and he was pushing the brakes on. That corner was obviously not dry. But none of the other cars had any trouble. They were all obviously running the Aqua tires.

Once Ralphie got in the wet grass soaking his tires, he was history. He was having a hard time keeping his car on the track, let alone trying to race. He was getting lapped as easily as Cliff was earlier. It wasn't long before he was quite a few laps down. I thought I wouldn't say a word if he decided to pull it off the track.

But after about 15 minutes, he was beginning to figure out how to get through the bank. Not very fast, but at least without spinning out. And he wasn't getting lapped anymore.

Lamberto Collari had taken the lead, with Stefano Columbini in second and Rody Roem in third. It stayed that way for about 10 minutes and then Rody got by Columbini for second place. Collari pitted for tires about the 20-minute mark and Rody went into the lead. It took Collari's mechanics an unbelievable long time to change tires—2-1/2 laps! Right then Rody came in and it took him two laps to change tires. So Ralphie made up two laps quite easily.

Collari continued to lead with Rody second and Columbini third. Ralphie was starting to go faster now, and was running about the same speed as Collari. He was passing the slower cars and moving up from his tenth-place spot.

Ralphie pitted at 30 minutes for his tire change, but when Ron went to get the tires, someone had stolen the rear tires, which were there at the beginning of the race! Someone didn't want Ralph to win, I guess. So Ralph's tire change was postponed another five minutes, until I could get another pair in the pits.

After we changed the tires, which only took one lap, Ralphie said that's the best his cars' had run all week. And it looked it. He started laying down the fastest lap times of the race. He came up on Columbini, who

moved over and let him by. A few laps later, Rody let him by. And then in another few laps he was on Collari's bumper. It took a couple corners, but then Ralphie got by.

At about the 40-minute mark, everybody else changed tires again, and Ralphie gained another two laps. But this time it moved him into fourth spot! He passed the leaders one more time, and now he was only one lap out of third. A few minutes later he came upon Columbini again, who moved over and let Ralphie take over third.

Meanwhile Collari was sitting on Rody's rear bumper, less than a foot behind Rody, pushing Rody. All Rody had to do was plant Collari in the wall and Rody would win. You should have heard ten Italian mechanics in the pits *screaming* at Collari to keep away from Rody.

But then Collari started doing something I didn't think was right. He passed Rody and then pulled over, stopped, and let Rody go by. Then he passed Rody, stopped, let Rody go by. He was taunting Rody. I got the feeling there was no love lost between Rody and the Italian team. He did this four times. If I thought the Italian mechanics were screaming before, that was only a warmup. If they could have gotten their hands on Collari, he'd be black and blue.

Ralphie was still flying around the track. He passed Rody and Collari together. He had a chance to catch Rody for second spot, but Collari was too far ahead. Just then Rody's car quit on the track! They took it to the pits, put fuel in, but it wouldn't start. Meanwhile, Ralphie was making up time. They changed the glow plug, but it still wouldn't start. The engine had blown two minutes from the end.

Ralphie went into second with another incredible driving exhibition! Coming from dead last, laps down and able to finish second was unbelievable. Columbini moved to third, and 17-year-old Lamberto Collari became the first Italian World Champion ever. All of a sudden, instead of the Italian mechanics giving Collari black and blue marks, they were giving him kisses. The Italians celebrated all that night and for all anyone knows they're still celebrating!

I'd like to thank the MACH club for running a super race. Everything was run on time if possible, and I never heard of any lap counting problems. Theirs is a thankless job, but they deserve a great deal of thanks from all the racers.

beat2



CX

JR REMOTE CONTROL

2 Channel Racing Excitement!

Command the roadways or the waves with the *Beat 2 CX*. Pulse Code Modulation (PCM) makes it possible to select a fail safe system that will help to protect your model in the event of signal loss or interference. Incorporate this with servo reversing for both channels, and you have a versatile system at affordable pricing.

No frills, just pure, solid performance. Quick frequency changes are as easy as grabbing optional crystals (27 MHz), making it easy to be ready for any challenger. Each *Beat 2 CX* is equipped with an ABC&W™ receiver, two 507 servos, switch harness, and battery case. Take command with the *Beat 2 CX* 2 channel radio system - - JR quality at its best!

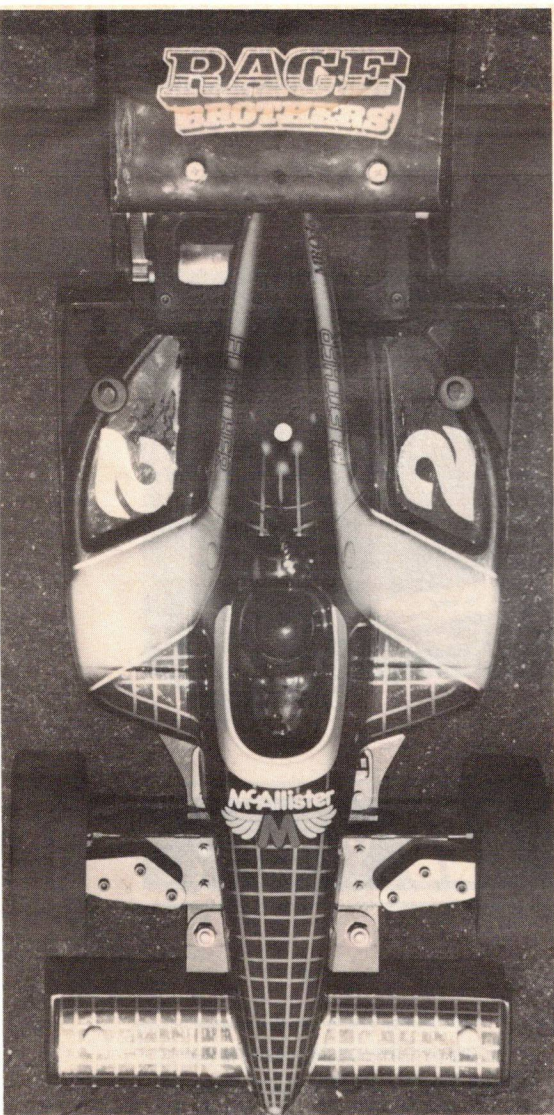
Available now through
your local hobby dealer
at yesterday's prices.

hobby Dynamics

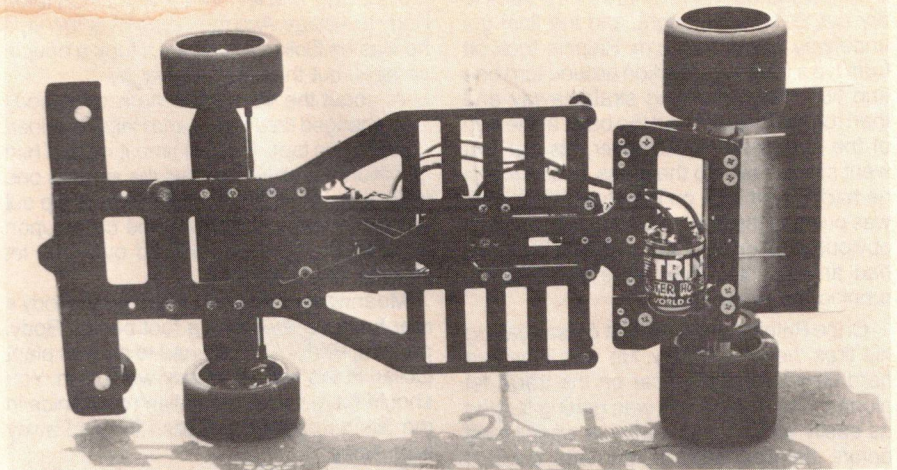
P.O. Box 3726
Champaign, IL 61826-3726
Phone 1-800-458-0241
FAX 1-217-355-0058

1989 IFMAR 1/8 GAS WORLD CHAMPIONSHIPS FINAL RACE Heemstede, Holland

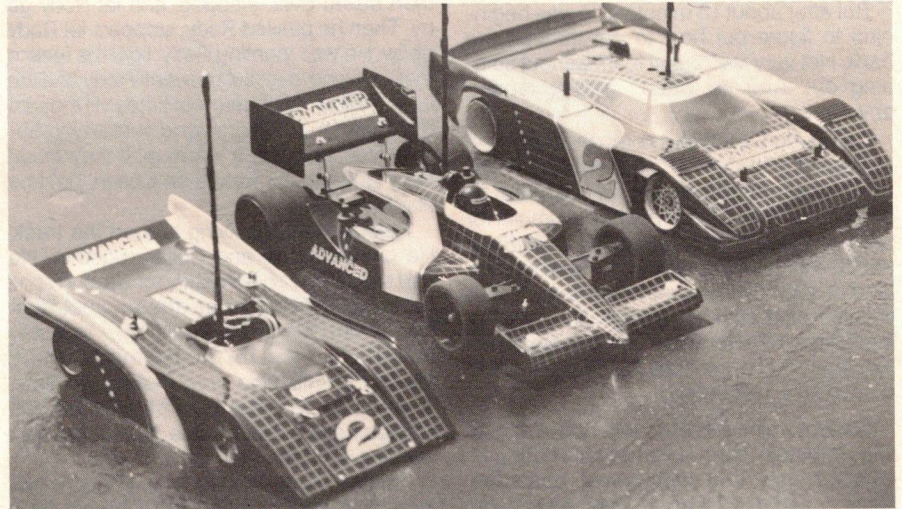
PLACE	NAME	COUNTRY	CAR	ENGINE
1.	Lamberto Collari	Italy	Blitz	Rex
2.	Ralph Burch Jr.	USA	Associated	Paris-Rex
3.	Stefano Columbini	Italy	Associated	Rex
4.	Rody Roem	Holland	Serpent	S-Power
5.	Andrea Hachler	Swiss	Serpent	Ops
6.	Roger Sahli	Swiss	Serpent	Ops
7.	Stefano Solaroli	Italy	Blitz	Ops
8.	Massimo Fantini	Italy	Blitz	Rex
9.	Domenico Calce	Italy	Blitz	Rex
10.	Michele Baruzzi	Italy	Blitz	Ops



Minitech wheels and tires complement the M.R. Ogle "Tron" paint scheme.



Underside of the Junior's chassis shows author's front end modification for mounting PC-17 body.



The Junior is a promising addition to the Advanced Racing Team's lineup of hot road racers.

main, I grabbed second as someone else slid by me for first. I really didn't win a race all day, but I've learned to take the wins where I can, and I didn't turn it down.

There's one modification I've made since that first race, and if you get any of the Agitator family you can see it for you. By flipping the saddleblock and pivot blocks upside down the caster adjustment can be made by tightening the nuts on top of the crossbeam and you don't have to loosen the bolts on the chassis bottom. This is simpler,

faster, and prevents the possible stripping of the bolt heads.

In summary, the Agitator Jr. has some significant advantages over the Agitator. It's a couple of ounces lighter, much simpler, and costs much less. With the upgrade kits, it's possible to start with the Basic Jr. kit, buy the rear bearings and graphite axle, then upgrade with the 1004 conversion kit that gives you the full tri-shock rear suspension. With the final 1002 graphite conversion kit you've got the full pro Agitator and you've

done it step-by-step. You can't ask for more than that. Happy racing!!

ART recently reconditioned a couple of NiCd packs for me using their ReFlex charging system. I haven't had a chance to see how well they work but if they add even a little life and power to already-tired packs, it'll be good news. It's a service they offer that just shows they are always thinking of the racer. That's it for now, we'll see you at the track.

1/4 Scale DRAG!



1988 Pro Stock Champion

Features:

- ★ Strut independent front suspension
- ★ True 5 link rear suspension
- ★ Pro Stock aero scoop
- ★ Tires: Racing rubber 4" wide rear, 1 1/2" wide front
- ★ Authentic pro stock full frame
- ★ Highly detailed Flexiglass® body in 6 colors
- ★ Body styles: 88 T-Bird, 89 Corvette, 89 Iroc-Z, 89 Olds
- ★ Spun aluminum deep dish wheels

New Era Models, Inc.

Serving the Modeler for Over a Decade.

1/4 Scale OVAL!



<p>East Coast Super Modified</p> <p>39" long 18" wide 19" high</p>	<p>Grand National</p> <p>48" long 18" wide 13" high</p>
---	--

Features:

- ★ Hand laminated Flexiglass® body in 6 colors
- ★ Body styles: 88 & 89 T-Bird, 89 Grand Prix, 89 Olds, 88 Monte Carlo, 89 Iroc-Z, 89 Corvette
- ★ Heli-arc welded 4130 high strength tubular steel frame
- ★ Dual rear disc brakes, ventilated
- ★ Sway bar pre-load system, front & rear
- ★ Coil over suspension
- ★ Independent front suspension, caster, camber & toe
- ★ Five link rear suspension fully adjustable with left & right metal rod ends
- ★ Precision ball bearings throughout
- ★ 35cc 2.3 HP Quandra or 23cc 1.4 HP Zenoah Max gas powered engine
- ★ Recoil starter, centrifugal clutch
- ★ Spun aluminum deep dish wheels

1/4 Scale ROAD!



1989 CORVETTE

44 1/2" long
18" wide
11" high



P.O. Box 7378, Nashua, NH 03060-7378 • (603) 880-3453 • FAX 603-888-8645 • Dealer Inquiries Invited

Continued from page 59

There's a "Turbo" switch that offers high-speed gearing or low-speed, hill-climbing torque when you need it. The gearbox is sealed to keep dirt and grit out, a necessary feature for the younger driver who disdains maintenance in favor of driving time.

The body of the T-Shot is impact-resistant plastic resin, molded in white, which contrasts nicely with the supplied stickers. The chassis is "engineering" plastic, chosen for long life.

An electronic speed control, with two forward speeds plus reverse, is something you wouldn't expect to find in a car like this; it's much more reliable than the cheaper mechanical units usually found in inexpensive or entry-level R/C cars.

The pistol-grip transmitter (on 27 MHz with interchangeable crystals), has a collapsible antenna and a knurled steering wheel. The pistol tranny is a good introduction for first-time drivers; it gets the novice started on the right foot and gets them familiar with the standard R/C car radio setup.

The Thundershot QD is definitely the class of the ready-to-run field in 1/14 scale. For novices or anyone seeking fun in the dirt with a minimum of hassle, this is certainly a car that's worth a look.

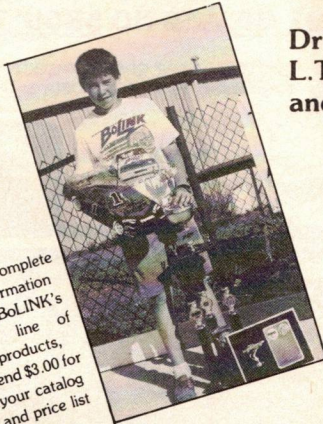
BoLINK

NATIONAL CHAMPIONS

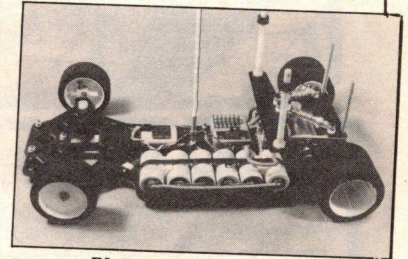
CONGRATULATES KEVIN LANIER

"1989 Stock Oval National Champion"

Driving the ELIMINATOR 10 with the L.T.O. (left turn only) chassis, Kevin TQ'd and led flag to flag.



For complete information on BoLINK's full line of products, send \$3.00 for your catalog and price list to:



BL-5069 L.T.O. Chassis

BoLINK R/C CARS, INC.

420 Hosea Rd. (RCM), Lawrenceville, GA 30245/(404) 963-0252/FAX: 404-963-7334

BELT DRIVE

TURBO GLIDE
TQs at ROAR
DIRT OVAL NATS



STOCK RC 10

REVERSABLE
SIDE PLATES
FOR REAR OR
MID ENGINE
APPLICATIONS



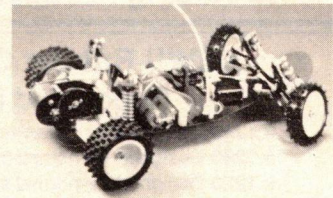
SPRINT CAR



STOCK ULTIMA



MID ENGINE



OFF ROAD



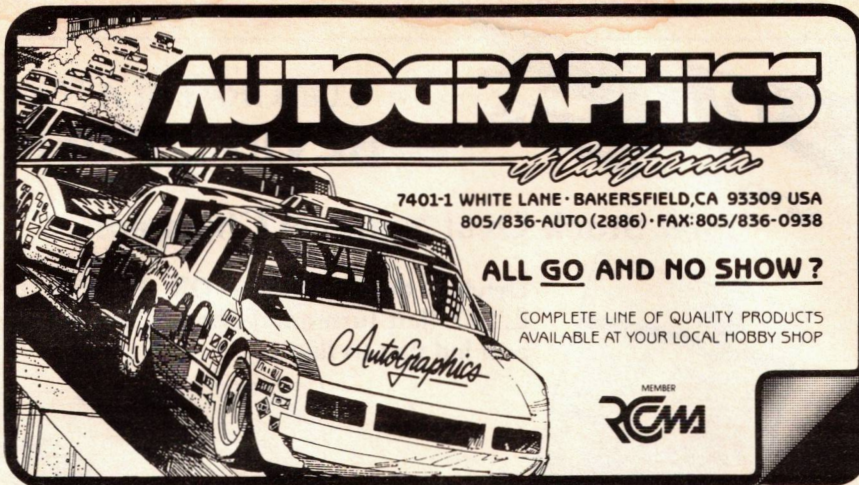
MADE IN U.S.A.

AVAILABLE AT YOUR LOCAL
HOBBY STORE

TRACK MASTER MFG., 1466 Pioneer Way Ste. 10
El Cajon, California 92020 (619) 422-0767

TURBO GLIDE

TRANSMISSION



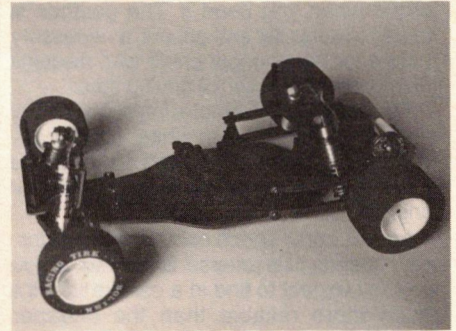
AUTOGRAPHICS
of California

7401-1 WHITE LANE · BAKERSFIELD, CA 93309 USA
805/836-AUTO (2886) · FAX: 805/836-0938

ALL GO AND NO SHOW ?

COMPLETE LINE OF QUALITY PRODUCTS
AVAILABLE AT YOUR LOCAL HOBBY SHOP

MEMBER
RCMA



PARTS FOR THE JR-X2

BoLink is producing a body mount kit and a lowering kit for the new Losi JR-X2 offroad racer. The body mount kit means you can adapt the JR-X2 to a stock car body for dirt or pavement racing. With the lowering kit you can drop the chassis height, bringing it closer to the ground for oval or flat track racing.

1/8 GAS SPRINTER!

Check out the awesome excitement of Moody "American" 1/8 gas sprint cars! Revving engines, smoking headers, spinning tires, flying dirt, power sliding through corner traffic! The realism of in-line drive, heavy duty clutch, rear disc brakes, coil suspension, all structural metal components! Send \$1 for more Moody Automotive oval track racing information today.

MOODY Automotive

MOODY AUTOMOTIVE
755 Ash Street AC
Flossmoor, IL 60422
312-799-5597



Basic "American" kit for \$595.00 requires your .21 engine and 2 channel radio system.



TRAXXAS SLEDGEHAMMER

The new Sledgehammer is no conversion—this is a from-the-ground-up design for a monster truck with four-wheel independent suspension; 8 coil-over, oil-filled shocks; a T-6 aluminum chassis that will keep your truck from high-centering on a curb or a big rock; a planetary gear differential like the kind on full-size monster trucks; and a 1989 Chevy Sportside body with a chrome rollbar and a drop-down rear bumper.

Made in the U.S.A.

Space Age Technologies, inc.



RC Racing Products For the Serious Racer

NEW!! Rubber Capped Sponge Tires
Suggested Retail \$37.50 pair

- # 1340 Designed for Abrasive tracks where wear is a problem.
- # 1230 Designed for normal tracks, modified motors, daytime use.
- # 1220 Designed for normal tracks, stock motors, indoor or nighttime use.
- # 1120 Designed for cool tracks or where traction is a problem.

Available widths: 1.125", 1.31", 1.75", 2.0"

Pro Bearing Hub Adapter \$1.80 pr.
Included free for limited time with purchase of front tires.

Our Unique Foam Tire Traction Compound

- Not a softener
- Improves Traction
- Not a Glue
- Resists Chunking

Total New Concept \$5.95

Distributed by: **REMOTE HOBBY DISTRIBUTORS**
9005-C Two Notch Road, Columbia, SC 29223
803-736-9446

NOW OPEN! Indoor Carpet Racing, Oval & Road Course, Columbia, S.C.



PARAGON SHIRTS & CAPS

Now you can wear the famous Paragon Racing Products logo with these new T-shirts

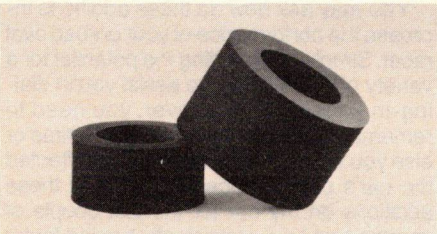
WHAT'S NEW

and caps. The T-shirts come in black or white, with the Paragon logo on the front, and Paragon Racing in two colors on the back. The hats come in black corduroy and are embroidered in white and magenta with the Paragon logo. For \$10.95 you can get either the shirt or the cap, direct from Paragon. Send your order with size shirt (S-M-L-X-Z) to Paragon Racing Products, Box MC2, 690 Industrial Circle So., Shakopee, Minnesota 55379.



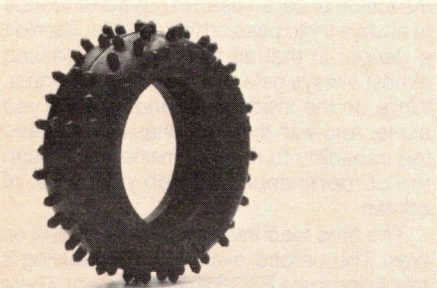
MATCHED SANYOS IN BULK

Parma International is now offering matched Sanyo batteries in bulk packages of 24, packed with a certificate of rating signed by the technician who matched them. You can get either SCR(1200) or SCE(1700) cells and really be in a position to dominate the proceedings down at the local track. Parma's bulk Sanyos can be obtained through any Parma dealer.



PARAGON POSITRAKS

These new Paragon tires offer the serious onroad racer the best in a one-compound tire that allows more throttle into and out of the corner without scrubbing away battery power. The new Positaks are now available in 1/12 sizes, with 1/10 coming soon. For more information, including a new color catalog, send \$2.00 to Paragon Racing Products, Dept. MC2, 690 Industrial Circle South, Shakopee, Minnesota 55379.



DYNAMITE FRONT SPIKES

These new CRP Dynamite front spike tires are great for traction in soft to medium track conditions. These Dynamite tires will fit CRP's 4116 and 4122 rims, and are sold by the pair.

THE WCM RACING TEAM

THE INNOVATORS IN 1/4 SCALE RC RACING

\$1395

THE WCM HOLESHOT

A PRO-STOCK RADIO CONTROLLED QUARTER SCALE DRAG CAR

This kit comes complete with two-speed transmission and hydraulic disc brakes. Black powdered-coated welded tubular steel frame and speeds in excess of 60 mph. Scheduled for shipment beginning March 1989!

Call your WCM Dealer or call the factory!

ORDER TODAY!

GENUINE **WCM INC.**
PARTS 214-322-4869 factory
Rt. 2 Box 207A, Dept. DR • Buffalo, Texas 75831

WAGONHILL HOBBIES

FREE UPS SHIPPING **FREE UPS SHIPPING**

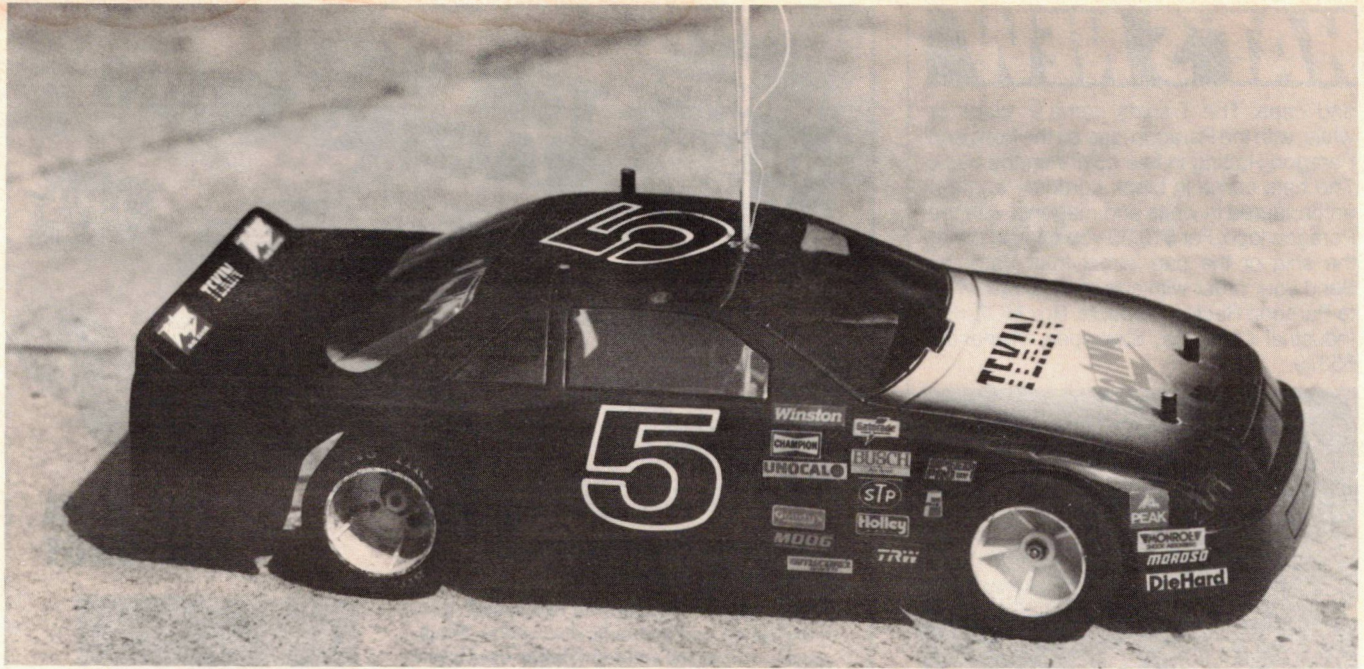
225 S. Broad St., Grove City, PA 16127

GREAT DEALS ON A GREAT CAR

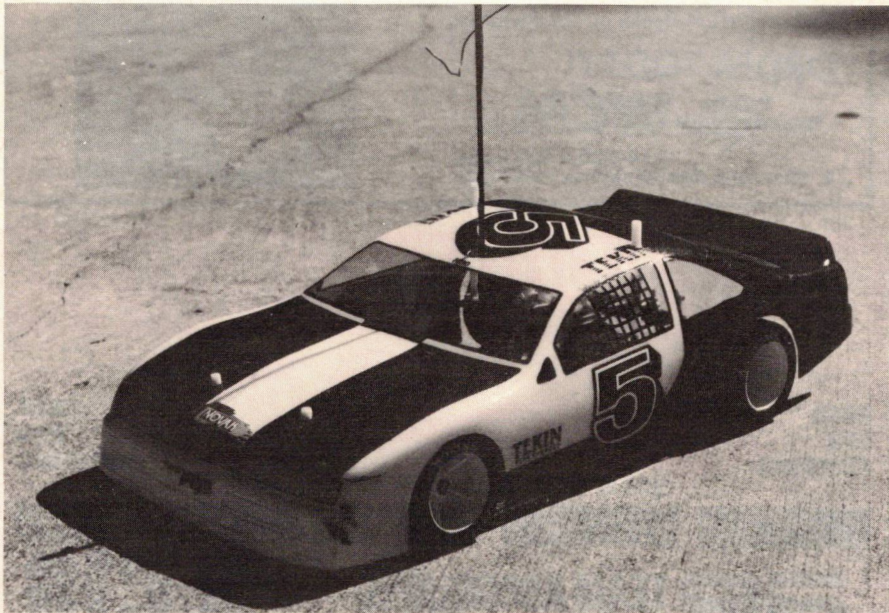
TEAM ASSOCIATED R/C10

	#6010 W/Bushings	#6016 W/Bearings
KIT <small>(CAR ONLY)</small>	\$135.00	\$170.00
with Futaba 2-Stick radio, battery, and DC Quick Charger	\$228.00	\$268.00
with Futaba Sport Pistol radio, battery, & AC-DC Quick Charger	\$274.00	\$314.00
with Futaba Magnum Junior radio, Sanyo SCR battery, & MRC or ProTech AC-DC Quick Charger	\$299.00	\$339.00

Mastercard/Visa Free Shipping **1-800-874-6229** C.O.D. add \$2.00
PA customers add 6%



One of the two Bodies of the Month, the LeBaron body with NASCAR decals is from BoLink R/C Cars.



Our other Body of the Month, also from BoLink, is the aerodynamic Thunderbird for 1989 NASCAR competition.

in by using the shocks at the rear of the car. If you tighten up on the right-hand shock, more weight is transferred to the left-front wheel which in turn makes the car turn to the left quicker. To test this, set your car on a flat surface and adjust the shocks as far back (loose) as possible and then pick up on the left-front wheel and then on the right. You should feel equal pressure. Next tighten up on the right-hand shock. Again pick up the left wheel and then the right. You should feel a considerable difference in pressure between the left and the right. This all helps your oval racer to make left-hand turns.

The kingpin brace provides for a stronger front end, increases the steering slightly, and perhaps most importantly helps keep your tires wearing evenly. This is really a simple part as it is just a straight piece of graphite (or fiberglass) with two holes in it. The holes fit over the kingpins with the "E" clips to hold it

on. Believe it or not it really works and it does help keep your tires wearing evenly. I usually wear out a set of front tires on an oval track in about three to four races. With this kingpin brace, the tires last about twice as long.

The graphite T-plate is just a replacement that will provide a lighter-weight car while providing slightly more stability.

The new motor pod with adjustable ride height adjusters comes as a unit and provides the ability to adjust your car in a variety of ways. You can raise or lower the height of your rear axle to three different heights; standard, offset #1, and offset #2. Or I guess if you wanted to you could mix the adjusters to have one side of your axle at a different height than the other. I am not sure what this would do to the handling of your racer.

The new differential is a brass-sleeved, graphite version and comes with a ball bearing and a nylon nut. The bearing goes in the

center of the spur gear and allows the power to be distributed to both rear wheels equally as well as a super-smooth differential action. I have heard that if you pin your diff rings (or glue them), you will have better performance while cornering and under acceleration. I have tried this on my dirt cars and it does seem to work, however I have not tried it yet on the onroad cars.

You may ask how do these additions increase the performance of your onroad oval racer. Simply by providing the potential for a variety of adjustments to assist you in dialing-in your racer. However, you need to remember to make one change at a time or else you will not know what change affected the car's performance. I have used these additions on my car for the last couple of months and I am consistently turning faster lap times. Some of the faster times can also be attributed to practice, fiddling with, and learning about the car. This is a necessity for any racer. Once you learn what a change here versus a change there will do, you will be able to adjust your car better and quicker with better and more predictable results. For ovals you want to be able to turn left as good and as fast as possible while still being able to run straight down the straights. These adjustments have made it easy to pass on the inside of cars. I used to have a tendency to always try to pass on the outside. There is a danger in that as the car being passed almost always gets to use you as a bumper. While on the inside they tend to leave you alone. And with the LTO chassis, you have the capability to hug the inside line though the corners; depending on your tires, of course.

The tires lead into next month's topic on tires. The onroad oval racing is causing a revolution in the R/C tire development. There are real racing rubber tires on the market. I will report on the performance of some of these tires next month.

This month's body of the month are the two BoLink bodies featured in this article, the '89 T-Bird and the LeBaron. •

TOWER HOBBIES ANNUAL CATALOG

THE SINGLE BEST VALUE IN R/C!

• 288 Pages Jam-Packed with Thousands of R/C Products from Nearly 300 Different Manufacturers.

• The Most Complete Guide to R/C Including Product Information, Accessory Completion Guides, Instructions, Building Suggestions, Racing Tips, etc.

• Includes Cars, Boats, Planes, Helicopters, Motorcycles, Engines, Radios and Every Accessory You Need!

HOW TO GET YOUR ANNUAL CATALOG:

The Tower Catalog is included FREE with your first order, or available by itself for only \$3.00 (a coupon for \$3.00 off your first mailed-in order is included).

Don't miss out - Order yours today!

FREE R/C SALE FLIERS!



Tower Talk is your bi-monthly guide to the latest in the R/C cars and more. Order your FREE copy today and get:

- The industry's biggest, best selection of sale prices.
- Phone Specials, combos, and exclusive special sale promotions in 72 + product-packed pages.

Speedmart is Tower's new guide to the best hop-ups available for improving the performance of your R/C car - 32 pages filled with great ideas for your model!

Just Call Us Toll-Free

Phone 1-800-637-4989

or Mail this Coupon to:

Tower Hobbies, Dept. RCMC
P.O. Box 778, Champaign, IL 61824-0778

- Yes, send me the Annual Tower Hobbies Catalog (\$3.00 enclosed).
- Yes, send me a FREE Speedmart.
- Yes, send me a FREE Tower Talk.

Name _____

Address _____

City _____

State _____

Zip _____



New 1990
Tower Catalog
Coming Soon

Stock Number	A&L	Retail Price	Now Only
CK1001	Steer Bellcrank Kit-Ultima	\$15.95	\$12.99
CK1002	Steer Bellcrank Kit-Opt Mid	15.95	12.99
CK1003*	ARISTO-CRAFT 260 2-Ch, 2 Servos, Pistol	69.95	49.99
CK1004	ASSOCIATED RC10 w/o Batt./w/Body	225.00	129.99
CK1005	RC10 w/B Brg & Body	290.00	164.99
CK1006	RC10 Kit w/Grph Chassis	250.00	139.99
CK1007	RC10 Kit w/Grph Chassis-BB	325.00	189.99
CK1008	Yokomo YZ-10 4WD Kit	399.00	239.99
CK1009	RC12L Grph./No Body 1/12	245.00	149.99
CK1010	RC10L On Road Kit-FG	170.00	99.99
CK1011	RC10L On Road Kit-Grph	235.00	139.99
CK1012	BOLINK 1/10 Elim Sport-No Elec	99.95	69.99
CK1013	1/10 Elim Sport-Mtr/SP Ctl	129.95	92.99
CK1014	COMPOSITE CRAFT 1/10 Predator Road Racer	249.95	139.99
CK1015	1/10 Predator Lynx	299.95	179.99
CK1016	DURATRAX Brg Set-Clod Buster (20)	74.95	49.99
CK1017	Brgs 5X11 Stainless (6)	18.00	10.49
CK1018	Brgs 5X10 Stainless (6)	18.00	12.99
CK1019	6C 1400mAh Flat Pack-Tam	24.95	16.99
CK1020	6C 1400mAh Flat Pack-Kyo	24.95	16.99
CK1021	6C 1400mAh Hump Pack-Tam	24.95	16.99
CK1022	7C 1400mAh Flat Pack-Tam	29.95	21.99
CK1023	7C 1400mAh Hump Pack-Tam	29.95	21.99
CK1024	7C 1400mAh Flat Pack-Kyo	29.95	21.99
CK1025	7C 1400mAh Hump Pack-Amps	29.95	21.99
CK1026	Front Comp Shocks-3" (2)	24.95	16.99
CK1027	Rear Comp Shocks-4" (2)	24.95	16.99
CK1028	FUTABA FX-10 1/10 Offroad Buggy	129.95	49.99
CK1029*	**2PBKA 2Ch, 2 S132H Srvo, Pstl	189.95	112.99
CK1030*	**2PBKA 2Ch, 2 S148 Srvs, Pstl	159.95	89.99
CK1031*	**2PBKA 2Ch, 2 S9601 Srvo, Pstl	239.95	134.99
CK1032*	**2PBKA 2Ch, S132H Srvs, MC112B	214.95	124.99
CK1033*	**2GS 2Ch, 2 S148 Srvs, 2 Stck	99.95	46.99
CK1034*	**2PB 2Ch, 2 S148 Srvs, Pistol	119.95	54.99
CK1035*	**2PB 2Ch, 1 S148 Srvs, MC112	169.95	84.99
CK1036*	**2NBR 2Ch, 2 S148 Srvs, 2 Stck	114.95	57.99
CK1037*	**2NBL 2Ch, 2 S148 Srvs, 2 Stck	104.95	54.99
CK1038*	**2PBKA 2Ch, 1 S148 Srvo, MC112B	199.95	117.99
CK1039	HOBBICO 905 AC/DC Multi-Charger	57.95	37.99
CK1040	910 Variable Rate AC/DC MltChg	64.95	45.99
CK1041	HYPERDRIVE Hyper 10 On-Road Kit Grph	449.95	299.99
CK1042	1/10 Scale Hyperdrive Kit	129.95	99.99
CK1043	RC-10 Hyperdrive Kit	89.95	69.99
CK1044	Optima Mid Hyperdrive Kit	59.95	49.99
CK1045	Total Hyperdrive Kit	269.95	199.99
CK1046	KYOSHO Sling Shot 4WD Dirt Oval 1/10	339.95	249.99
CK1047	Shadow 4WD Electric 1/10	194.95	119.99
CK1048	Aero-Streak 4WD Elec 1/10	224.95	109.99
CK1049	Optima Mid 4WD Elec 1/10	289.95	179.99

Stock Number	KYOSHO (Cont'd)	Retail Price	Now Only
CK1050	Turbo Opt Mid SE-4WD 1/10	\$379.95	\$239.99
CK1051	Ultima Elec Buggy 2WD 1/10	199.95	109.99
CK1052	Turbo Ultima 2WD Elec 1/10	279.95	189.99
CK1053	Ultima Pro 2WD/Grph 1/10	259.95	189.99
CK1054	Raider 2WD Electric 1/10	119.95	89.99
CK1055	Raider ARR Electric 1/10	149.95	89.99
CK1056	Maxum Front WD 1/10	249.95	89.99
CK1057	Big Brute 2WD 1/10	169.95	99.99
CK1058	Hi-Rider Vette 2WD 1/10	179.95	99.99
CK1059	Double Dare 4WD/4WS 1/10	234.95	169.99
CK1060	Beck Stocker ARR 1/12	119.95	69.99
CK1061	Honda CR-X 2WD 1/12	179.95	89.99
CK1062	Peugeot w/Lights 2WD 1/12	179.95	89.99
CK1063	Honda NSR500 Cycle 1/8	114.95	49.99
CK1064	Yamaha YZR500 Cycle 1/8	114.95	79.99
CK1065	Rocky 4WD Electric 1/10	199.95	129.99
CK1066	Slinger MKII 4WD Gas 1/10	299.95	219.99
CK1067	Assault w/OS CZ1 2WD 1/10	319.95	244.99
CK1068	ZR1 Corvette w/12 CZR 1/10	359.95	269.99
CK1069	Rampage 2WD w/12 CZR 1/10	359.95	269.99
CK1070	6C 1200mAh Power Pk/Kyo	28.95	16.99
CK1071	7C 1200mAh Power Pk/Kyo	35.95	23.99
CK1072	6C 1200mAh Power Pk/Tam	28.95	18.99
CK1073	6C 1700mAh Speed SCE-Tam	44.95	33.99
CK1074	6C 270mAh Ball-Mini	29.95	21.99
CK1075	6C 600mAh Ball-Mini	39.95	33.99
CK1076	Ball Diff-Ult, T-Ult-Up	44.95	24.99
CK1077	Bearing Set-Ult, T-Ult (14)	49.95	31.99
CK1078	Bearing Set-Brute, Hi-Rider(12)	23.95	18.99
CK1079	Rod Set-Adjustable	15.70	9.99
CK1080	Car Aids Screw & Nut Set	39.95	24.99
CK1081	Plat Shocks-Short 3" (2)	39.95	24.99
CK1082	Plat Shocks-Long 4" (2)	39.95	24.99
CK1083	360ST LeMans Elec Motor	29.95	14.99
CK1084	240ST LeMans Elec Motor	27.95	14.99
CK1085	Super Stock 34" Motor	27.95	17.99
CK1086	Mega 12x2 Paved Oval Motor	39.95	24.99
CK1087	Mega 14x2 Dirt Oval Motor	39.95	24.99
CK1088	Mega 16x2 4WD Off-Road Mtr	39.95	24.99
CK1089	Mega 18x2 2WD Off-Road Mtr	39.95	24.99
CK1090	Mega 20x2 On Road Motor	39.95	24.99
CK1091	Mega 22x1 Outlaw Stock Mtr	24.95	14.99
CK1092	Mega 360 Monster Truck Mtr	24.95	14.99
CK1093	LeMans 4WD Precision Mtr	79.95	49.99
CK1094	LeMans 2WD Precision Mtr	79.95	49.99
CK1095	LeMans On-Road Prec Mtr	79.95	49.99
CK1096*	*Pulsar Pro 2000 2 Ch	99.95	59.99
CK1097*	*Pulsar EXP 2001 2 Ch	119.95	84.99
CK1098*	*Impulse II 2 Ch/2 Stck	82.95	59.89
CK1099*	*Impulse III w/Cycle RS Set	109.95	79.99
CK1100*	*RS Set for Cycles	69.95	53.99
CK1101	SC-500 Speed Control-Kyo	89.95	64.99
CK1102	DC Multi-Charger II	39.95	27.99
CK1103	DC Peak Charger	119.95	87.99
CK1104	6 Cell DC Power Quick Chg	24.95	18.99
CK1105	Quick Chg 7.2V-270mAh	24.95	17.99
CK1106	Quick Chg 7.2V-600mAh	39.95	31.99
CK1107	Standard Field Bag	19.95	14.89
CK1108	Extra Large Field Bag	23.95	18.99
CK1109	TEAM LOSI Revolution Insane Motor	75.00	52.99
CK1110	MARUI 1/12 Big Bear Datsun Truck Kit	117.95	79.99

Stock Number	MINICRAFT	Retail Price	Now Only
CK1112	1/10 Lazer 2WD Buggy	\$89.95	\$49.99
CK1113	MRC 1/10 Elec Black Foot 2WD	144.95	93.99
CK1114	1/10 Elec Monster Beetle	207.95	124.99
CK1115	1/10 Elec 4WD/4WS Clodstr	354.95	219.99
CK1116	1/10 Elec Mud Blaster	184.95	114.99
CK1117	1/12 Elec Mid Night Pumpkin	163.95	105.99
CK1118	MRP Budweiser Stock Car	169.95	104.99
CK1119	Budweiser Indy Car	169.95	104.99
CK1120	NOVAK NESCT1X Elim SC/LED-Fut J	220.00	129.99
CK1121	NESCT1 Dlx SC w/LED-Fut J	180.00	109.99
CK1122	NESCT4 Econ SC w/LED-FutG	115.00	69.99
CK1123	NESCT4 Econ SC w/LED-FutJ	115.00	69.99
CK1124	NESCT4 Econ SC w/LED-Kyo	115.00	69.99
CK1125	PAASCHE VL-Set Airbrush Set	93.00	64.99
CK1126	PARMA Chrome Wheels-Clodbuster	20.00	16.99
CK1127	1/10 Corvette ZR1 Body	19.00	14.99
CK1128	1/10 BigFit Body w/Decal	25.00	19.99
CK1129	PRO-LINE RC10 Mnsr Truck Conv Kit	79.95	54.99
CK1130	PRO SHOP Pro Auto Peak Converter	34.95	24.99
CK1131	PRO-TECH 700 AC/DC Digital Charger	109.50	69.99
CK1132	701 AC/DC 4-8 C Charger	68.50	51.99
CK1133	702 AC/DC 6-7 C Charger	58.50	42.99
CK1134	707 AC/DC Peak Charger	89.50	62.99
CK1135	ROYAL 1/10 Ford Ranger 4WD	109.95	89.99
CK1136	1/10 Crusher	109.95	79.99
CK1137	TEKIN ESC600J Pro-X Tmpft SC-FutJ	165.00	99.99
CK1138	Peak Detector Charger	88.00	59.99
CK1139	TRINITY Bearing Set-RC10	64.95	41.99
CK1140	Big Daddy Drag Race Mot	80.00	56.99
CK1141	Monster Stock Motor	28.00	17.99
CK1142	Pure Gold 2WD Motor	80.00	49.99
CK1143	Silver Dot Modified Mot	80.00	49.99
CK1144	Godzilla Dirt Modified Mot	80.00	49.99
CK1145	Speedworks 427 4WD Mot	39.99	23.99
CK1146	Speedworks 350 2WD Mot	39.99	23.99
CK1147	1/12 Gish Wing	7.99	6.99
CK1148	TRACK MASTER Dir Drive Trans-RC10 Alum	94.95	74.99
CK1149	Dir Drive Trans-RC10 Grph	109.95	89.99
CK1150	Dir Drive Trans-Ultima-Alum	94.95	74.99
CK1151	Dir Drive Trans-Ultima-Grph	109.95	89.99
CK1152	TWISTER Hurricane Wet Mag Motor	80.00	49.99
CK1153	Terminator Wet Mag Motor	80.00	49.99
CK1154	Typhoon Drag/Oval Motor	80.00	49.99
CK1155	Annihilator Drag/Oval Mot	80.00	49.99
CK1156	Carolina Mountain Motor	80.00	49.99
CK1157	Flash Modified Motor	80.00	49.99
CK1158	UNIVERSAL ENERGY 6 C 4400 mAh D Cell-Cldbst	145.00	99.99
CK1159	2000 mAh SCE 6 Cell-Stick	69.95	59.99

800-637-4989

Orders Only

800-637-6050

Order Assistance/Information

Foreign: 217-398-3636

Send mail orders to TOWER HOBBIES P.O. Box 778, Champaign, Illinois 61824-0778. (Send \$5.25 for regular postage & handling. For C.O.D. also add \$3.95.) Prices are good on orders received by the 15th of the month of this issue only.

HOURS:

All times are Central Time.
Monday-Thursday: 8:00a.m.-10:00p.m. Saturday: 9:00a.m.-5:00p.m.
Friday: 8:00a.m.-5:00p.m. Sunday: 10:00a.m.-7:00p.m.

REFER TO AD NUMBER 10K01 WHEN ORDERING

TOWER HOBBIES

have a couple of questions that I am hoping you may be able to shed some light on for me. First, I was wondering if there is some trick that you know of for getting the paint up into the narrow ends of the fins. My airbrush was partially successful, but the results weren't to my satisfaction. Also, now that the paint is on the inside of the car, is there some way of protecting it so as to avoid getting it all scratched and chipped? I have put so many hours of work into it that I hate to see it get ruined the first few times out (like when my boyfriend runs it into a tree!). I thought that perhaps some kind of clear plastic flexible spray coating might work. If you know of anything which might help, I would appreciate knowing. For reference, I have been using Pactra paints for most of the body, and

Tamiya Acrylic for tinting the windows. Thank you again for your interesting and enlightening articles.

Yours truly,
Patricia Adolph
Rexdale, Ontario, Canada

Patricia: You have a couple of very good questions. The raised "fins" at the rear of G.T.P. cars and others with an upturned rear spoiler can be a real problem to effectively paint. True, an airbrush just doesn't seem to want to blow any paint up into such narrow, enclosed channels, and spray cans will probably cause runs and sags in the adjoining areas. I quit fighting this and broke down and painted

the fins on the outside of the body. If you get some paint into the raised areas, you can sometimes just brush (or spray) the inside edge of the fins, instead of spraying both sides on the outside. As for extending the durability of your new paint job, you probably won't get any chipping or flaking off with Pactra paints. This stuff will flex more than the Lexan body plastic, so your real problem is keeping rubbing wires and plugs, and other untethered or moving parts away from rubbing a hole in the paint from the underside. If you see this starting to happen, or just suspect it will happen, just put a large piece of clear cellophane packing tape on the body's underside in the endangered area. It doesn't add much weight, either.—Mike.

LOOKING FOR DEL

Reader response to our plea in the July issue asking for help in finding our Readers' Pages editor, Delbert Bagshaw, was overwhelming and gratifying. Thanks to your help, Del is back behind locked doors, wading through the mountain of readers' photos. The only sour note in all of this is the assumption you people have that just because you helped track him down, you deserve a free subscription. The very ideal! Fortunately, we have an understanding boss, who said to give subscriptions to those who wrote in before Del was found. So congratulations to those readers who responded swiftly. Now we'll see if we can't keep ol' Del at work on the backlog of photos sent in to the Readers' Pages. Once again, thanks for your kind assistance.

Dear RCMC,
I found Del on page 37. I like the magazine.
Shannon Gomez
Lancaster, Pennsylvania

Shannon was the first to write to tell us where Del could be found. We gave her a free subscription (she didn't ask for a reward), and maybe she told all these other guys to write in for a sub!

Dear RCMC,
I love your magazine. I noticed you had an ad about your missing editor, Delbert Bagshaw. I've discovered his whereabouts. On page 37 of your July issue, Del is the guy with the big glasses sitting behind the man with the big hat, and the guy with the fluffy hair. How about a free subscription to award my services of returning Del? Your loyal reader,
Jeff Williams
Baton Rouge, Louisiana

Dear RCMC,
I have recently purchased your magazine for the month of July. It's rad! When I looked at the Readers' Page I saw this question: "Have you seen Del?" Well, a matter of fact I have. If you turn to page 37 in the middle (a

little to the left), there he is. I'll send the page in.

Yours truly,
Raylen Witt
Regina, Saskatchewan
P.S. Please send page back if possible.

Dear RCMC,
I sent in my Readers' page photo before you said you have stopped taking them for a while, then in July I saw that the Readers' Photo editor was missing. Del, wherever you are, come back to work so that my photo will be seen in *R/C Model Cars*! I've told all my friends and my parents that it would be in your magazine and I will be embarrassed if it doesn't show up. Can someone else fill in for Del until he comes back?

Morris Bleyer
Utica, New York

I AM HOLDING DELBART
HOSTAGE. IF I DON'T
RECEIVE A FREE SUBSCRIPTION
YOU CAN KISS DELBY-BABY
GOODBYE. I WANT MY
NAME TO BE ANONYMOUS.
SEND THE R/C MAGS TO
THIS ADDRESS
~~10061 SLEEPY WILLOW~~
10051 SLEEPY WILLOW CT.
SPRINGHILL, FL. 34608
XXX/000
000PS ~~BILLY THE KING~~

Dear RCMC,
You guys must think we have the brains of a cheeseburger when you came up with this contest to find your Readers' Pages editor. I picked him right out of the crowd of subscribers on page 37 of the August issue with no problem. You didn't say I'd win a subscription for finding him, but I know you will do what's right, right? You can start by sending me a new copy of the August issue. I cut out the two-page picture of Ayrtton Senna's Formula One car and put it on my wall. I need a new, uncut copy please.

Darrell Cook
Peoria, Illinois

Dear RCMC,
Dudes: Del's trying to hide out in the crowd shot on page 37 of the July issue. He's the dopey guy about six rows back to the left of the gardener in the floppy hat with glasses. Tell me where the picture was taken (it looks like outside Chicago) and I'll go track down the sucker and bring him in for you. I figure that's the only way I'm going to see my car photo in your Readers' Pages.

Steve Elkins,
Skokie, Illinois

P.S. I don't want a subscription; send cash money!

Dear RCMC,
In your July 1989 issue on your Readers' Pages, you asked for the whereabouts of Delbert Bagshaw. I found him in the crowd of the photograph on page 37. I'll be sending in a photo of my RC10 for Del to prepare for your magazine. Keep up the great work.
Yours Truly,
Andrew Botticelli
Brick, New Jersey

Dear RCMC,
Are y'all still lookin' for Del? I saw him at a recent gathering of *R/C Model Cars* subscribers. Check out page 37.

Martin Rojas
Galveston, Texas

P.S. I need some JRX-2 parts!

HOT WHEELS

2 Channel Racing Excitement!

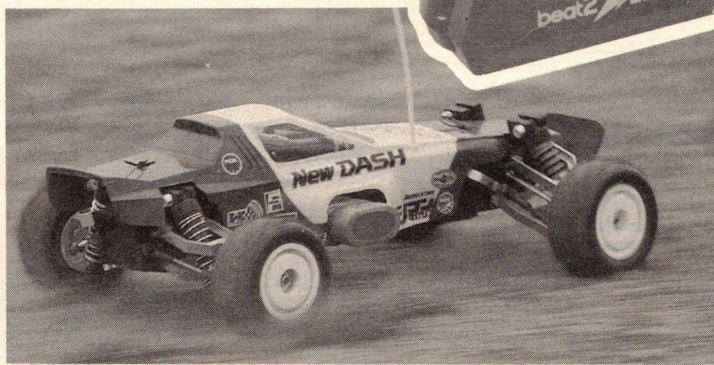
Put the magic of electronics in your hands with the *Alpina 2* channel wheel radio systems. These radios combine superior quality and styling with exceptional performance to bring you the hottest 2 channel radios yet! The AM system is designed to facilitate fine tuning of steering and throttle control right at the transmitter, easing much of the burdens of the mechanical installation. The PCM system has 1 to 1 & 3 to 1 throttle kick down for reverse or brake type speed controls.

ALPINA PCM

beat2 **ALPINA**



JR REMOTE CONTROL
RADIO CONTROL SYSTEMS



Hot Features

Take advantage of servo reversing and variable rate steering. Use the steering and throttle trims to get everything set to the best final positions. You'll be set with two 507 servos, and an ABC&W™ receiver. Just in case you arrive at the track with the same frequency that everyone else is on, you can make a quick change by removing the plug in crystals, and replacing them with a new, less crowded frequency. The *Alpina PCM* system also features a user selectable fail safe system that in the event of signal loss or interference, the throttle will cycle to the low throttle or off position thus preventing model runaway. Great for your R/C car or boat!

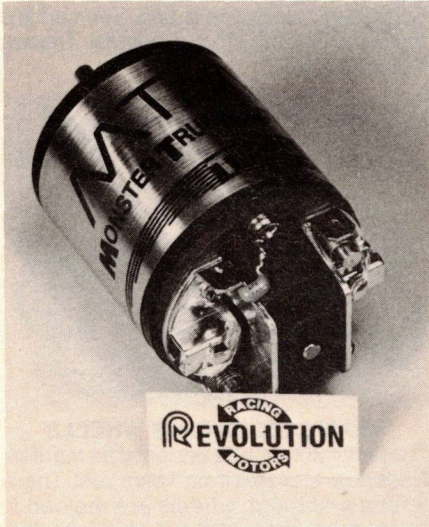
*Available now through
your local hobby dealer.*

hobby
Dynamics
DISTRIBUTORS



'40 FORD PICKUP

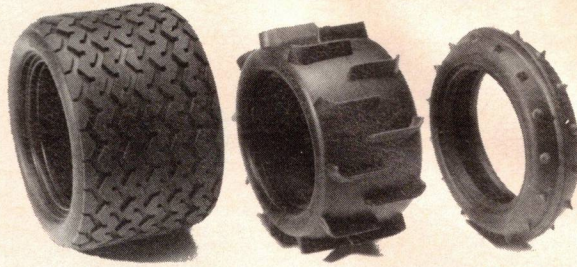
Here's a classic truck body from BoLink that can turn your monster truck into something special. It comes molded in clear Lexan, ready for painting, and lists for \$18.00. For more information, write to BoLink R/C Cars, 420 Hosea Rd., Lawrenceville, Georgia 30245.



TEAM LOSI RACING MOTOR

Team Losi has developed a new MTM motor that's intended for monster truck racers. This motor is hand-built, and packs a lot of high torque in its can. The unique construction provides for a cooler-running motor, which minimizes expensive rebuilding. Look for it at your Team Losi dealer.

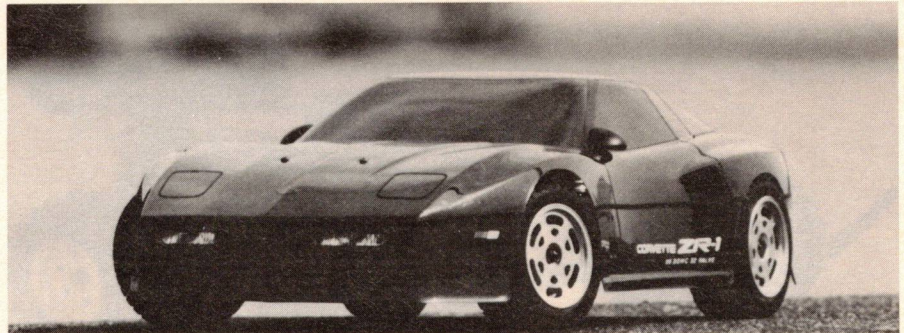
WINNERS' CIRCLES.



While others count down the seconds 'till the start of the race, you can count on **PRO-LINE** tires to tear up the competition. **PRO-LINE** tires set the pace with a range of sizes, styles, widths and tread patterns designed to rule the track. So, get into **PRO-LINE** today and get used to winning.



Send \$2.00 for our complete 1989 catalog packed with **PRO-LINE's** hottest RC tires, wheels, and accessories. **P.O. BOX 456, BEAUMONT, CA 92223 (714) 849-9781 FAX (714) 849-2968**



KYOSHO ZR-1 CORVETTE

Here's a 1/10-scale, gas-powered model of the Chevy Corvette ZR-1. It comes with four-wheel independent suspension to smooth out the ride, with large-capacity oil-filled shocks giving excellent performance on any paved course. The engine is an O.S. CZ-R

.12-size with a handy recoil starter that makes racing fun with little frustration. The gearbox includes a smooth-action differential and is enclosed to keep grit and gravel out of the gear teeth. A two-channel radio is required to operate this hot sportster. Look for the ZR-1 at your nearest Kyosho dealer.

ALVES SPRINT CARS

- Top Qualifier — 1988 Roar Asphalt Nationals
- Top Qualifier — 1988 Roar Dirt Nationals
- 1988 Roar National Dirt Champion
- More "A" Main Qualifiers at Asphalt Nationals Than Any Other Manufacturer
- All Drivers in "A" Main at Dirt Nationals Were Driving Alves Sprint Cars!

DRIVE A CHAMPION!
Feel the Difference

1988 ROAR NATIONAL CHAMPION



DEALER INQUIRIES INVITED

ALVES MANUFACTURING
1455 CALIENTE WAY • SAN JOSE, CA 95132 • (408) 923-6364

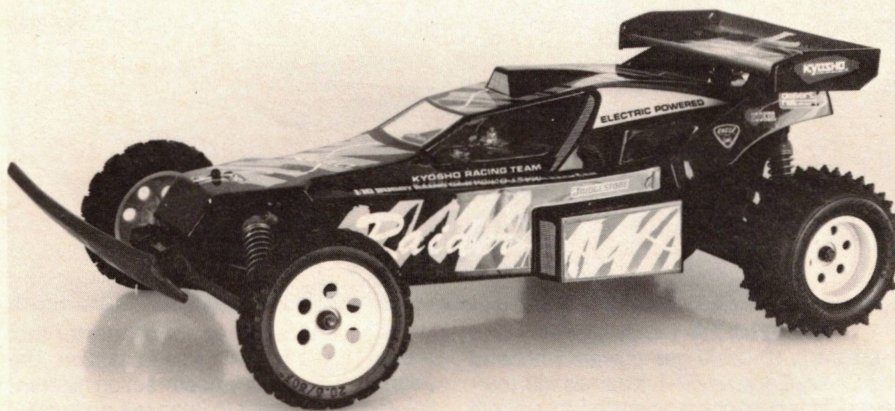
RACING TO BRING YOU THE BEST TIRES IN THE WORLD.

A development of the PRO-LINE® Racing Team. A tire with technologically advanced rubber compounds and competition tread designed for specific track conditions. This combination of high-tech rubber compound provides you with unmatched performance for the racer's edge.

RED

Race Engineered Design

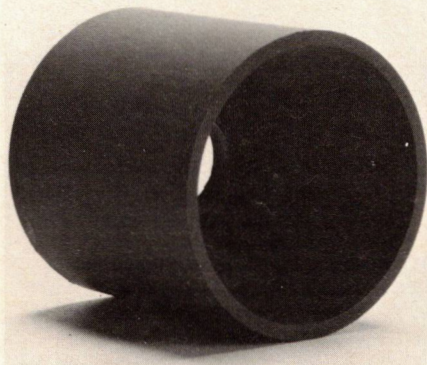
PRO-LINE,
P.O. BOX 456
BEAUMONT
CA 92223
(714)
849-9781



KYOSHO RAIDER ARR

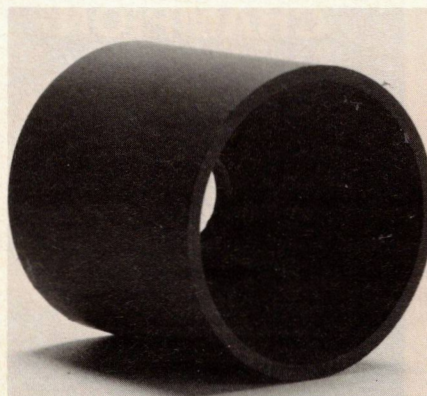
Here's an assembled version of the tough and well-received Kyosho Raider, spiffed up with neon decals and neon-green wheels and a mid-mounted LeMans stock 05 motor included. The buggy runs great on its four-wheel independent suspension, and the

composite-plastic parts give long and reliable service. A fine entry-level car that's just the thing to keep little brother or young son out of your competition car and off enjoying some offroad fun of his own. Look for the Almost-Ready-to-Run Raider at your nearest Great Planes/Kyosho dealer.

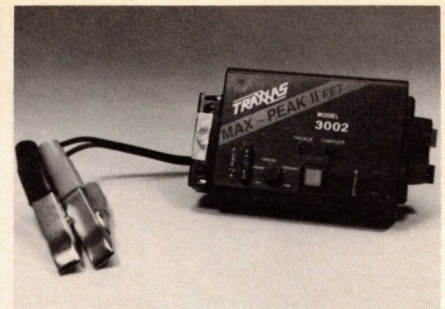


1/10 ONROAD WHEELS

Custom Racing Products' new 1/10 onroad wheel fits all popular 1/10-scale onroad cars

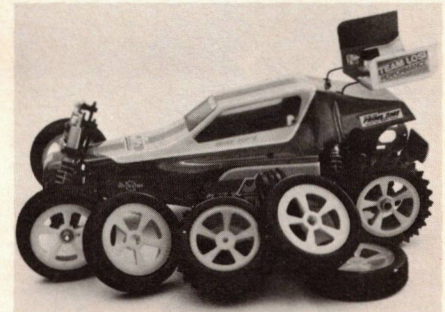


and comes molded in bright yellow. The 2-inch wide, 2-inch diameter wheels retail for only \$5.99 at your nearest CRP dealer.



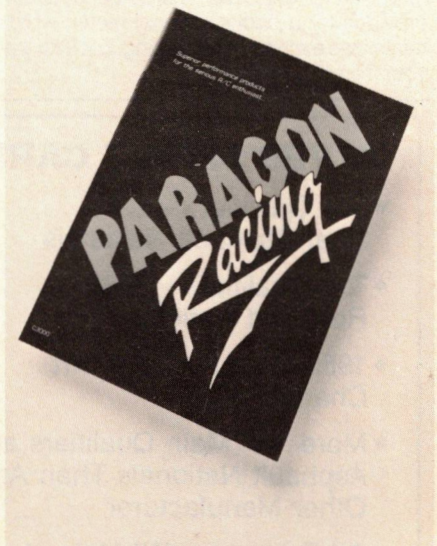
TRAXXAS PULSED PEAK CHARGER

The new Max Peak II Pulsed Peak Charger from Traxxas has advanced peak-detecting circuitry that helps to take the guesswork out of charging batteries. The Max Peak automatically powers down to trickle charge and sounds a buzzer when the pack has peaked. The current is adjustable for from 4 to 7 cells and the Max Peak II is fully fuse protected. Suggested retail price is \$55. You can find the Max Peak II at your nearest Traxxas hobby dealer.



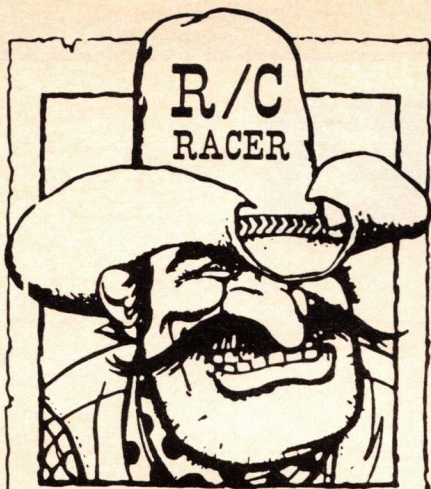
TEAM LOSI RACING WHEELS

The new nylon wheels designed for the JRX-2 are now available from Team Losi. These strong and tough wheels are molded in fluorescent orange and red, plus a dyeable white color. Both front and rear wheels are available at your hobby shop now.



PARAGON CATALOG

The new Paragon catalog is here, containing a colorful look at all the available Paragon products for R/C car racing. For your copy, send \$2.00 to Paragon Racing Products, Dept. MC2, 690 Industrial Circle So., Shakopee, Minnesota 55379.



REWARD!

WANTED . . .

. . . all R/C racers and fans for membership in R.O.A.R., America's largest and fastest growing organization dedicated exclusively to remote control auto racing

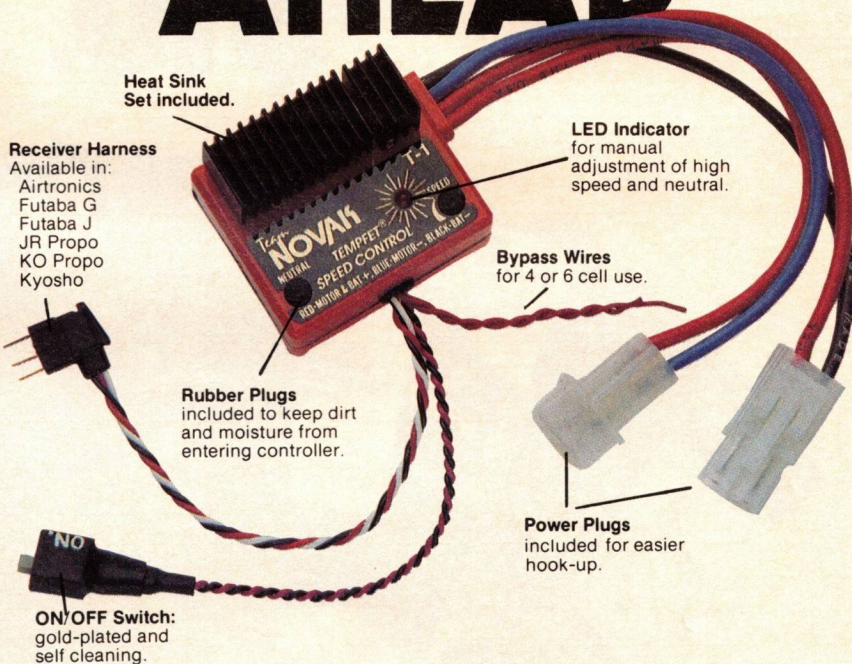
REWARDS . . .

- \$1,000,000 Liability Protection
- \$1,000 Accident/Medical Insurance
- REV-UP Magazine
- Competition License for participation in R.O.A.R. sanctioned events
- Official R.O.A.R. rules/regulations
- PLUS MUCH MORE!

FOR INFORMATION ON HOW YOU CAN COLLECT YOUR REWARDS, WRITE . . .

R.O.A.R. Information Center
P.O. Box 1536
Lawrenceville, GA 30246-1536

FULL SPEED AHEAD



TEMPFET® Speed Controls™

Designed to keep you ahead of the competition.

National & World Champions.

Discover why 15 of the 17 1988 ROAR National events were won by racers using NOVAK speed controls, and why Masami Hirotsuka won the 1988 1/12 Scale IFMAR World Championship using our NESC-T1 speed control.

Lower Voltage Drops.

The voltage drops of our new TEMPFET® Speed Controls™ have been improved to allow greater acceleration at the starting line and a longer running time. And, most importantly, greater performance for a lower cost.

No Brake Failures.

By the use of temperature-sensing MOSFETs, we have eliminated aggravating speed control failures due to overloads such as shorted motors, locked-up transmissions or inadequate ventilation. Our new circuitry gives complete protection (except against reverse voltage to the controller) without the use of a fuse or a loss in performance.

Specifications	T4	T1	T1X
Weight with Wires (oz.)	1.74	1.74	2.46
Voltage Drop (V/A)	0.0045	0.0030	0.0015
Continuous Current (A)	176	276	576
Voltage Input (cells)	4-10	4-10	4-10
Braking Power (A)	26	26	52
Response (msec)	15-20	15-20	15-20
Current Efficiency	99%+	99%+	99%+
Motor & Battery Plugs	yes	yes	no



...because you're not the only one who dreams of winning.

NOVAK ELECTRONICS, INC. 128-C East Dyer Rd., Santa Ana, CA 92707 (714) 549-3741
TEMPFET® is a registered trademark of Siemens Components, Inc. TEMPFET® Speed Controls is a trademark of NOVAK ELECTRONICS, INC.

FOR NEW SUBSCRIBERS ONLY

SIX ISSUES FOR \$10.



Now you can get six exciting months of *R/C Model Cars* for only \$10! This is a deal you can't pass up! *R/C Model Cars* has more of what you're looking for with product reviews, personality interviews, racing features, and the latest in new R/C kits along with tips on how to get the most out of your radio-control car. The racers who know choose *R/C Model Cars*, the number one R/C car magazine in the world. Subscribe today and save!

SUBSCRIBE TODAY!

New subscribers: Send your name and address and a check or money order to: *R/C Model Cars* 6 for 10 Offer, 898 W. 16th Street, Newport Beach, California 92663, or call (800) 243-9593 to enter your subscription to *R/C Model Cars*.

Name _____

Address _____

City _____ State _____ Zip _____

Mastercard or Visa # _____ Exp. Date _____

Signature _____

Note: This offer is good only in the Continental United States.

Give your RC model
a burst of brilliance
and realism
with **BADGER**
air-brushes and
accessories



The **Model 180-II** is a lightweight, portable compressor that will operate one air-brush of any make.

Foto Frisket™ film is a self-adhering masking and stenciling material. The transparent backing enables you to lay over lettering, logo, etc. to cut stencils.

The **Re-Coil™** air-hose is lighter than conventional air-hoses but just as strong.

The re-coil feature prevents damage to the air-brush by keeping the hose off the floor.

The **Model 200** single action air-brush is simple to operate yet produces the same soft spray pattern as dual action air-brushes. The 200 sprays modeling paints, ink, dyes, acrylic enamels and lacquers, etc. The 200 offers a choice of 3 reservoirs and heads.

For a complete 24 page catalog send \$1.00 for postage and handling to:



©BACo. 1988



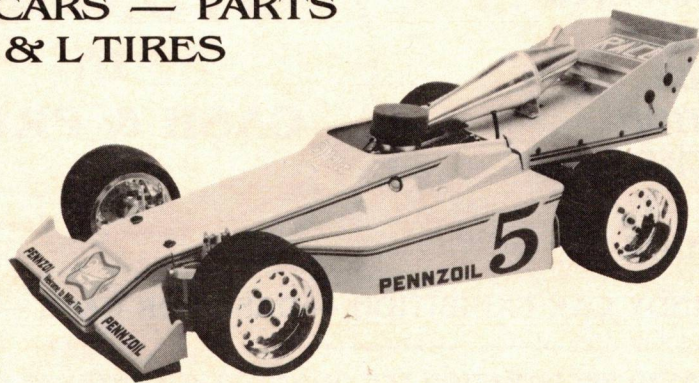
BADGER AIR-BRUSH CO. 9128 W. BELMONT AVE. FRANKLIN PARK, IL 60131
Dist. in Canada by: HOBBY INDUSTRIES - 24 Ronson Drive - Rexdale, Ontario M9W 1B4



TRACKSIDE RACING ENTERPRISE

1/4 SCALE HEADQUARTERS
RACO CARS — PARTS
B & L TIRES

**NEW RACO
SUPER MODIFIED
NOW AVAILABLE**



SUPER MODIFIED	\$1195.00
GRAND NATIONAL	\$1150.00
OUTLAW CAMARO	\$1250.00
JACK RABBIT	\$ 995.00
COMPLETE STOCK RACO PARTS	

**TRACKSIDE
RACING ENTERPRISE**
16178 MARTINCOIT
POWAY, CA 92064

CALL: (619) 451-2852
HRS: 6:00 - 10:00 P.M. (PACIFIC)

KING K8

HOTEL
&
GAMBLING HALL
LAS VEGAS, NEVADA

Presents

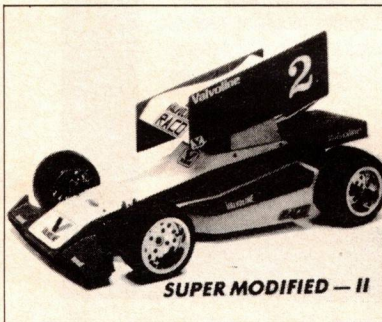


3rd ANNUAL 1/4 scale

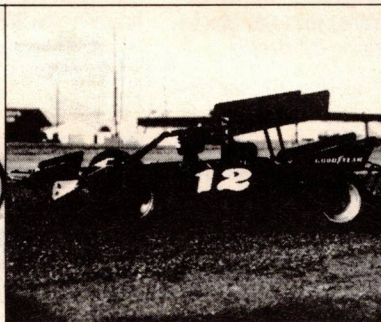
SUPERNATIONALS '89

October 11-14, 1989 • LAS VEGAS, NEVADA
To Be Held at UNLV Thomas & Mack Stadium

Co-sponsored by R/C Model Cars Magazine



RACO



WCM WINNERS CIRCLE



AUTO ENGINEERING



RACE TECH

THESE 3 GREAT SUPER MODIFIED CARS, AND AN INDY CAR WILL BE GIVEN AWAY!!

Plus a Skellinger Quick Change Rear End and other fabulous prizes.

- ALVES ENGINEERING
- RACECRAFT TIRES
- R.C. MODEL CARS
- AUTO GRAPHICS
- AIRTRONICS
- B&L TIRES
- CAR ACTION
- R / C NEWS
- FUTABA
- AIRTRONICS

- SCHEDULE OCT. 11 - 14
- WED.: PRACTICE
- THURS.: PRACTICE
- FRI.: QUALIFYING
- SAT.: ALL MAIN EVENTS
- SUN.: EXHIBITIONS

\$10,000⁰⁰
IN
CASH & PRIZES

ALSO SEE OVER 160 OF THE
MOST OUTSTANDING 1/4
WHEELERS IN THE COUNTRY IN
SHOW-N-SHINE COMPETITION

INDY CAR EXHIBITION — DASH FOR CASH — EAST • WEST GRUDGE MATCH

CUT HERE

PLEASE SEND REGISTRATION FEE OF \$40.00 PER ENTRY IN EARLY TO SUPERNATIONALS '89, 6412 ALTA, LAS VEGAS, NV 89107. IF ANY QUESTIONS, PLEASE CALL "TRACK MASTER" KENNY HIGDON AT (702) 258-8511

Grand National _____ Sprint _____ Super Modified _____

Car No. _____ Freq. No. _____ Car No. _____ Freq. No. _____ Car No. _____ Freq. No. _____

Name _____ QSAC No. _____ (MUST HAVE CARD TO RACE)

Address _____

City _____ State _____ Zip _____

RACES WILL BE RUN UNDER QSAC RULES • ENGINES LIMITED TO 23CC

For Hotel Reservations call: 1-800-634-3488 (Reservations are necessary to guarantee room)

HOSTILE TAKEOVER!

The Royal **CRUSHER** is one monster that's ready to take over. Its big 5" tires, **4-wheel steering**, independent suspension, powerful Mabuchi 540 motor and **4-wheel drive option package*** make any terrain ripe for the taking. Chrome rims, chrome bush guard, chrome roll bar, and a wild decal set are

all standard equipment. Add it up and you get one hostile machine that's ready to "take it all on" — even a price war! And in this type of battle, our low retail price wins hands down.

See the **CRUSHER** today at your local dealer and begin planning your own takeover.

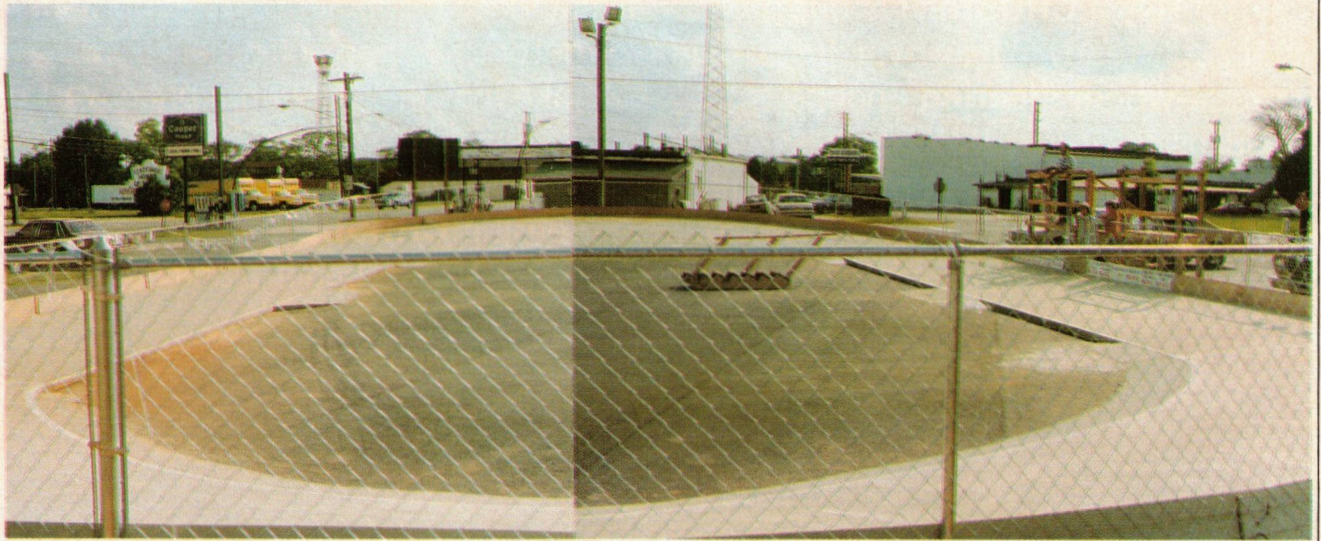


**4-wheel drive conversion available as option kit at modest additional cost.*

Royal

PRODUCTS CORP.
790 W. TENNESSEE AVE.
DENVER, CO 80223

TRACK OF THE MONTH



Dixie North Speedway

Highway 90 (Across from Pizza Hut)
Crestview, Florida

The onroad racing craze is spreading and is getting closer to home all the time. The latest in concrete oval tracks is located in Crestview, Florida, located on Highway 90 across the street from the Pizza Hut.

The owners of the track are Rick and Mary Blasberg and they have built a first-class R/C race track. The phone number is (904) 682-9104. If you are on Interstate 10, exit at Highway 85 and go north about two miles to Highway 90 and turn left and the track is about a block down on the left. You can not miss it.

Races are every Friday and Saturday nights starting at approximately 7 p.m. Registration starts at 6 p.m. Currently, the racing classes consist of gear box, 1/10-scale and 1/12-scale road cars. Currently only stock classes are being run; however, Rick promises that as soon as there are enough racers for a modified class, one will start. The current racers are turning approximately seven-second laps. The cost of racing is always on

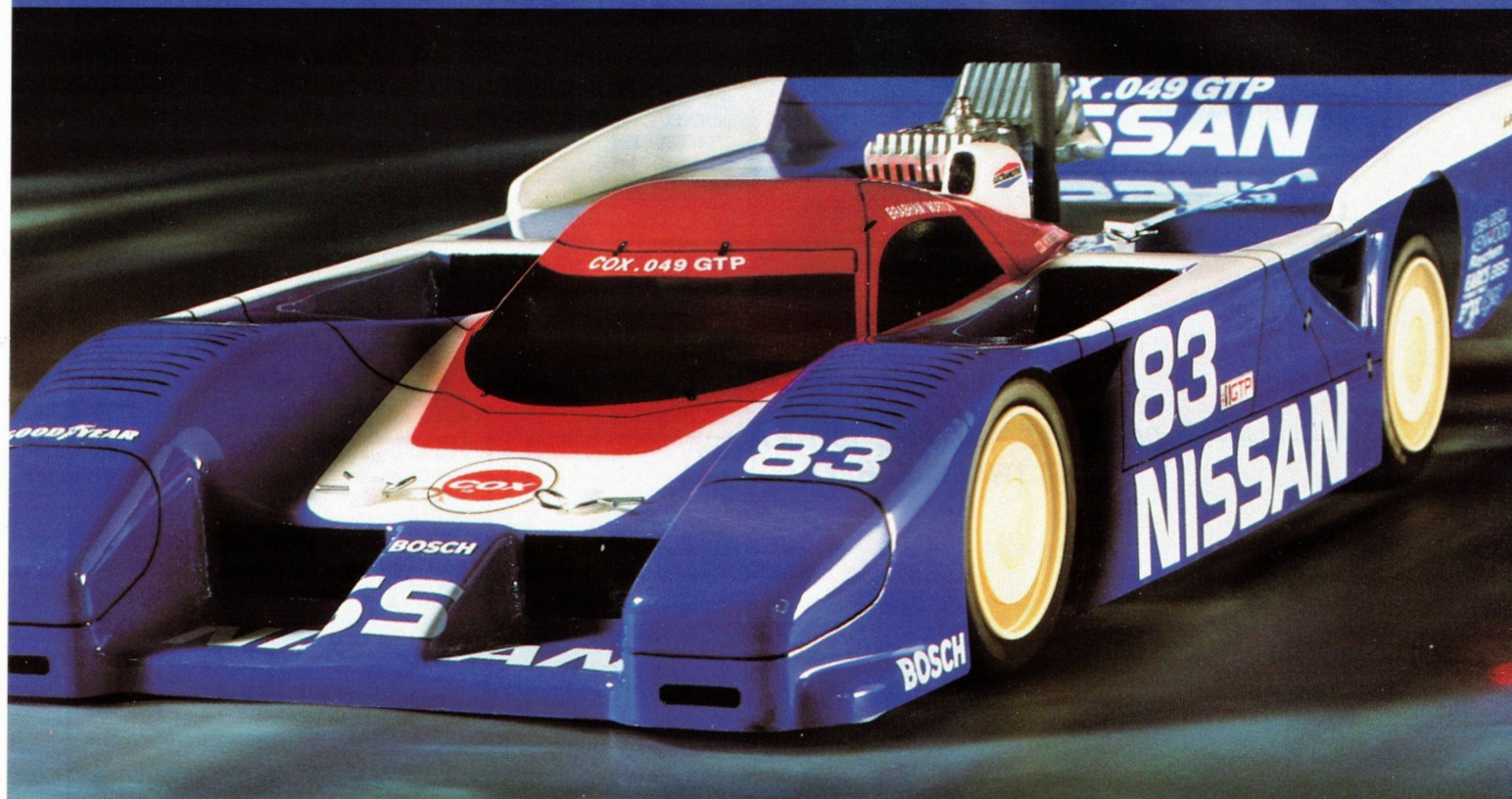
everyone's mind and currently the cost, as I write this, is \$7.00 per class.

The track is 300 feet around the centerline and is slightly banked. The banks are just enough to help you through the corners, but you still have to drive the car as the banks won't make the turn for you. The first and second turns are slightly narrower than turns three and four. Turns one and two are approximately 63 feet across while turns three and four are approximately 69 feet. This keeps you on your toes because if you set your car for turns one and two and let the car go through three and four on its own, you will be off in the infield which is completely paved. There is plenty of illumination on the track and plenty of AC outlets (about 40).

There is something about Saturday night stock car racing. The atmosphere is just different than day racing. And the racers at this track are some of the nicest and most competitive that you will find. Rick says to all, come vacation in Florida, go to the beach during the day, and race at night! ●

.049 GTP NISSAN

Radio Controlled 1/12 Scale On-Road Race Car



GAS* POWERED

* Use Cox Super Power Fuel Only

You're looking at the newest car to hit R/C racing.

The Cox .049 GTP Nissan.

It's powered by the world's finest small engine, the Cox .049.

There's nothing like it.

Running at peak performance, the incredible Cox .049 engine turns an awesome 23,000 RPM. . . That gives you the thrilling sound of full size racing.

Full out, the .049 GTP Nissan travels in excess of 30 MPH. . . That delivers the speed you need for exciting, competitive racing.

The .049 GTP Nissan combines the latest R/C racing technologies: minimal weight, fiberglass chassis, rear axle differential and independent coil front suspension. . . That enables you to corner the .049 GTP like it's riding on rails.

The engine burns Cox fuel. . . That produces the same smell of nitro you experience at full size race tracks.

Give your racing some gas.

Drive the new Cox .049 GTP Nissan.

You'll find it at your favorite race track or hobby shop.



1525 East Warner Avenue
Santa Ana, CA 92705

Finally
A New Technology in 1/4 Scale
Racing Tires



Hook up with

B & L Racing Products USA

- 100% Rubber
 - Sprint Cars
 - Grand Nationals
 - Super Modifieds
 - Pneumatic
 - Foam Core
- OFFICIALLY LICENSED
BY GOODYEAR

TO ORDER / INFO
CALL OR WRITE
P.O. BOX 69 DEPT. A
NUEVO, CA 92367
(714) 521-6334
(714) 657-3441
FAX: (714) 521-9539

SUBSCRIBE TO R/C MODEL CARS

CONVERT YOUR RC-10 TO A
DIRT TRACK SPRINT

Go For the Gold!!



• CAD-CAM Designed • CNC Fabricated •

- Light weight all metal Alum. 2024
- Stronger Chassis, Gold Anodized
- Increased rollover protection
Alum. Tubular Roll Cage & Wing Supports
- Adjustable lightweight Alum. Wing
- Race winner on dirt & asphalt
- Fully adjustable for track conditions
(Indoor/Outdoor)
- Super strong Lexan Body

\$140.00 Retail

Send Check or Money Orders, No COD's
To:
RBS Fab., Inc.
230 N. Hoernerstown Road
Hummelstown, PA 17036
(717) 566-9513
Hours: 8:00 to 5:00 E.S.T.



RBS FAB. INC.
RACE DIVISION

Super Sprint

DISTRIBUTOR & DEALER INQUIRIES INVITED

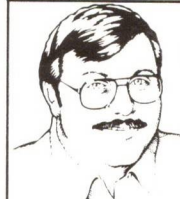
AD INDEX

Advanced Racing Technologies	13
Alves Manufacturing	77
Andys R.C. Products	3
Associated Electrics	44-45
Autographics	70
B & L Racing Products	86
Badger Air Brush Co.	81
Bolink R/C Cars, Inc.	69
Bullet Racing Products	65
Cox Hobbies, Inc.	85
Dahm's Racing Bodies	23
Delta Manufacturing, Inc.	65
First Quarter Hobby & Racing	72
Futaba Corp. of America	Cover 3
Gilmer Hobby & Machine, Inc.	72
HO/RC Hobbies, Inc.	23
Hobbico	31
Hobby Dynamics Dist.	67,75
Imex Model Co., Inc.	15
Ja Lea Company	76
Kyosho	10,11
Live Performance	33
M.C.S. Products	17
M.K. Engineering	29
Model Rectifier Corp.	Cover 4
Moody Automotive, Inc.	70
National Hobbies	64
New Era Models, Inc.	68
Novak Electronics	79
Oval Track R/C Racing	76
Paragon Racing Products	13,25
Parma International Inc.	9,19,21
Polk's Model Craft Hobbies	76
Pro-Line Mfg. Co.	77,78
Quarterscale Racing Specialties	63
R B S Fab., Inc.	86
R/C Car Subscriptions	80
Race Tech	61
Raco Modelcraft, Inc.	27
Radio Controlled Models/RAM	63
Royal Products Corp.	83
S.S. Industries/Hyperdrive	35
Space Age Technologies, Inc.	70
T & A Machining	25,72
Team Losi Performance	Cover 2
Tower Hobbies	73
Track Master	69
Trackside Racing Enterprise	81
Traxxas	57
Trinity Products, Inc.	6,7
W.C.M., Inc.	71
Wagonhill Hobbies	71
Walt's Hobby and Crafts	86

CLASSIFIED ADS

Non-commercial rate is 25 cents per word, with a minimum of \$3.00. Commercial rate is 40 cents per word, with a minimum of \$5.00. Name and address free, phone number counts as two words, abbreviations count as whole words. All ads are payable with order, and may be for any consecutive insertion period specified. Send ad payment to: R/C MODEL CARS, Classified Ads, 898 W. 16th, Newport Beach, Calif. 92633

FOR SALE: 4WD RC10 w/MIP conversion, Andy's rear arms, Proline low profile rear rims w/Schumacher rear tires, Losi steering cranks w/bearings, new pulleys and belts on 4WD kit. \$165.00 or best offer AND TRC Pro 10 Graphite never raced. Just run up and down street with Porsche 962 body, \$150.00. Call after 5 p.m. Mon.-Fri., Steve, (901)363-5456 or 386-6253.



WALT'S
HOBBY

"Call Walt's"

Full line radio control hobby shop specializing in friendly, helpful service for remote-control cars, parts and accessories. Daily UPS service, discount prices. Visa, Master Card, Discover card. Home of the indoor clay oval and computerized scoring. 2 Dwight Park Dr., Syracuse, NY 13209, Tel. (315)453-2291.



MAGNUM FORCE.



Tony Neisinger wins the 1989 Futaba Grand Prix with Magnum.

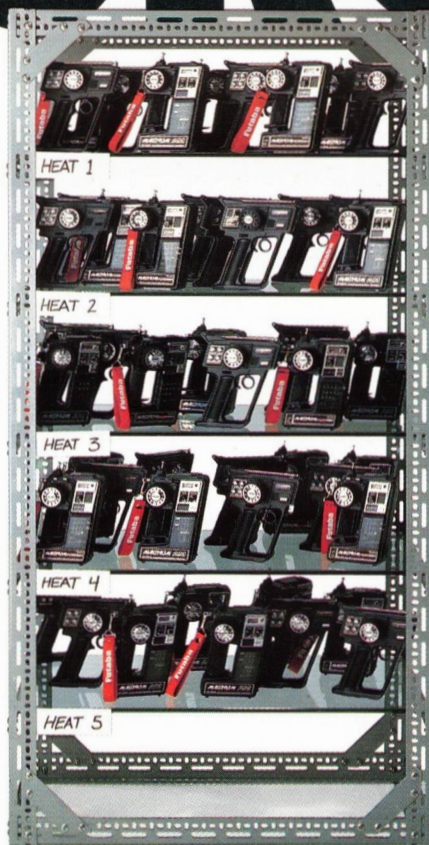
Every race day, more and more Magnums are showing up at the track. That's because Futaba makes a complete selection of Magnum pistol-grip systems to suit every kind of radio

controlled car. Each Magnum system is loaded with competition features to give you an edge, whether it's your first race or the World Championships.

Get a grip on our hot, new 2PB/Sport. With a price as comfortable as its ergonomically designed case, the Sport is the perfect Magnum for the beginner. Servo reverse switching and convenient throttle and steering trims make set-up in any car or boat easy, and the Sport ESC option includes our MC112B MOS/FET speed control with reverse.

MOVE INTO THE WINNERS CIRCLE

Our grown up Magnum 2PBKA/Junior gives you some extra moves to put on the competition. Full range steering rate lets you perfectly balance your car's



handling, even as track conditions change. Fine trimming and ATV controls let you dial in race set-ups fast, and are positioned for easy adjustment.

Racing options for the Junior system include the MC112B and a choice of S148, S132H or S9601 servos.

THE ALL NEW MAGNUM AM

The Magnum 2PD/AM is just what the serious racer ordered. Compact, yet fully equipped with pro-style, fine tune controls like steering rate, brake trim, throttle ATL, ATV and sub trim. The Magnum AM transmitter also lets you customize wheel throw and spring tension.

Like all Magnum 2 channel systems, the 2PD includes our new, narrow-band R102JE receiver. S9301 servos, the choice of most top 1:10 on and offroad drivers, are included, or you can choose S132H or S9601 versions.



Servo reversing, throw adjustment and sub-trimming can be individually preset on the 2PD control panel.

THE ULTIMATE MAGNUM

Racers who want it all turn to the awesome Magnum 3PB/PCM. The 3PB has everything you need for world class competition, in any class. Electronic trimming with sub trims and LED readouts, programmable mixing, dual rates and exponential, plug-in RF module, DSC and more make the 3PB a uniquely refined and versatile performer.

And the incredible interference protection and resolution of Futaba's exclusive PCM 1024 put it in a class by itself.



2PB/Sport

(2PB and 2PBKA available with MC112B speed control)



2PBKA/Junior



2PD/AM

(2PD and 3PB available with S9301, S9601 or S132H servos)



3PB/PCM1024

MAGNUM
Futaba

Futaba Corporation of America
Four Studebaker, Irvine, CA 92718

MONSTER ROCKER

MUD BLASTER



Mud Blaster, a Tamiya 1/10 scale, radio control, off-road monster truck kit (58077)

WAY RAD!

It's flashy. It's fast. It's powerful. A true monster truck with the chassis of a crusher and the body of an exquisitely-detailed pickup truck.

Check out the double wishbone front and rear trailing arms. You'll find a full independent suspension ride with coil springs all around to absorb the bumps and bruises of monster mashing. 540-type motor powers the beast through an advanced differential gear system. Mega performer.

MRC™  

MODEL RECTIFIER CORPORATION
200 Carter Drive, Edison, NJ 08817