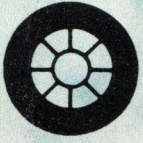


# U. S. Indoor Championships

FEBRUARY, 1994

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# COMPETITION



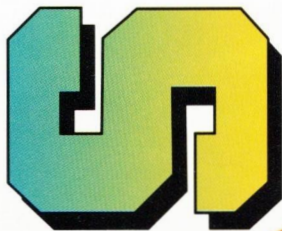
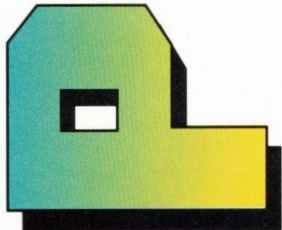
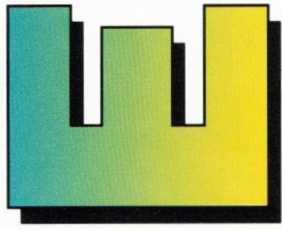
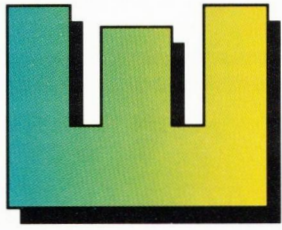
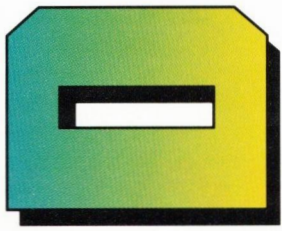
# PLUS

 THE R/C CAR MAGAZINE

*Tekin's*  
**BC48**

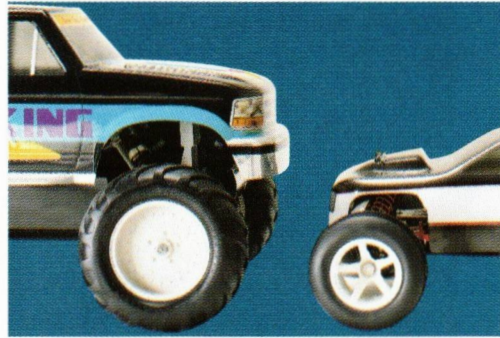


MRC's World Scale  
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A brilliant concept. Create an off-road racing truck that can blow through grass tall enough to make others wobble. Give it the power to bull over rocks and obstacles where others are stopped dead in their tracks. In addition to super ruggedness and brute force that lets you go where you've never gone before, this new truck has to have the speed, agility and responsiveness of today's best competition trucks.

Our engineers couldn't meet these criteria in 1/10 scale. It was impossible. So they pushed the envelope and created the next



World Scale trucks like the Baja King or Thunder King (shown here) are longer and wider, with 50% more mass than 1/10 scale.

**WATCH FOR DATES OF THE  
WORLD SCALE NATIONAL  
RACING CONTEST  
COMING SOON.**

generation of off-road...World Scale, and with it the Baja King.

Significantly bigger, of course, and highly competitive too, this brawny, low, low-CG racing truck has most wanted performance-speed features built in, like adjustable turnbuckle linkage for quick, precise adjustments. And 15 ball bearings throughout. And get this, the Baja King is powered by two, not one, but two 540 motors\* driving a 7 ball bearing Power Command Transmission with slipper clutch and competition ball diff. Bell crank steering and a 4-wheel independent suspension. Four oil-filled aluminum shocks with three different pistons and adjustable coil over springs that let you match the preload, compression and rebound damping to track/road conditions.

You don't get it yet? Why the excitement? Because this is the next major advance in R/C off-road. It's driving realism you have to feel and see to understand.

It's size speed and handling you'd love to take to your backyard or racetrack and let them all see that...suddenly everything else is just a toy.

\*Available with and without motors and speed control.



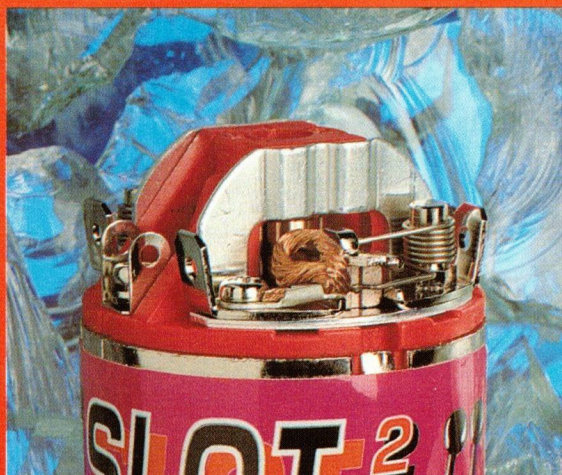
*...suddenly  
everything else  
is just a toy*

**MRC** **WORLD**  
OFF-ROAD *Scale*™

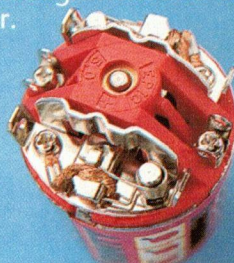
# Slot Machine 2

The stock motor redefined

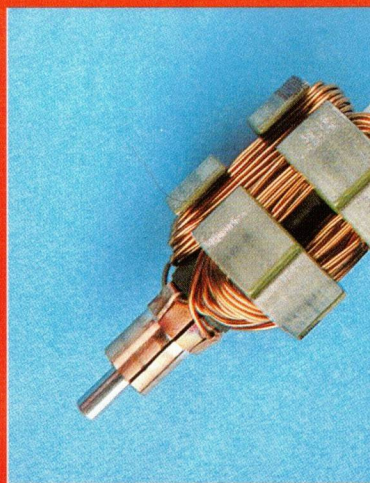
## Closing the Gap BETWEEN Stock AND Modified



All endbell hardware is removable. Spring and shunt clearance is increased for free brush movement, while the hood-to-brush fit is more precise for better brush alignment and even wear.



Can vents are louvers punched in so they scoop hot air out. By leaving the can metal intact, the magnetic field is unchanged which gives more low end punch.



The armature is hand wound on an all new, slotted blank with machined points to allow for more exact balancing. The locked comm is diamond trued for less brush bounce and the armature wire is 22 gauge, high temperature copper for fewer shorts.

Lay-down brushes wrap further around the comm which increases firing duration at the armature pole. This exclusive feature works great with timed brushes and gives more timing change!

Use Trinity brush RC4463 (hard) or RC4466 (timed)



Aerodynamic end slots flow cooling air lengthwise and bushing alignment is the most precise in racing.



**EX-Tech technology makes the Slot Machine 2 a ROAR 91 stock motor that runs like a modified!**

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- 5.0 version wet magnets

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at your local hobby shop

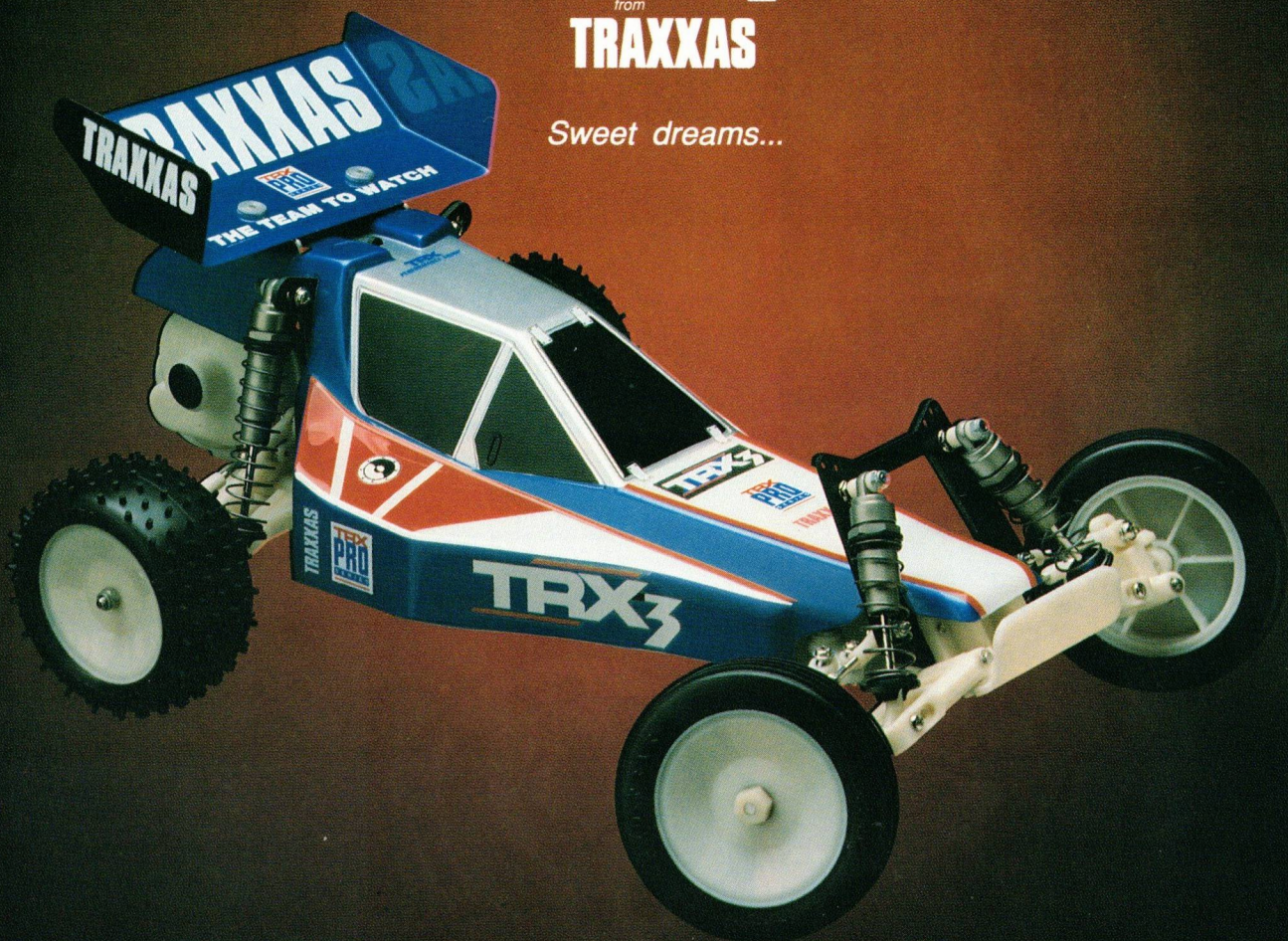
© Trinity Products, Inc., 1993

*You dream about that perfect race.  
Launching hard off the line, you lead through the  
first turn. This time it feels right. The car is totally  
dialed, responding instantly to your every input.  
As your rhythm develops, each turn and jump is  
taken with increasing speed and precision.  
Your lead steadily grows as you lap the traffic.  
Across the finish line, it's a new track record:  
one that no one else can touch.*

*The car you are driving is a TRX-3*

**TRX3™**  
from  
**TRAXXAS**

*Sweet dreams...*



Every aspect of the TRX-3 has been designed to deliver all of the steering you could want. The TRX-3 lives for tight, twisting tracks where lightning maneuverability and aggressive driving are essential for winning. Features include a new gearbox which moves the motor forward for improved balance and aggressive steering; adjustable slipper clutch; and model 2603 has an externally-adjusted ball differential; and full ball bearings. The TRX-3 also has an advanced double-deck chassis structure for extreme rigidity; more rear suspension

adjustments; X-tra long rear shocks; telescoping U-joint driveshafts; ball bearing-compatible bellcrank steering, with perfect ackerman and zero-bump-steer geometry; narrow front track; short front arms; wing tubes; new chassis-hugging body; bridged front shock tower; Pro-Trax tires; and solid dish wheels. The new large-diameter shocks have increased oil volume; hard-anodized, teflon-coated, pressurized cylinders; low-friction pistons; and clip-on spring adjusters. See the all-new TRX-3 at your local hobby dealer today.



# COMPETITION



## PLUS.

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### ABOUT THE COVER

On the cover this month is MRC's World Scale Baja King. This car can really take on all you can dish out!

# MAILBOX

## SETTING THE RECORDS STRAIGHT

Dear Peter,

We are a small R/C company located in Oklahoma City that prides itself on a very quality and cost effective product for competitors in the R/C car racing market. This past year we spent considerable time, money and effort to develop products, most notably stock and modified motors and bat-

ttery combinations to compete at the NORRCA Paved Oval Nationals in Pine Bluff, Arkansas.

In your latest magazine, the NORRCA Paved Oval Nationals was reviewed and to my chagrin, although we dominated the Super Speedway 400 class, we were shown to not even be in the hunt! Let me set the record straight about who we sponsor and how the qualifications and race finished.

Bob "Bullet" Light, since he left Trinity, has been sponsored by us exclusively when it comes to motors and batteries. The "Bullet" top qualified the Speedway 400 class by more than a lap; Bob was the only participant to turn more than 81 laps in qualifications. During the race, Bob was consistently as fast as the four minute guys and did that pace for 50 minutes. At the end, with the help of Gary "Bigfoot" O'Brien (pitman), the "Bullet" was nine laps ahead of second place! To say that Specialized R/C and the "Bullet" outclassed the field would be an understatement! Our World Series 12 Triple Hand wound modified motor and hand assembled Sanyo 1700 SCRC battery packs could not be touched by any of the competition at

this race. In addition, Tom Blackman also used our motors and batteries and finished a very good fourth place.

Please correct the "A" Main winner as reported by you in your next edition of your magazine. I believe our hard work should be recognized. Thank you.

Sincerely,  
Mark A. Fulton  
President  
Specialized R/C

*Ed:*

*The correction has been noted.*

Dear Peter,

Peak Performance wishes to extend an apology to all the racers at the 1993 Arkansas State Championship for an error which we reported to Competition Plus for publication.

It was reported that Jeff Masse won the 1993 Arkansas State Championship in Modified Truck Class. Jeff actually won the Mid-South Championship held in Jackson, Mississippi.

The winner at the Arkansas Championship was Matt Fuel. Sorry about that Matt! There was no malicious intent.

Sincerely,  
Rick Hohwart  
Peak Performance

## RIGHTEOUS EDITORIAL

I've been a subscriber for more than 8 years, and enjoy the magazine very much. One of the first things I crack open when it comes in the mail is the "Finish The Lap You're On" column. Although many times I do not agree with Peter, in December he was right on!

We've got way too many Nationals going on right now, and much like his boxing analogy, it's tough to keep track of when races are and who has won what. Although we probably need more nationals than the "original three", we don't need a nationals every month for every scale invented.

Keep up the good work,  
Mike Moore  
S. San Francisco, CA

2

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**"IQ" PRODUCTS**

**NOW AVAILABLE at your Hobby Dealer**  
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FINISH THE LAP YOU'RE ON

**T**hink about it for a moment and I'm sure you'll be blown away. How much has our sport changed in the past 15 years? Back in the late 1970's we didn't run things like electronic speed controls, 7 cell packs or even off-road cars.

It would be irresponsible not to take note of how 1/10 off-road changed the R/C car market. This scale single handedly made R/C cars big business.

Other memories of the decade past include many great performances put forth by various teams and drivers. Once such performance was turned in over the summer of 1983, at the ROAR 1/12 Nationals, a small motor manufacturer with a one man team took on the country's best and came home with TQ's in both the Stock and Modified classes in 1/12 scale to go along with both National titles. This same company has since grown to become one of the industry's giants. The company that took the country by storm more than 10 years ago was Trinity. The one man team was none other than Joel Johnson.

More recently, similar domination in the off-road world came from Associated/Reedy and Cliff Lett. In 1988-89 this trio was the most successful team, in the most competitive scale, 1/10 off-road.

Looking back at who had to be the most versatile driver in the world, no one matched the performances of Masami Hirosaka. He was not only racing with the best of them in off-road and 1/12 scale, for a while he was the best! World titles in both on-road and off-road back up that claim.

What the 1990's will bring as far as great performances we still don't know. Certainly there has been a changing in the guard so to speak. New names like Jeremy Kortz, Brian Kinwald and Mark Pavidis will certainly rise to prominence in the 1990's. Whether their stars will shine as bright as the aforementioned is still to be seen. It is interesting though that just as we become complacent with certain drivers . . . just when you think the guy on top will never be beat, it happens. I don't know for sure, but there's probably some 9 year old out there right now racing in the novice class that will be the 1999 Off-Road world champ.

*Peter Barana*

# TRINITY<sup>®</sup>

Presents the

## **1994 WHIPPOORWILL US OVAL MASTERS<sup>®</sup>**

Hosted By Competition Plus Magazine  
& Lake Whippoorwill Super Speedway

*Trinity Invitational 4 Minute Challenge*  
*Trinity Amateur Stock & Modified Challenge*  
*Novak Invitational 500*  
*Whippoorwill Concourse & Best Paint*

*Bolink Clash*  
*Novak Amateur 200*  
*TRC Dash*

### **SCHEDULE OF EVENTS**

Tuesday, March 29th to Thursday, March 31st; Registration and practice.

*Friday, April 1st starting at 10 am;*

- The "Bolink Clash", one 4 minute qualifying round for stock and amateur modified drivers. This is for a position in the "Trinity Amateur Challenge".
- The "Bolink Clash", two 4 minute qualifying rounds for invitational drivers for a position in the "Trinity Invitational Challenge".
- The "Novak Amateur 125" and "The Novak Invitational 125" will each run one of their 3 qualifiers for a position in the "Novak Amateur 200" and the "Novak Invitational 500".

*Saturday, April 2nd starting at 9 am;*

- The "Bolink Clash" amateur stock and modified drivers will run their final 2 qualifiers and the "Bolink Clash" invitation drivers will run their final qualifier (weather permitting).
- The "Novak Amateur 125" and "The Novak Invitational 125" will each run their final qualifiers (weather permitting).

*Sunday, April 3rd gates open at 9 am;*

- 11 am, True Concours and Best Paint, and the "TRC DASH"
- 1 pm, The Trinity Whippoorwill US Oval Masters mains begin!

**1400 Sanyo  
SCR's For  
Amateurs  
Only!**



Entry deadline, March 10,th 1994. Please sign me up quick so I am one of the first 100 entries that receive a pit area with electric

Name \_\_\_\_\_ Phone \_\_\_\_\_

Adress \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Drivers Skill; Expert  Intermediate  Novice

Frequency 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

Entry Fee: \$50.00 per class for stock, modified and and Novak 200, All stock entries include a Trinity handout stock motor. Entries are limited, pre-entries are non-refundable. NARA Rules apply!!!

Make checks in American currency only, payable to:

Lake Whippoorwill International Speedway, 12345 Narcoossee Road, Orlando, Fl 32827, 407-277-9586

# PIT BOARD

## Lake Whippoorwill International Speedway Update

---

The new Trinity Evolution 10ss once again stretched the envelope at The Whip on Saturday, January 8th. Piloted by Mike Boylan, the EV10 set a new track record of 4 laps in 4:02.45. Mike was using equipment provided by Trinity, Novak, TRC, and Protoform. It was a chilly (60F) and windy day of racing which also saw Jeff Irish set a new record for the fastest single lap in a 4 minute race. Driving an Associated 10LSS and equipment provided by Lightspeed, Novak, TRC, and Protoform. Jeff turned in a 4.88 second lap but lost the Pro-Mod main event to Mike Boylan on his record run.

Our congratulations to both of these outstanding racers!!!

See you at the MASTERS (47 laps?)

## Peak Performance/ Team Orion Win Another Championship

---

Peak Performance Racing Motors and Team Orion Matched Batteries place first at the 1993 U.S. Open Wheel Sprint Car Championships.

Congratulations to winner, Jeff Greenly, for an outstanding performance at Cooper's RC Raceway in Virginia.

### LATEST NEWFLASH!

Ace Peak Performance/Team Orion, Losi, Yokomo driver, Jeremy Kortz, stunned the competition at the 1994 Ninth Annual Reedy International Race of Champions with an awesome performance, taking home the trophy for first place overall in the Invitational Class.

In his debut outing as a Peak Performance, Team Orion driver and his first time racing in the very competitive "Reedy Race", Jeremy out-powered the world's fastest veterans including the current IFMAR 2WD and 4WD World Champions and the current ROAR 2WD and 4WD National Champions.



# **PIT BOARD**

## **TEAM LOSI'S NEW DOUBLE-X SCORES A DOUBLE VICTORY AT THE 1994 REEDY RACE OF CHAMPIONS**

---

The stage was set. The highly competitive Invitational class was underway at this year's Reedy Race at R/C Offroad Raceway in Fountain Valley, CA. This class has the best drivers from around the world battle head to head for two days, six times each day. All but the worst finish each day counts, so consistent performance is a must.

When the dust had settled, and the points totaled, Team Losi drivers had finished first and second. Finishing in the first position was Jeremy Kortz. This was Jeremy's first time at the Reedy Race, but his Peak Performance powered Team Losi Double-X gave him the consistent performance necessary to finish ahead of a pack at this level of competition. Jeremy's choice of tires on this tricky surface were Team Losi's Gold Compound IFMAR Pins. These tires put the power to the ground in both 2WD and 4WD competition.

In the second position was Brian Kinwald. Brian had switched to Trinity and Team Losi only four days before this event. With limited time to adjust and dial in his new combination, he was still not only able to finish in second position overall, but he also posted the fastest time of any Invitational heat in both 2WD and 4WD competition. Brian also used the Gold Compound IFMAR Pins to keep his car hooked up. Just wait until he gets some time on his new car and motor combination!

Team Losi driver Jon Anderson put the icing on the cake as he piloted his Trinity powered Double-X to the first place position in the 2WD Open category. Even though the track was very slick, the stability of the Double-X and the traction provided by the Gold Compound IFMAR Pins, were all that Jon needed to leave the competition in the dust.

Congratulations to all three drivers for an outstanding performance at the 1994 Reedy Race of Champions.

# PIT BOARD

## THE LATEST PRODUCTS FROM TRINITY

**RC1001 Monster Stock, Jr. 2 - \$32.00.** All new version of the most popular NORRCA legal stock motor. The Jr. 2 now uses the all new Epic EX-Tech EZ flow endbell and can technology. This allows for a much cooler running motor. The magnets are the latest 5.0 wet type while the motor can features a 3 hole pattern which tailors the magnetic field to the new short slotted armature blank. Lay down brushes are utilized which allow more commutator wrap and more horsepower. This new version of the Monster Stock Jr. is faster than the original, while running cooler and more efficiently.

**The latest Trinity catalog is now out.** Send \$5.00 to Trinity Products Inc., 1901 E. Linden Ave. #8, Linden, NJ 07036 to cover handling for the latest catalog. You receive the Trinity catalog which covers Trinity, Speedworks, Magic, Evolution, Revolver, etc. plus you will get the on-road car special pamphlet.

**RC4380 1994 New Hard Brush - \$3.50.** This all new brush has a furrow face designed to break-in much quicker. The compound is an improved version of our old 4038, which now makes more power, but is more commutator friendly. This brush comes with a single shunt, so it can be used with light springs without the fear of hanging up. Terminal for easy screwdriver assembly.

**RC6680 Zip Grip - \$6.99.** This is the latest in foam tire traction compounds. This all purpose traction works equally well indoors as well as outdoors. Does not dry out halfway through a run. Comes in bottle with dauber application, so you never have to get traction compound on your hands again.

**9204 Onyx - \$45.00.** The latest in the Speed Gems line of machine wound motors. The Onyx like all the Speed Gems motors now features the Epic Ex-Tech Technology. This is a 14 turn double which is really an excellent all around motor that works well in most racing applications. The Onyx has 5.0 wet magnets, dual ball bearings, and adjustable timing.

## DATELINE:

### January 23, 1994

Records fell at The Whip on Saturday, January 22nd. With the air temperatures at a tropical 78 and the track temperature at 84 degrees under sunny skies, 46 lap runs became commonplace in the Pro-Modified Division.

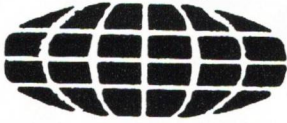
Troy Meredith broke the SCR Modified record by turning 44 laps in 4:05.60 minutes. This eclipsed the previous record which had stood for over 2 years. Troy was running a Trinity Evolution 10 powered by Extreme Motors and equipped with TRC tires, a Tekin ESC, and a Pontiac body by Protoform.

In the Expert Stock Division, Larry Burkett came within 3 hundredths of a second of breaking the Stock record of 42 laps in 4:05.90 minutes. Larry was piloting an Associated 10LSS with an HPI chassis, TRC tires, an Atomic stock motor, a Tekin ESC, and a Pontiac body by Protoform.

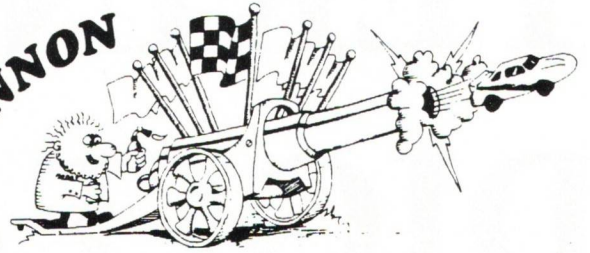
We congratulate both of these drivers on their accomplishment.

# Miracle R/C Speedway with

**WORLD CLASS**



**CANNON**



**BME**

**EXTREME  
MOTORSPORTS**



**PROTOform.**

Presents...

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**Dates: 4/22/94 - 4/24/94**

4/22/93: Track Opens at 12PM, Practice All Day

4/23/94: Track Opens at 7AM, Qualifying Starts at 10AM

4/24/94: Track Opens at 7AM, Final Qualifying at 10AM

Mains Begin One Hour after Last Qualifier

**Track: 140', Banked-Carpet Oval**

**Entry Fees: \$35 per Stock, \$25 per Mod.**

**Deadline: \$10 Additional, per Entry, after 4/14/93**

**Motors: Hand-out Stock Classes**

**Batteries: Stock 1400s Max, Mod. 1700s Max**

**Call Miracle for More Information at 303-420-3051**

Detach and Return, with Check to: **Miracle R/C Speedway, 4206 N. Wadsworth Blvd., Wheat Ridge, CO 80033**

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Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

**Classes:** 1/10th Stock \_\_\_\_\_ 1/10th Expert Stock \_\_\_\_\_ 1/10th Modified \_\_\_\_\_

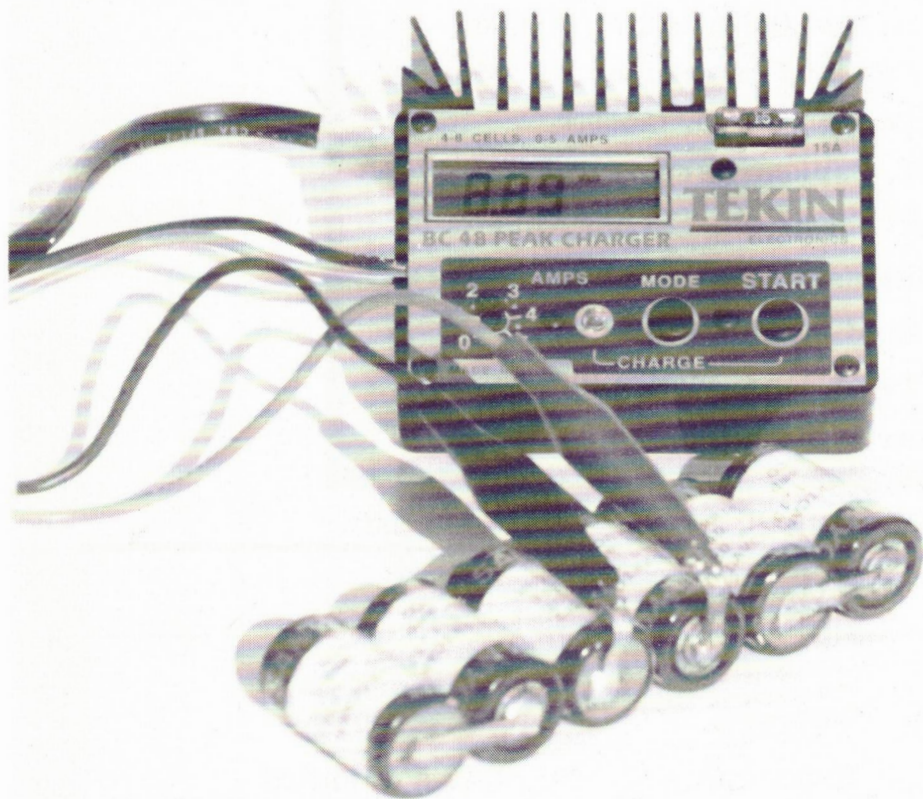
1/12th 4-Cell Stock \_\_\_\_\_ 1/12th 6-Cell Stock \_\_\_\_\_

**Frequencies:** 1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_

# TEKIN'S BC48 DIGITAL PEAK CHARGER

*By Jack Wright*

*The new chargers in Tekin's line certainly show how far chargers have come.*



Battery chargers have come a long way from the days of timer dials, now with more advanced batteries and demanding motors. A good charger is as essential as the best batteries. Tekin the company who has brought us many killer chargers, has taken their line of chargers to an even higher level. The new BC48 is just part of the new Tekin line of chargers, with an all new face plate the BC48 still retains the size of the popular BC100L. What sets the new line apart from the rest is its fully digital circuitry and its microprocessor brain.

The BC48 features an LCD display of all functions and modes of operation, the display shows you each of the following; input voltage, charge volt-

age, peak pack voltage, amps, trickle amps, and charge time. Other features include a cold start feature and protection from shorts and overloads. To further understand how the BC48 operates I'll go through each of the BC's features.

#### **CHARGE. . .**

The BC48 can charge from four to eight cells, when charging four or five cells you must use the dropping resistor that is supplied with the charger. The BC48 can charge 6-8 cell packs at up to 8 amps and 4-5 cell packs at up to 4 amps, of course, depending on your power supply. For a power source to oper-

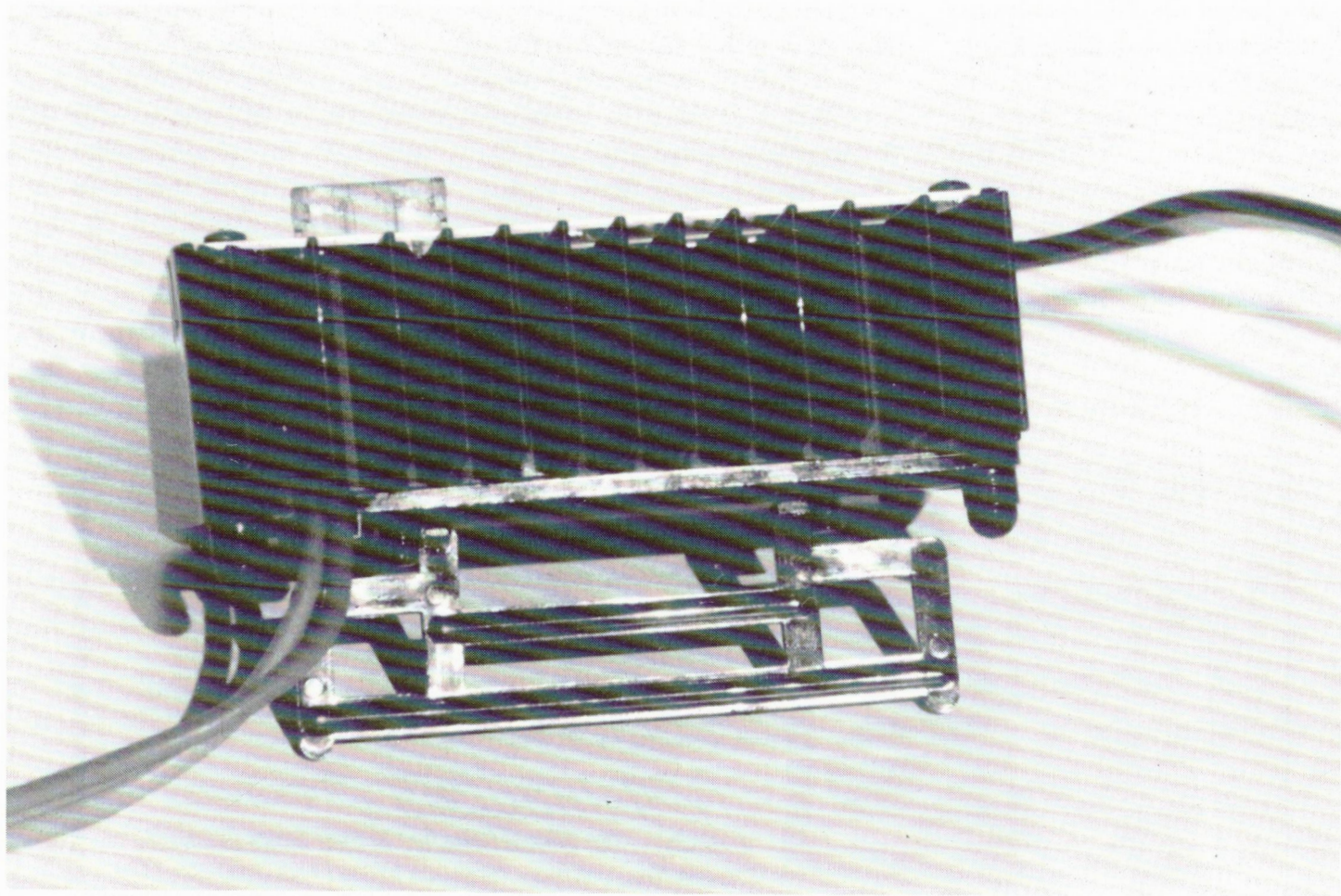
*The fold down stand and large heat sink are just another plus to the package.*

ate the BC48 you can either use a 12 volt car battery or a purpose built power supply with at least a 4-6 amp output and that does not have a voltage output more than 14 volts.

To use the BC48 first connect the charger to your power supply, you will notice the screen will come alive. By pressing the mode button until it reads volts, you can see the voltage output of your power supply. Of course, this reading can only be seen without a battery pack connected to the charger, now if you want to use the trickle mode press the mode button until you see TRKL then press the start button to turn the trickle mode on or off. Next adjust the amp setting to suit the amperage you

would like to charge the batteries at.

The BC48 features three different charge modes to suit your needs, the P mode is for a pack that is not fully discharged and is activated by pressing the start button twice. (Note: the first time you press the start button you get the code OFF). The second charge mode is P2, this mode features a short delay at the end of the charge to top off the cells to give the pack a little more punch. And the third mode is the Cold Start mode "CS", by pressing the start button for the fourth time within three seconds, the CS mode is for a fully discharged pack. Once the charger is operating you can use the mode button to view



charge volts, charge time, and amps.

Adjusting the amperage during the cycle is allowed only in the first few seconds after you enter amp reading mode, on the display you will see the word SET, only when the SET is displayed you can make adjustments. If you do move the amp setting after that the charger will shut down and the error code EC2 will appear, more on the codes later.

### **BUMPING . . .**

Once the pack has peaked, and you want to bump the pack up, you will want to only bump in the P mode and never use the Cold Start mode as a repeak unless you don't mind smoking a set of killer cells. At the end of your charge the BC48 will also show you the peak charge voltage and the time it took the cells to get to that point. The purpose of these are to help you gauge your packs to see if there are any sudden changes in them that might warn you of a pack that's going south. Better to find out on the charger than in the main.

If you use the trickle mode, the BC48 also features an adjustable amp trickle, that can be adjusted from 1MA to 200MA. Or if you chose not to use the trickle, just leave it off, as the charger is preset with the trickle in the off position.

### **TO ERR IS HUMAN - BUT NOT TEKIN . . .**

The folks at Tekin have installed many fail safes into the BC48, the obvious is the fused system to prevent reverse voltage at the power source. Besides this the BC48 also uses error codes to warn you if you have something hooked up wrong, or that someone has tampered with your adjustments. Here's a good example of that, one of the guys I race with, (let's call him Gregg) while Gregg was off doing his turn marshal duty some wise guy decided to reverse the wires on his very expensive Super HI Q. And guess what, that's right; smoke and a very expensive paper weight were all that remained. Just think if Gregg had a BC48, he would have come back to a charger with a warning

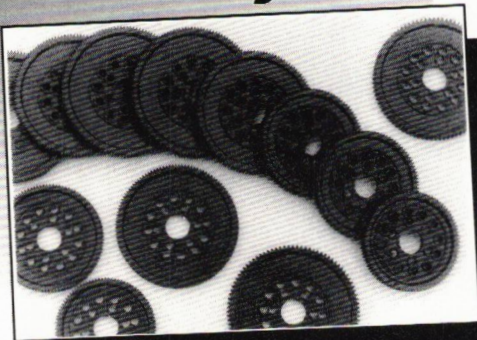
code EC6 on the display and the least of his worries would have been that the pack wasn't charged. As you can see a lot of thought was put in to the BC48.

### **OVERVIEW . . .**

The BC48 has to be the most idiot proof charger I know of, with all of the fail safes and features the \$145.00 price tag is a wise investment. With the built in LCD display my voltmeter can go back in the tool box and only come back out for shorted wires or something. Another thing I liked about the BC48, was the larger heat sink and built in stand, all that and it's still the same size as my old BC210. So if you're in the market for a charger that has just what you really need and costs less than two killer packs the BC 48 is all you need.

But wait just around the corner Tekin will soon offer the BC112D, this charger will offer all the features of the BC48 and more. Like a built in 10 amp power supply, the ability to charge 12 cells, and so much more. So stay tuned to the pages of Competition Plus!

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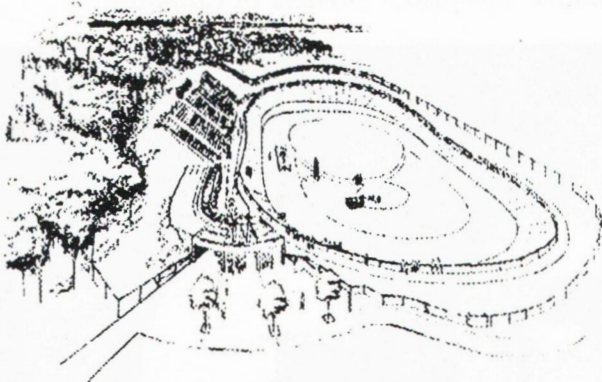
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# 1993 ROAR Canadian National 4 Cell Champs: *The Randy Shantz Memorial Race*

By  
Roger  
Brown

The Canadian National 4 Cell Championships were hosted by the Vancouver RC Road Racers on December 4 & 5, 1993. ROAR National Championships are not limited to country of citizenship and as a result, a significant number of American racers were entered in this race. The competition proved to be close and tough, the camaraderie was great and everyone had a good time.

*Top: Ron Steen (left) and Matt Younger (right) holding the Randy Shantz Memorial Cup. Randy's family is in the background*  
*Bottom: The fastest 4-cellers in Canada!*



Our race has been co-named the Randy Shantz Memorial Race after one of our most competitive racing buddies who's recently passed away. Randy's family has donated a large trophy on which we will engrave the names of each year's TQ's and A Main winners.

Kelly Ho of Vancouver won concours with Gary Gundesen coming second and Jeff Travelstead third. Our new points system for judging Concours *Do these guys look like they had a good time. These racers in the Modified E main show how much fun our sport really is.*

seemed to work well by taking out most of the subjectivity of the judging process.

In Stock qualifying, Craig Roberts led Round 1 with a 39/8:07. Round 2 had Craig again in top spot with a 39/8:01. Round 3 had Matt Younger grab top spot with a 40/8:08. Round 4 had Matt upping the ante to 40/8:06. Round 5 had Matt once again improve the TQ time to 40/8:00 only to lose TQ honors to Craig Roberts in Round 6 with a 41/8:09.

The rest of the Stock A Main would be Matt Younger (40/8:00), Adam Baxter (40/8:04),

Tom Younger (40/8:10), Jerry Koga (39/8:10), Korgae Scales (39/8:12), Don Landaker (39/8:13), and Ron Halford (39/8:14). Chris Gambini (38/8:00) and Steve DaSilva (38/8:02) just failed to make the cut.

Chris White held the TQ spot after Round 1 of Modified qualifying with a 42/8:09. Chris upped that to a 42/8:07 in Round 2. Round 3 had Byron Bressel turn in a 43/8:12 to take over top honors. In Round 4 Chris White reclaimed the TQ position with a 43/8:00. Chris experienced radio problems in Round 5, but nobody else was



# "Most of the mains were tremendously entertaining with close racing and last minute lead changes."

able to beat his previous round mark. In Round 6, Chris again had radio trouble and this time Ron Steen was there to grab TQ with a 44/8:06.

The rest of the Modified A Main would be Jeff Travelstead (44/8:11), Chris White (43/8:00), John Ha (43/8:03), Monty Ho (43/8:10), Byron Bressel (43/8:12), Steve Curry (42/8:01) and Brian Bodine (42/8:03). David Curry (42/8:08) and Roger Brown (42/8:13) were bumped into the B in the last qualifier.

The Stock A Main looked like it would be a Victoria shoot-out.

The Victoria club runs only a Stock Class and it seemed to be paying off as the top 4 qualifiers were all from the Victoria club. Pole sitter and defending Stock Champion Craig Roberts had looked like the guy to beat all through qualifying. He got the holeshoot as the main started and quickly built up a comfortable lead. Second qualifier, Matt Younger, got caught up in first corner traffic and dropped to sixth. Matt worked his way through the traffic, and after 5 laps found himself in second place. He steadily started to reel in Craig. Craig got involved in


an accident and Matt forged into the lead. As Craig tried to tighten up his lines and regain the lead, he got into another accident and now Adam Baxter moved into second place. There were no more passes and Matt Younger in fourth place completed the Victoria sweep of the first four places as expected. Ron Halford came in fifth, Jerry Koga sixth, Korgae Scales seventh and a problem plagued Don Landaker eighth.

In Modified Class, the question was whether Chris White had solved his radio problems. He had, but starting third, he got caught up in first lap traffic and dropped way back. Ron Steen and Jeff Travelstead both had clean starts and built up a bit of a cushion. Chris White quickly worked his way back to third and then slowly started to gain on the leaders. At the five minute mark, he caught and passed Jeff. He then set his sights on Ron Steen, but although he was gaining slightly, he was unable to catch Ron, who drove an immaculate race. Jeff Travelstead was dumping badly for the

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last two laps and John Ha in fourth place was closing fast. John came smoking around the last corner with a chance to pass Jeff for third, but ran into the back of Jeff's car and pushed him across the finish line. Monty Ho came in fifth, Steve Curry sixth, Brian Bodine seventh, and a broken Byron Bressel (literature freaks will note the alliteration) came in eighth.

Craig Roberts (Stock TQ), Matt Younger (Stock A Main winner) and Ron Steen (Modified TQ and A Main winner) will have their names engraved on the beautiful trophy donated by Randy Shantz's family.

Most of the Mains were tremendously entertaining with close racing and last minute lead changes. My B Main race is a good example. After a bad start, I came back through the field to take the lead at about the four minute mark. With about 45 seconds left, my car was doing the P-170 slowdown while David Curry was making the SCRC charge for the lead. He passed me with about 20 seconds left only to dump on the last lap as I passed him (slowly) with 3 corners remaining. Our club is trying to promote greater participation at races like this and with that in mind made sure that everyone in the bottom two mains of both Stock and Modified went home with a memento of some kind. Rather than hand out tiny trophies which often end up in storage boxes (or in the garbage), we tried something a little different and provided each of these racers

with a mug emblazoned with the race logo. Our reasoning was that these racers had the toughest luck during the weekend and we wanted them to feel appreciated. The people in the higher mains already had their reward with a successful weekend of racing. Any leftover mugs were given to helpers at the race, which also solved the perpetual problem of what to do with the extra leftover trophies.

As you can see from all the smiling faces in the pictures, a good time was had by all.

Thanks to everyone who helped out during the race - Rob Branson, Ed DaSilva, Steve DaSilva, John Ha, Ron Halford, Rod Hazelwood, Bill Hicks, Dave Johnson, Jerry Koga, Jonathan Lauzon, Mike McEwan, Troy Ralph, RC Steve, Fife Williamson, and everyone who helped with the track set-up and teardown.

#### **STOCK A MAIN**

- 1st - Matt Younger
- 2nd - Adam Baxter
- 3rd - Craig Roberts/TQ
- 4th - Tom Younger
- 5th - Ron Halford
- 6th - Jerry Koga
- 7th - Korgae Scales
- 8th - Don Landaker/DNF

#### **STOCK B MAIN**

- 1st - Steve DaSilva
- 2nd - Nick Newroth
- 3rd - Duffy James
- 4th - Gerry Vantreight
- 5th - Chris Gambini
- 6th - Shaun Sutherland
- 7th - Cary Bennett

#### **STOCK C MAIN**

- 1st - Yin Lee
- 2nd - Dar Hicks
- 3rd - Kevin Zilkey
- 4th - Gary Janke
- 5th - Shane Archer

- 6th - Troy Ralph
  - 7th - Larry Van Every
- #### **STOCK D MAIN**
- 1st - Trevor Johnson
  - 2nd - Derek Wardas
  - 3rd - Mike McEwan
  - 4th - Allan Couch
  - 5th - Milt Wilson
  - 6th - Matt Thompson/DNS

#### **STOCK E MAIN**

- 1st - Don Lauzon
  - 2nd - Bob Hetherinton
  - 3rd - Andrew Hui
  - 4th - Richard Broman/DNF
  - 5th - Eric Taunton
  - 6th - Scott Mawer/DNF
- #### **MODIFIED A MAIN**

- 1st - Ron Steen/TQ
  - 2nd - Chris White
  - 3rd - Jeff Travelstead
  - 4th - John Ha
  - 5th - Monty Ho
  - 6th - Steve Curry
  - 7th - Brian Bodine
  - 8th - Byron Bressel/DNF
- #### **MODIFIED B MAIN**

- 1st - Roger Brown
- 2nd - David Curry
- 3rd - Scott Brown
- 4th - Gary Gundesen
- 5th - Mike Tapp
- 6th - Rod Hazelwood
- 7th - Kelly Ho

#### **MODIFIED C MAIN**

- 1st - John Walentia
- 2nd - Wayne Mah
- 3rd - Henry Cannon
- 4th - Scott Howard
- 5th - Michael Wingo
- 6th - Chien Hwa Chen
- 7th - Ken Ho/DNF

#### **MODIFIED D MAIN**

- 1st - Dave Wideman
- 2nd - Way Mah
- 3rd - Elite Fung
- 4th - Chris Piccini
- 5th - Rob McCaskill
- 6th - Danny Yuen/DNF
- 7th - Glen Gudesen/DNS

#### **MODIFIED E MAIN**

- 1st - Glen Ho
- 2nd - RC Steve
- 3rd - Nelson Chui
- 4th - Rob Branson
- 5th - Fife Williamson/DNF
- 6th - Arson Larsen/DNF
- 7th - Ian De La Salle/DNF

Obviously, the driver that wins is the one that turns the most laps in the least time. When you break it down, you see that they also average the lowest lap times. They also must then average the quickest cornering times, and the quickest times between points of a corner. Tip: Correct any deviation of the car from the desired path of travel as soon as possible. If you want to stay on the track that is 6 feet wide, you will have to make

steering corrections each 12 feet or so of travel through a typical corner. If you want to hold a line within 2 feet, you will have to make corrections in the direction of travel each 4 feet. If you want to hold a line 6 inches wide, you will have to be adjusting the steering every foot the car goes forward. Tighter corners require less distance between corrections, while looser corners allow a bit more.

Modern radio systems have an electronic delay of about .01 seconds. A servo has a delay of about .01 seconds for minor adjustments. There is also a delay of about .01 seconds in the brain-finger path. Total delay to a desired response is then .03 seconds. If you are trying to hold a line within 1 foot, the maximum possible speed is 22 M.P.H., which is the speed the car will travel 1 foot in .03 seconds. Always try to set up the chassis to be responsive at any portion of the track, especially where the speed to cornering radius is highest.

Then try to keep your response time its shortest.

The new Tekin digital chargers are getting to hobby stores now. They are controlled with a Motorola microprocessor, smaller but similar to

# TEKINews

## Driving Tips & New Chargers

the ones in Apple computers. The software is built right into the chip, so they can't "crash".

Don't forget to go to school at least some of the time. The microprocessor has about 4000 separate instructions to get it to perform all the functions. The microprocessor also works with a custom Tekin digital control chip that has around 20,000 wire connections inside.

The chargers have several nice features, such as the multiple charge modes. The "P" gives a normal peak charge. The "P2" gives extra peaking, followed by a 45 second delay, to warm the cells up more. The "CS" modes gives an 8 minute lockout, to prevent any chance of false peaking.

The BC48 originally put out just 5 amps. It was revised, so now it puts out up to 8 amps on 6-7 cells, 4 amps on 4 cells. The BC112 series puts out up to 12 amps. They also charge 1-12 cells. Since the 112 series will charge down to one cell, you can re-peak each cell individually. This gives explosive power off the line, and increases the battery voltage and power near the end of the run.

The chargers all feature heavy-duty 50 amp MOSFET transistors, efficient Schottky rectifiers, internal and external fuses, thermal sensors, and heavy duty construction, to insure they charge for a long, long, time.

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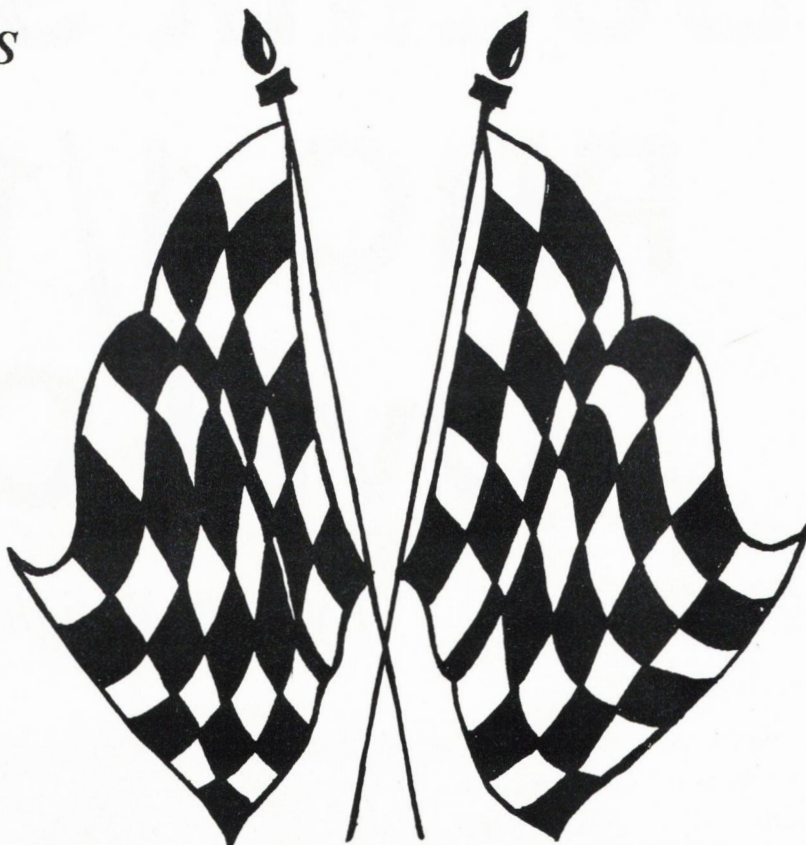
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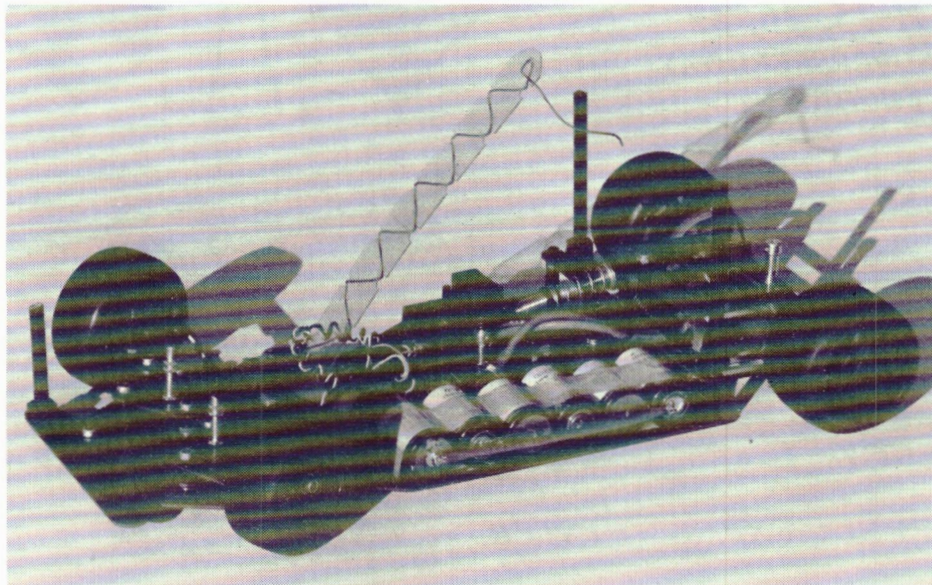
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# BoLink's LTO PRO 1/10th Oval Car

*By Jack Wright*

With years of success and a National title under its belt, the BoLink LTO has come of age. Redesigned from the ground up, the new LTO PRO car offers the latest developments in Oval car design. The BoLink LTO PRO only shares one thing from its



predecessor, the Eliminator LTO, and that's its left side battery mounting. The improvements are abundant. First of all, the LTO PRO offers a fully adjustable camber and caster front suspension with increased suspension travel. Secondly, the rear T-plate has been replaced

with a full floating rear pod that is supported by rocker balls and ball bearings, a single Delta style shock, handles fore and aft dampening along with a silicone-filled dampeners on each side of the pod to take care of side-to-side travel and to adjust chassis tweek. Other improvements

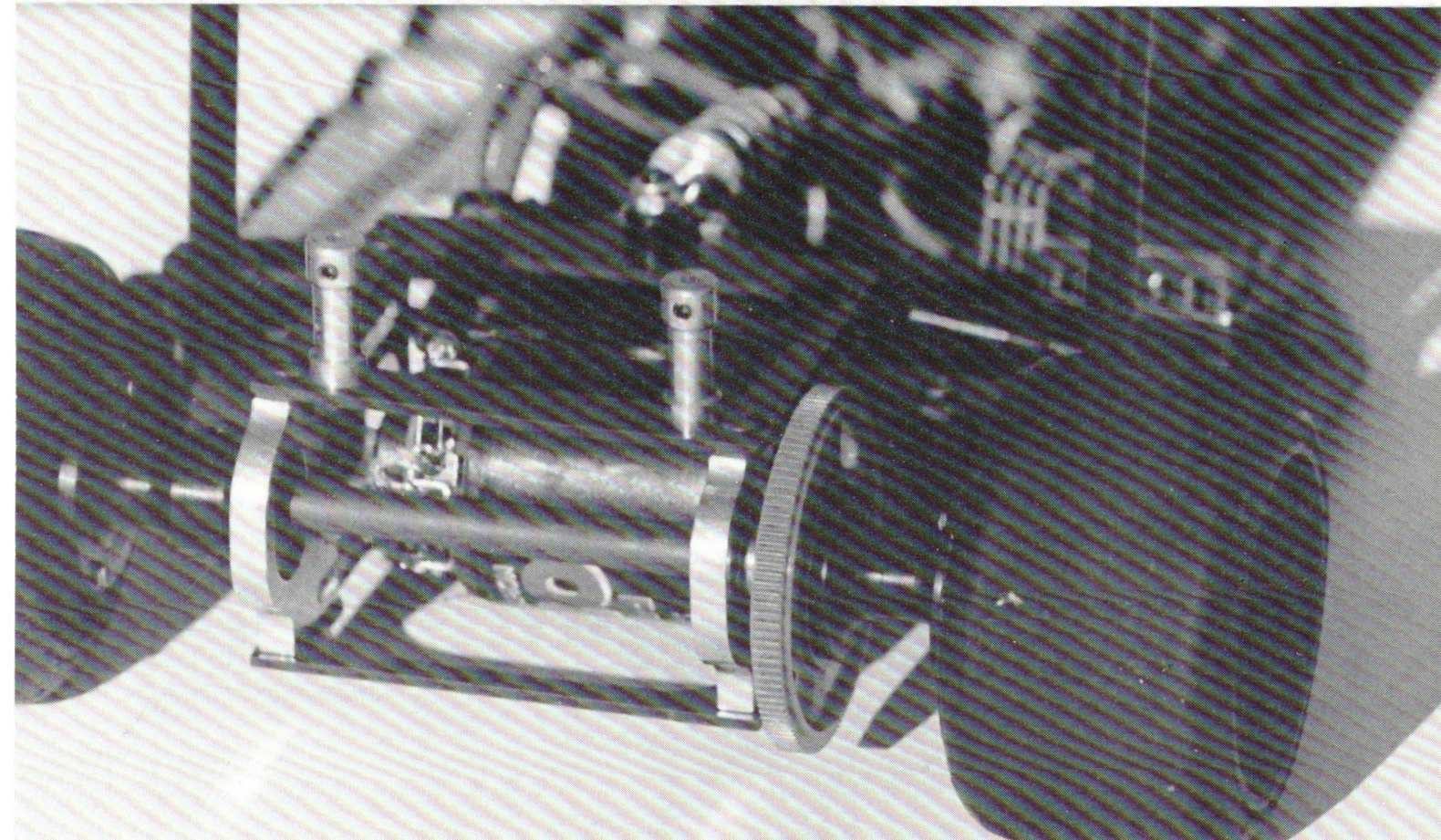
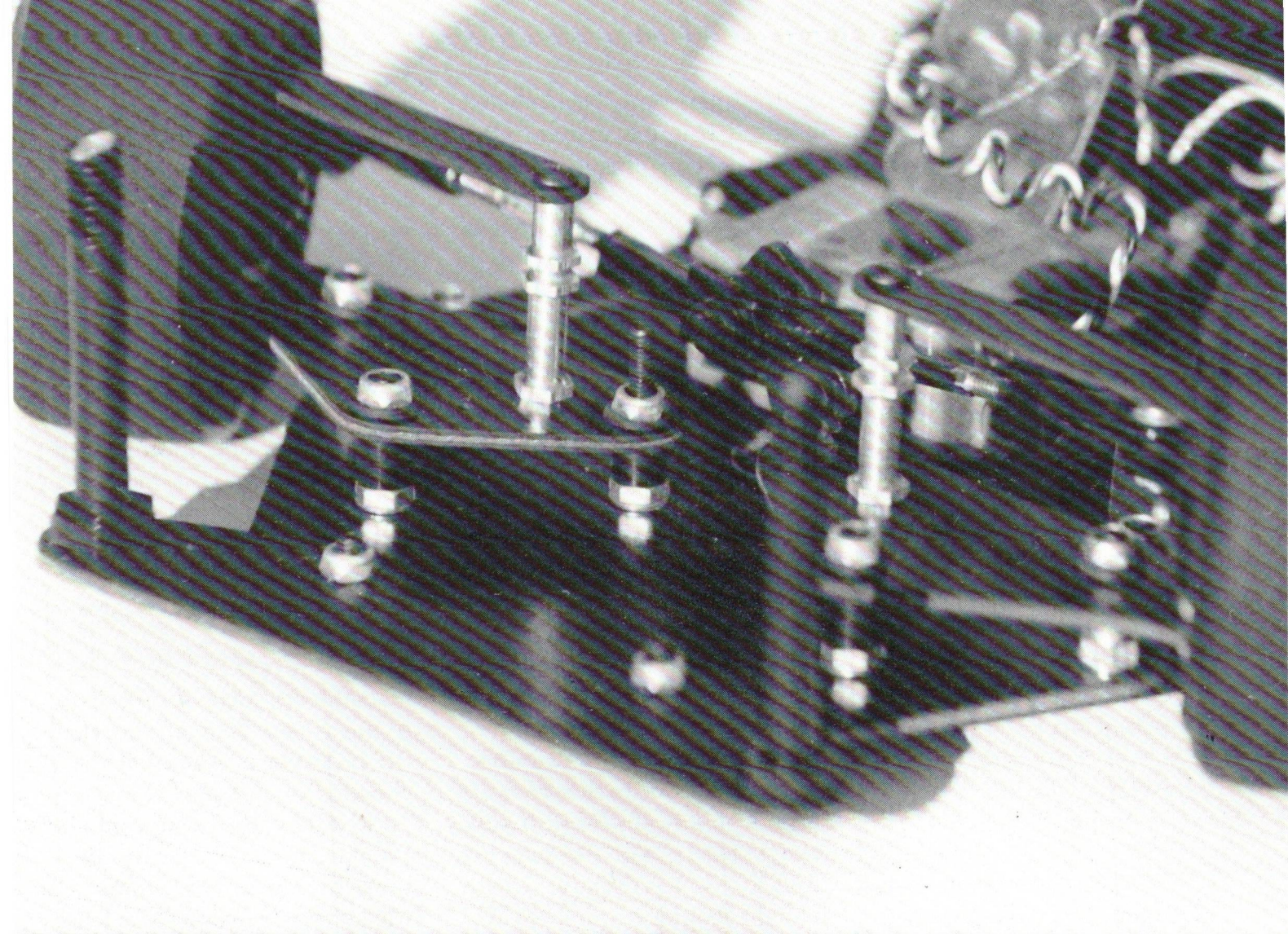
*Above: BoLink has taken their car design to new heights.*

*Placing the radio gear in the PRO was an easy task, due to all the space on the chassis.*

*Top right: Bolink's new independent front suspension has*

*greater travel and a whole lot more adjustment over the original axle found on the Eliminator, the set up may seem tricky at first but with practice it works very well.*

*Bottom right: The new rear pod allows for greater pinion selection, and left or right motor mounting.*



include: both left and right side motor mounts; six battery slots on the left and three slots on the right as to allow you to position the batteries for better weight transfer; as well as chassis braces that reduce the amount of flex in the chassis, to let the suspension soak up the bumps and allow for a smoother handling car.

### The Art Of Assembly....

After tearing into the box, I was pleased with the packaging of the kit and the instruction manual with its clear text and plenty of photos and diagrams. As you would expect, all parts are neatly packaged for quick identification. Before you break-out the tool box and start building, please read the manual. There is a lot of info you will need to properly build and race your PRO.

After we have read our manual it's time to get underway to build the LTO PRO. You will need basic hand tools as directed

in the instructions. Also needed is a 2 CH radio system, electronic speed controller, motor, battery and charger. To start, take all of the graphite chassis parts and lightly sand the edges with a fine grit sandpaper...the reason for doing this is that graphite conducts electricity, the sharp edges can cut into the battery's shrink wrap causing them to short-out and damage your car and the battery.

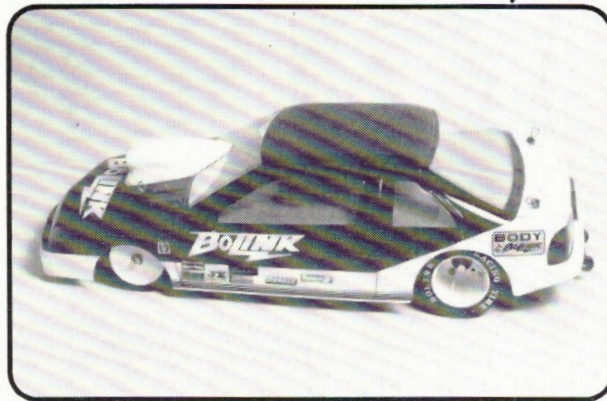
Once you have all the graphite parts smoothed out, find each of the motor pod plates. Install a 1/4 x 3/8 ball bearing into the inside of each motor plate as shown in step 2 of the manual; then attach the upper and lower graphite pod plates to the motor plates. Be sure to use some 242 Loctite on these screws so they won't come loose in the heat of battle. With the rear pod fully assembled find the T-plate and the aluminum hinge plates, install the hinge plates to the T-plate, do not tighten the mount-

ing screws all the way just yet. Take the graphite hinge pin and slide it into the right side motor mount bearing and then install an axle shim on to the pin. Now position the T-plate so the pin can slide through the hinge plates. Stop the pin just before it passes through the second plate; now, install the brass spacer between the second hinge plate and the left-side motor plate bearing. Once you have the spacer in place, position the pin so it is centered on the pod and then fully tighten the screws to the T-plate and the set screws in the hinge pin.

With the rear pod and T-plate assembled, attach the pivot balls to the T-plate, making sure that the pivot plates are installed according to the photo in step 10A. After the pivots are installed, check to see that they move freely in the mount; if they do not, remove them from the mount and sand them with a fine grit sandpaper...that should remove any binding in the pivot. At this point, install the pod assembly to the chassis, remember to put the 1/8th inch washers between the chassis and the pivot ball...then top off the assembly with the supplied 5-40 lock nuts. Next install the chassis braces to the chassis, mounting the braces to the chassis is rather simple as long as you follow the directions. The only real tricky spot is the braces that run along the chassis...be sure

*The three way dampening system on the PRO is a major improvement over the old two shock set up found on the older LTO.*

## Street or Strip!



Drag Racing Fans will love BoLINK's new Pro Street Racer. Patterned after the Pro Stock cars seen all over the U.S., this car mimics the same intense action of real drag racers!

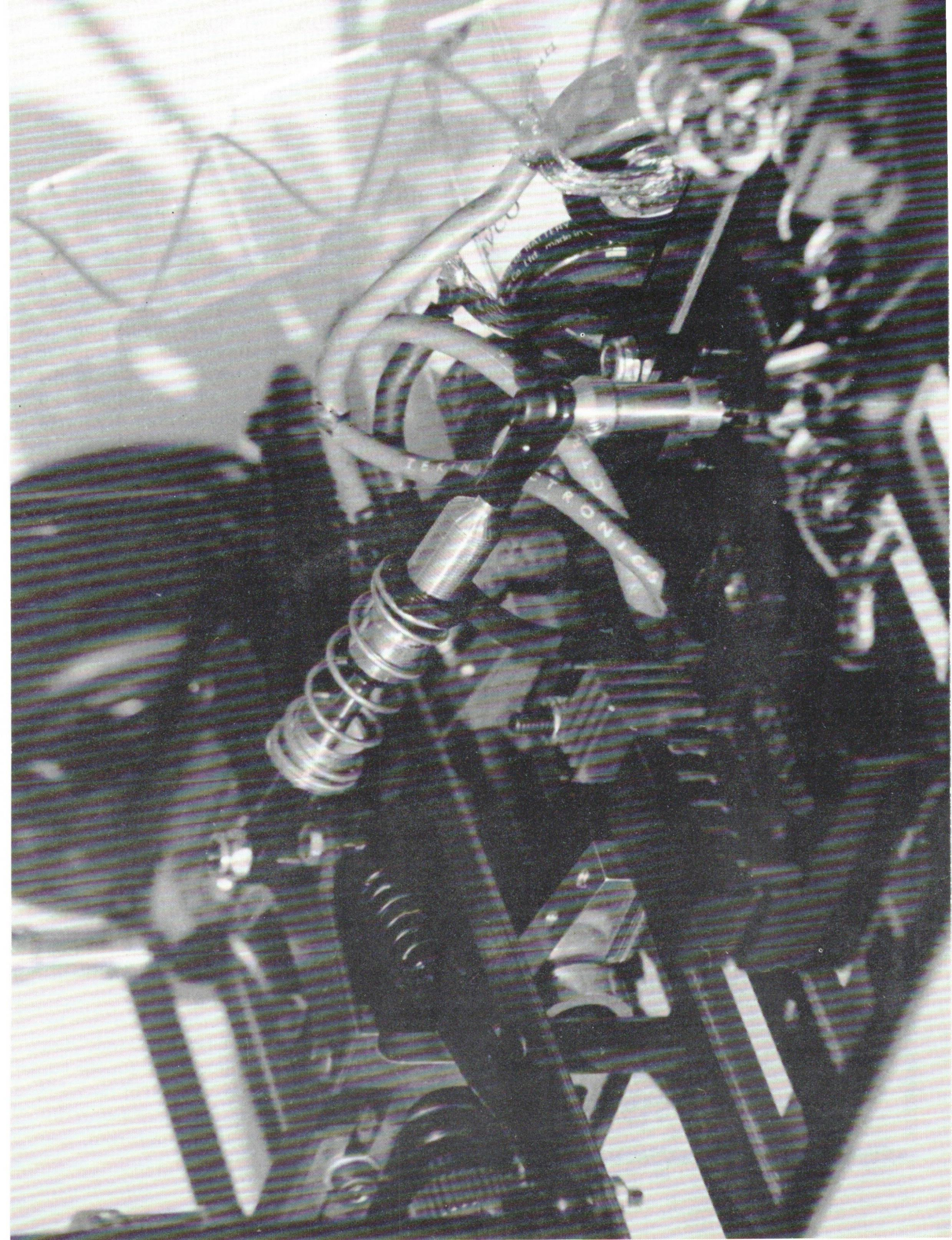
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**BoLink Superpro Springs**

**\$2.00**

**Trinity Pro Racer Silicone Shock Oil**

**\$2.95**

**BoLink BSR Radials**

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**Tekin's 411-G**

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**HPI UNO 12 Quad**

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**Dahm's Super Wing**

**\$3.98**

**Body Motions Diff Balls**

**\$2.75**

**Protoform T-Bird**

**\$19.95**

you check the photos to see if your installing the right brace to the right side of the chassis...it's an easy mistake to make (I know, I did it too!).

**Suspension Connection....**

Now that the rear motor pod and chassis is completed, the next step is to build the single oil-filled shock and two silicone side dampeners. The first step in building the oil-filled shock is to remove any flashing from the nylon parts. Assembly of the shocks is a little complicated if you have never done that sort of thing. The important thing to remember is to follow the instructions and you cannot go wrong. The LTO PRO comes with its own shock oil and two styles of springs. For racing conditions at my local track (which is a Superspeedway) I chose to use Trinity's 40 wt. silicone Pro Racers shock oil along with the stiffer gold spring included in the kit. As for the side dampeners assembly, which is just as critical to their performance as it is to the main center shock, the first thing you need to do to the side dampeners is to take each of the springs and compress them with a pair of pliers. The reason for this is the springs are coated with paint and I have found places between the coils of the springs that paint had collected and dried... not allowing the spring to fully compress. Once the dampeners are assembled, fill each unit with thick silicone lube that is supplied in the kit. Work each of the dampeners a few times before installing them into your car.

Once you have mounted the dampers, be sure that both dampers are of equal length. Next, install the main shock to the mounts on the pod and chassis. At this point, hold the car up and look at it from the side. The rear pod should be level or sloping downward slightly. If the pod is not at either position, just turn the shock body in or out of the ball link that mounts to the rear pod to correct the rear pod height.

### Front End To End All....

The front suspension for the LTO PRO isn't as complicated as it looks. BoLink designed the front end to allow for independent caster and camber adjustments to be easy and accurate every time. Besides being adjustable, the new front end still

has the durability to survive many encounters with the wall. Once again explaining assembly here would take up almost an entire article, so to simplify things, follow the manual and you won't go wrong. For a basic setup, I put 1 degree caster (king pin leaning toward rear of the car) on the left side, and 3 degree caster on the right. As for camber, I put 2 degrees of negative camber (tires leaning inward) on the right, and 2 degrees of positive camber (tires leaning outward) on the left. Doing this will prevent uneven tire wear on banked oval tracks, thus extending the life of your tires. As for the front springs, I used the kit-supplied medium red spring on the left but opted for the stiffer BoLink Superpro

purple spring on the right side. With the front end complete, it was time to assemble the rear axle and ball diff.

### Axle In Motion....

The LTO PRO features a graphite axle with five bearing diff and delrin hubs. Start by installing the centered ride height adjusters in the motor pod, followed by the 1/4 x 3/8 bearings. Next, slide one of the axle shims over the axle and then install the axle through the pod, then add another shim followed by the left-side delrin hub. Be sure that there is a slight amount of side-to-side play in the axle, and, the axle spins freely. The spur gear that is supplied with the PRO is 48 pitch and will work just fine; but, I replaced it with a 64 pitch

# EXTREME

## MOTORSPORTS

## "H.V." MODS

### NATIONAL CHAMPIONS!!

MAY 1993: NORRCA DIRT OVAL NATIONALS: SEAN YOUNG REWRITES THE RECORD BOOKS ON HIS WAY TO CAPTURING THE TOP SPOT IN THE 4 W.D. MODIFIED CLASS. SEAN'S CAR WAS POWERED BY AN EXTREME MOTORSPORTS 13 DOUBLE AND "S-2" BRUSHES AS WELL AS THE IMPECCABLY MATCHED AND CYCLED WORLD CLASS BATTERIES TEAM SCRC'S.

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DEFINING THE EDGE

## NEW!!

### THE ABSOLUTE MEGATONIC!!!

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115 tooth PSE Rocket Sprocket ultra thin spur gear for better performance over the stock spur. Besides the spur, I also replaced the diff balls in the kit with a set of Body Motions stainless steel diff balls...these diff balls are very smooth and have a slightly longer life over standard diff balls. For diff lube I used Cheetah Racing's Super diff Lube. I've used this stuff for years and let me tell you it has never killed a diff yet, always ultra smooth. Also, put a little drop of bearing oil on the thrust bearing that fits into the diff hub, that will aid in the smoothness of the diff action. On adjusting the diff, you want the diff to be as tight as possible, yet remain smooth. To check the

diff, hold the left hub with one hand and hold the diff side hub with the other. Now, using your thumb, push against the spur gear, the spur should only move slightly....any more than that will result in unwanted slippage, and, will cost you power.

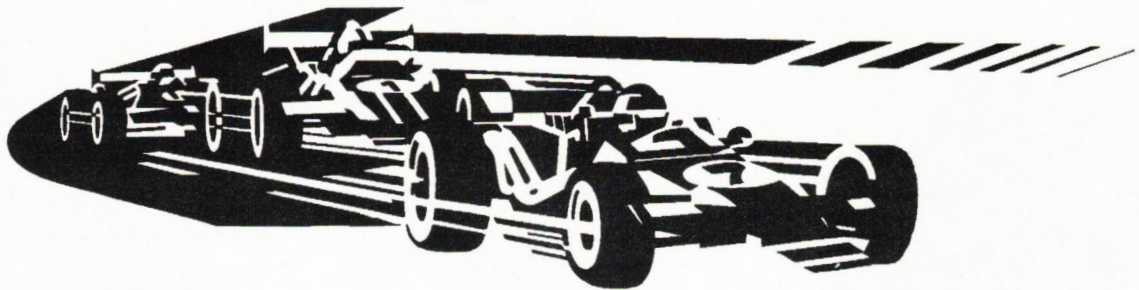
#### Radio Waves....

With the chassis complete, it's time to install the radio gear...no big trick here, just follow the manual. For this ride I went with my trusty Novak NES-1 servo for steering. Novak's NES-1 servo is no longer in production but I've used this one for years in my oval cars without fail. Another great oval servo is Futaba's 9401 or Airtronics 94151. Either of these hi speed servos have the stuff to make

one of these bad boys turn left. To transfer the power from the Hurricane batteries matched 6 cell SCRC's to the 12 Quad UNO modified, tuned to go fast using Power Surge's matched springs and brushes, I installed a Tekin 411-G Hi-Frequency ESC, the 411-G has everything you need to get the job done right...Hi-frequency operation for longer run times and longer motor life and, the torque control is a great plus on those slippery tracks. To receive the commands from the Airtronics Caliber 3P to the PRO without a glitch. I chose Tekin's micro three channel FM receiver. To finish out the package, a set of BoLink's new BSR staggered radial tires, three golds and a silver right front will

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do just fine. As for the Body, BoLink supplies the LTO PRO with their 92 Pontiac Grand Prix body; but, to be different I used one Protoform's hot-looking Ford Thunderbird NASCAR bodies. Along with a Dahm's Super wing, the PRO is ready to hit the track, and, not the wall.

#### **T-Time....**

The "of truth" was upon us, time to take the LTO PRO to the track. The test track, P.C. Hobbies King Superspeedway in King, NC. this rather large outdoor oval is just the place for the LTO to show its stuff. With transmitter in hand and the batteries pleasantly warm, I started off with just a few warm-up laps, then punched it! Whoa! Talk about speed, no wonder the HPI gang took home the Insane Run record last year, the UNO motor was hot! As for the car, a very noticeable amount of understeer was obvious, so I brought the PRO in and put two turns on the right side damper to put more weight on the left rear. That was the trick, the LTO PRO turned some very respectable 6.1 and 6.23 laps very constantly, and I am sure with a bit more time on the track to work with the chassis and gearing, the PRO could hit the 6.0 and 5.9's the top locals turn here every week. But, then again, how many of you have '93 ROAR oval champ Chris Smith and Ralph Burch, Jr. as locals?

#### **Overview....**

The LTO PRO is truly a new breed of BoLink and, is a better car than its Eliminator family. The car has plenty of room for

## Manufacturers mentioned in this article:

BoLink R/C Cars  
420 Hosea Road  
Lawrencville, GA 30245

Loctite Inc.  
Cleveland, OH 44128

Trinity Inc.  
1901 E. Linden Ave., #8  
Linden NJ 07036

HPI Inc.  
22600 Lambert St., # 904  
El Toro, CA 92630

Cheetah Racing  
10823 Amesroy Avenue  
Granada Hills, CA 91344

Dahm's Racing Bodies  
P.O. Box 360  
Cotati, CA 94931

Protoform Racing  
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St. Catharines  
Ontario, CA L2M 3P6

Futaba Inc.  
4 Studebaker  
Irvine, CA 92718

Airtronics Inc.  
11 Autry  
Irvine, CA 92718

Parma/PSE  
13927 Progress Parkway  
N. Royalton, OH 44133

Hurricane Batteries  
2210 Eagle Rock Road  
Wendell, NC 27591

Body Motions Racing  
2707 Brookbank Lane  
Raleigh, NC

Power Surge  
1901 Exrie Court #203  
Raleigh, NC

Tekin Electronics  
970 Calle Negocio  
San Clemente, CA 92672

adjustment to make it right at home on most any track...whether it's a short carpet oval or the largest of Super-speedways. The only thing I would change in the LTO kit, would be to replace the 48 pitch spur with a more competitive 64 pitch. Other than that the car is

fine the way she sits. As for the UNO motor, its speed and power are just what the doctor ordered for fast-paced racing and, the Tekin 411-G and TFM receiver did their jobs to perfection. Once again, BoLink is hitting on all eight with their latest entry in the oval wars.

Thanksgiving weekend is a tradition of a different type for serious 12th scale road racers. While this was the 5th Indoor Champs that I have attended, 1993 was the 14th year for this NORCAR run event. There may not be an RC event in the world that has run longer and attracted such top notch fields.

Arriving at the

# 1993 US Cell

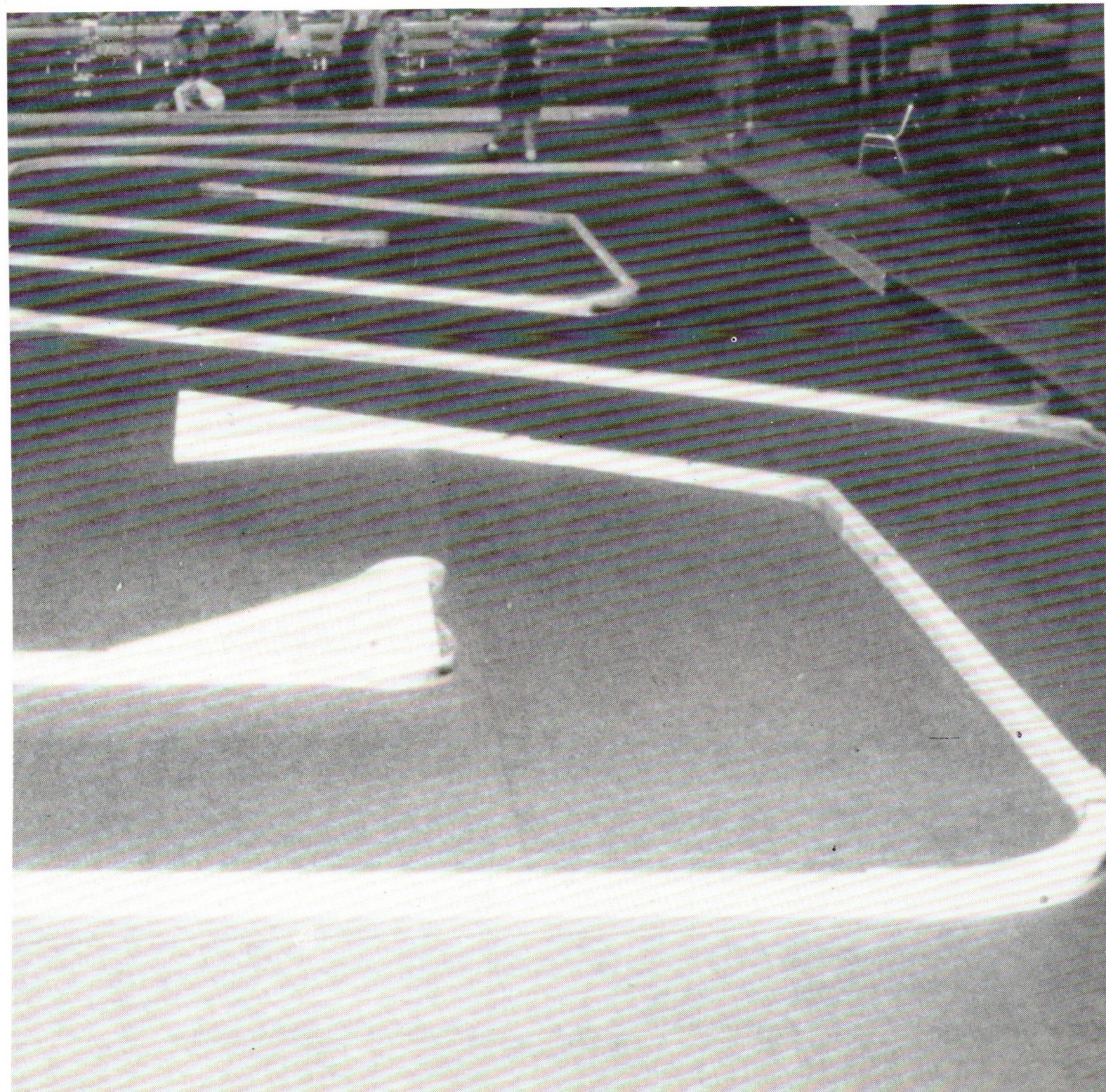
*By Bill  
McCall*



# Indoor 4

*Although the thought of going to chilly Cleveland on Thanksgiving weekend may not sound appealing, it's a race that every road racer should try to attend once in their lives.*

# Championships





# NOBODY KNOWS GAS

A lot of people would like you to think they created the whole concept of RC gas racing.

But with over 25 years of experience racing RC gas cars and winning two IFMAR Gas World Championships, Team Associated knows gas racing.

That's why the

Team built the RC10GT.

Our RC10GT is the real thing, designed and engineered by the same racers that brought you the original RC10 and the RC10T.

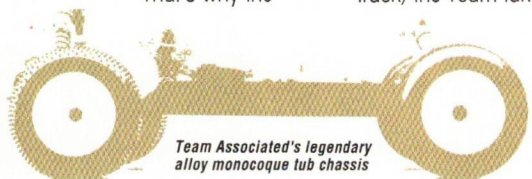
While it might be enough for some to simply drop an engine and a fuel tank into an electric truck, the Team takes this kind of



IFMAR World Champion factory drivers Brian Kinwald and Cliff Lett teamed with Curtis Husting in designing, track testing and racing our RC10GT prototypes.

powertrain transfusion seriously. The RC10GT is a completely integrated package created to take maximum advantage of gas power yet versatile enough to accommodate all popular .12 and .15 size engines.

The most advanced, high performance vehicle of its kind, the RC10GT features competition proven, four wheel suspension with precision, coil-over shock dampening. Our World Famous Team Associated Stealth ATC gearbox is also adapted to the RC10GT, to get all that nitro power to the ground and our race-ready disc brake gets it all slowed down in a hurry. And like all our kits, hardware and materials are nothing but the best. And because Team Associated understands RC racers, and their



Team Associated's legendary alloy monocoque tub chassis

The RC10GT is based on our Championship RC10T Team Truck.



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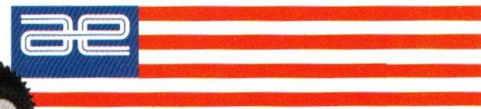
budgets, the RC10GT is available with either bushings or ball bearings and for both pull and non-pull start engines.

Enjoy the sound and power that makes gas RC racing come alive. The RC10GT is the ONLY RC gas truck with Team Associated's proven performance and reliability. Because no one knows RC racing like the Team.

The RC10GT is available in several Sport and Competition versions for most .12 or .15 engines. We highly recommend the .12 size for scale performance and reliability.

*All terrain tires developed by Pro-Line specifically for the RC10GT*

*Wide track, long throw suspension, molded from dyeable virgin nylon*



# RC10GT

Associated Electrics 3585 Cadillac Avenue, Costa Mesa, CA 92626

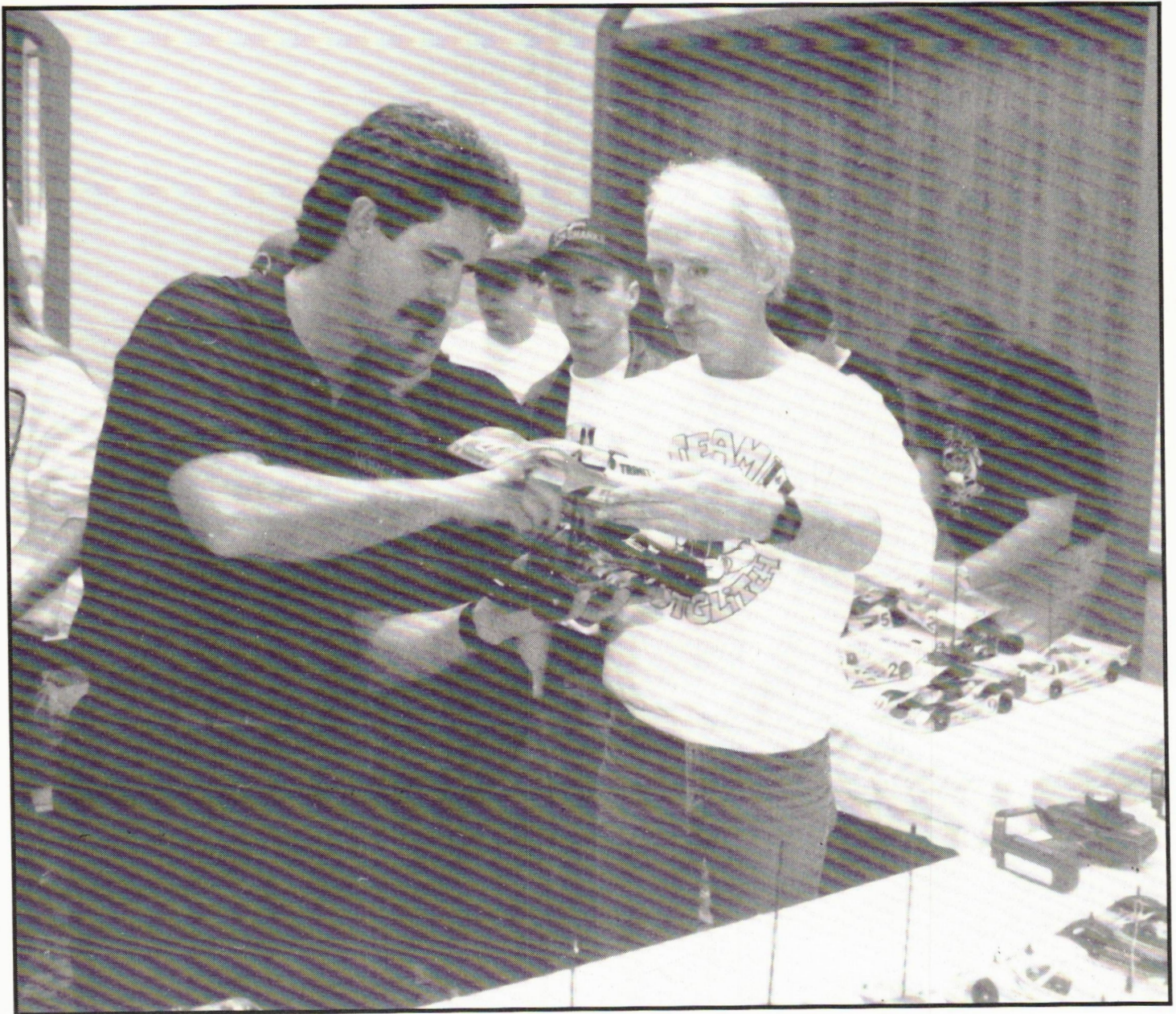
event, one thing hadn't changed, and two other things had changed for this year's event. The thing that hadn't changed was the track. The two things that had changed caused something of a small controversy. But what is Cleveland without controversy? The first thing I noticed was that the race board listing each racer's heat and frequency had two cut out holes. These holes were where the frequency would be listed for the

10 drivers in the sportsman and modified "A" qualifiers. One could see the frequency of the racers in all the heats with the exception of the two "A" qualifiers.

The intent was to prevent someone from deliberately interfering with one of the A drivers. This brought a couple of questions to my mind? Do we have to go this far to prevent cheating? With radio impound is this really needed? Finally with

NORCAR's system the A qualifiers are seeded into what NORCAR perceives to be the top 10 racers in each class. If shielding the frequencies is really needed, then it could be perceived as a benefit. That brings up the point, if something is a benefit, then it should be available to all racers, not just the ten pre-race favorites.

Another change this year, was a "fine" system imposed by NORCAR for racers who didn't



get their radios to impound or who didn't show up to turn marshall. If a racer didn't marshall, he had the choice of giving up one lap from his best qualifier or paying a \$10 fine. As a person who runs races, I can understand the need to keep the event going, but the problem with this rule is that is im-

possible to implement evenly. All weekend I saw racers using friends and family to fill in for them. However, the better known racers couldn't get away with that. I believe that a driver has a responsibility to marshall if physically able. But a driver who doesn't want to marshall will probably not do a good job. I see no problem if a driver gets another racer to marshall for them. However, I saw NORCAR trying to improve the quality of the race for all racers, but the implementation wasn't as even handed as it should have been.

The field was as strong as ever

for 1993. The Sportsman class was pretty big with 200 entries, but the Modified class was unusually small with less than 70 entries. In Sportsman, Chad Coppock and Chris Mockerman led the field with 35 lap runs. In the Modified class, Mike Blackstock dominated early with a low 37 lap run. Mike's run would

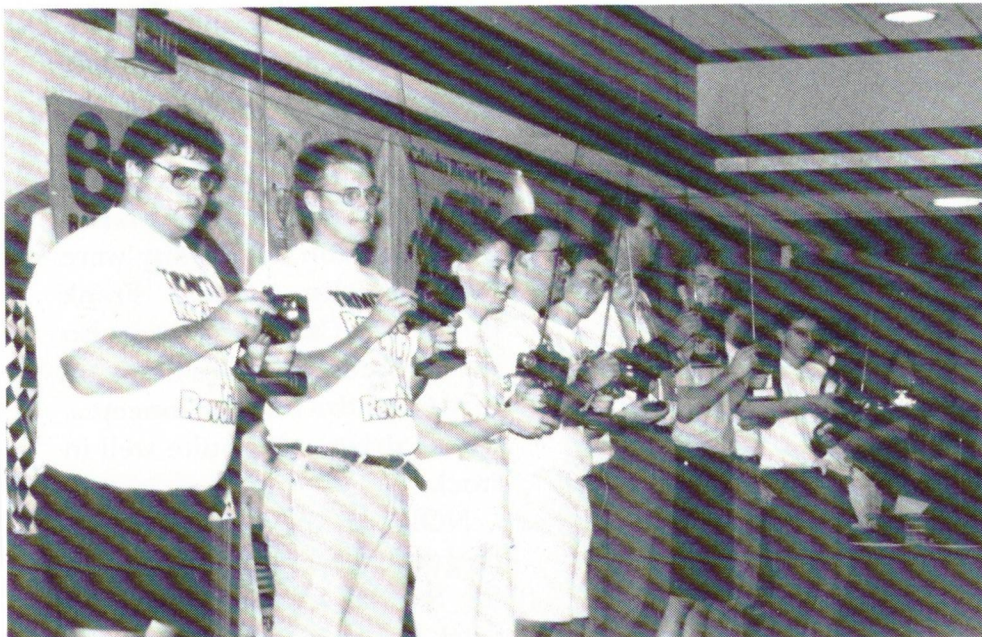
have won the main the year before on the same track. Joel Johnson and Mike Lufaso were close behind Blackstock. At the end of the first day, Bill Jeric's 36 lap 8:10 rounded out the top 10. The two previous Sportsman champions were in a position to make the top 10 in mod on the final day of qualifying. Also in a good position to make a run at the A was Brett Polivka, who came close to a Sportsman TQ and win in 1992.

Round 3 on Saturday saw Chris Doseck make a brilliant run that would fall just .01 seconds behind Blackstock's TQ

time. Steve Radecky was the 5th person to turn a 37 lap run. In Sportsman, Scott Williams driving a Trinity Revolver, turned in a 35 lap 8:07 to take the TQ spot in that class. The final round of qualifying saw Scott Williams hold on to the TQ spot while there was a lot of changing going on in the mod class. It started in the C qualifier, where Brett Polivka made an almost perfect run that fell just short of the 37 lap barrier and left him in 7th place with just two heats to go. (Brett would indeed hang on for the 10th spot in the A in only his first attempt in the mod class.) In the final A qualifier Joel Johnson turned in a run that was "almost" perfect. If there was a flaw in the run, I didn't see it.

After modified qualifying was over, there was a Trinity Revolver at the top followed by an Associated, another Revolver, and a Corally. It was good to see a three way competition among the manufacturers. I then set off to get my first close up look at the Revolver. (Joel's 92 car was a prototype.)

After qualifying was over, Joel's day wasn't over, with late night practice going on, Joel and his mechanic Jim Deiter were hard at work preparing for a final practice round. Joel's car was pretty much the stock item, except as Jim and Joel pointed out, they had done a little work on the T bar. As Joel explained, as Jim worked, they lengthened the T-bar. Joel said that this moved the weight transfer point





forward making the car more forgiving as well as allowing the car to carry more speed into the corners. The modified T bar was the only non-stock item on the car, although they did lighten up some graphite parts to get to minimum weight. Joel says that his modifications should be part of the Horizon Newsletter about the time you are reading this.

But the main wasn't won yet, Associated and Corally had some strong competition in the A as well. Lufaso qualified 2nd for Associated and Doseck was number 4 for Corally. Also in a good position for Trinity were Mike Blackstock and Frank Calandra. Calandra, was also there representing his new venture Calandra Racing Concepts, whose drivers did quite well in stock.

NORCAR did an excellent job of getting everything together for Sunday's mains. The first stock mains went off promptly at 8 a.m., much to the displeasure of the mod A drivers who had to get up 5 hours before the race to marshall.

Once the stock qualifiers got down to the "G", races alternated between stock and mod. Among one of the mod qualifiers was Mike Reedy, who took some time for himself to race. Somewhere out there today are two racers that are still talking about how they beat Mike Reedy. (Mike finished third, while taking a bit of light hearted abuse from the crowd and race announcer).

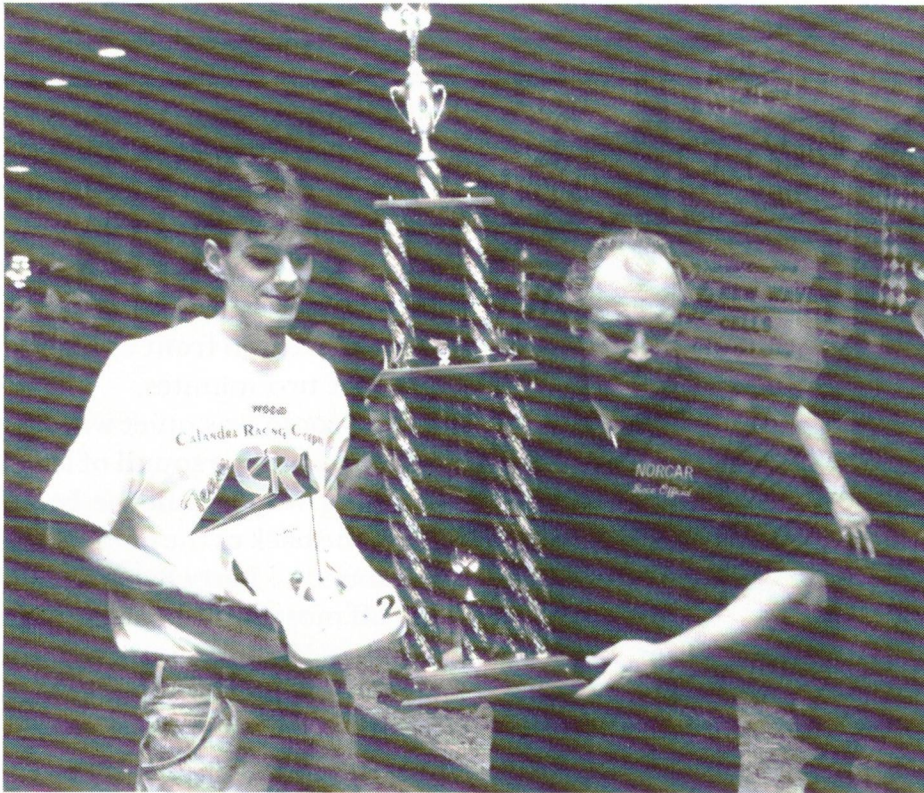
The Sportsman A main was the first controversy that oc-

curred on the track. The race started well enough with TQ Scott Williams and Chad Coppock turning in 8 consecutive 13 second laps each. Only a couple of seconds behind them was Andy Power. In fourth and making his second straight showing in the A was Chris Mockerman. Chris suffered a slow start and spent the first half of the race trying to catch up. It was on lap 15 that the controversy occurred. The lead trio had bunched up and came together

pulled his car to a corner and began to wait for the field to catch up with him. Unfortunately, the turn marshall at that corner, who was doing a good job till that point, was looking the other direction. Not realizing what was going on, the marshall heard the abusive crowd yelling at him to get the leader. The marshall then after 5 or 6 seconds had elapsed grabbed the car and put it back where it wrecked. Suddenly Scott found himself 8 seconds

that occurred in the Mod A to Joel in 1992. In a situation like this, the race announcer can make or break a race. In '92, the announcer kept things going. This year, the lack of attention might have cost Williams the championship. Scott did a great job of taking small chunks out of the lead to get back to 2nd place, but catching Chad Coppock was too much of a task as Williams fell about a second short. Here is how the 1993 Sportsman A main finished:

- 1st - Chad Coppock**
- 2nd - Scott Williams (TQ)**
- 3rd - Chris Mockerman**
- 4th - Andy Power**
- 5th - Dave Reiman**
- 6th - Mike McMahon**
- 7th - Steve Charles**
- 8th - Robert Vanwagner**
- 9th - Peter Maiolo**
- 10th - Jeff Brown**



at a 90 degree left hand turn with Williams on the outside. Williams was literally thrown over the board and ended up wheels down and pointed in the right direction further down the track. Scott seeing that the wreck had actually given him a big lead

back with half the race to go.

I would like it clear that I don't fault the marshall. I find some fault with the crowd for getting out of control, but at least none of them rushed out and turn marshalled! This was almost identical to the situation

While making the A in a field like this is an admirable accomplishment, the top 4 drivers put on an excellent show in skill and sportsmanship. That kind of racing excitement can only help the sport. Several of the past winners of this race have gone on to do well against the world's best in the modified class.

While it's great to see racers do well in this race and pick up sponsorships, the fact is most, if not all of these drivers, have at least partial sponsorships. However, I stick with my policy of not acknowledging sponsorship of stock drivers.

Prior to the big event, the B modified was a pleasure to

## THE 1993 US INDOOR 4-CELL MODIFIED NATIONALS

| <u>POSITION</u> | <u>DRIVER</u>   | <u>CHASSIS</u> | <u>MOTOR</u> | <u>BATTERY</u> | <u>TIRES</u> |
|-----------------|-----------------|----------------|--------------|----------------|--------------|
| 1st             | Joel Johnson    | Revolver       | Trinity      | Trinity        | TRC          |
| 2nd             | Mike Blackstock | Revolver       | Trinity      | Trinity        | TRC          |
| 3rd             | Chris Doseck    | Corally        | Cam          | Cam            | ???          |
| 4th             | Steve Radecky   | Associated     | Reedy        | Reedy          | TRC          |
| 5th             | Frank Calandra  | Revolver       | Trinity      | Trinity        | PSE          |
| 6th             | Mike Lafaso     | Associated     | Reedy        | Reedy          | Yokomo       |
| 7th             | Sean Cochran    | Procar         | Genesis      | Genesis        | TRC          |
| 8th             | John Orr        | Associated     | Reedy        | Reedy          | PSE          |
| 9th             | Rich Baker      | Associated     | Reedy        | Reedy          | TRC          |
| 10th            | Brett Polivka   | Corally        | Cam          | Cam            | TRC          |

watch. The A main had a few of the newest on road hot shots, but the B had a couple of masters. While Tony Neisinger didn't make the A, he showed several times during the main,

how a world class driver makes a pass and holds a line.

After another long holiday weekend it was time for the grand finale. Joel Johnson was no stranger to the pole position.

Next to him was Associated's top gun Mike Lufaso as well as Blackstock and Doseck. After a disastrous start in '92, I'm sure Joel was concentrating on a clean start. A clean start was exactly what he got. Joel was out clean and in front to stay. He added to his lead on each of the first 9 laps. The rest of the field was running a tight "train" behind Joel. As a result, the track remained clear in front of Joel for the first two minutes.

The room was quiet with the tension until the sound of lexan slapping wood could be heard from the back of the field. It was the sound of Barry Baker bouncing off most of the boards on lap number 19. Barry settled down again, but he was almost a lap off the pace. Joel continued to run out in the clear until Barry began to get loose again. As Barry made contact with the outside of the sweeper, Joel flew by to lap his first competitor. As if almost by magic Barry instantly settled down and began to chase Joel. Barry closed in as *Joel Johnson, winning once again at the 1993 US Indoor 4-Cell Champs in Cleveland, Ohio.*





5th Annual

# ASPHALT CHALLENGE OVAL CLUB



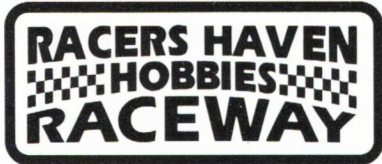
Ballistic Batteries

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**SCHEDULE :** Saturday, February 26: Open Practice 10am-9pm  
Sunday, February 27: 3 rounds qualifying, and mains 10am.

**CLASSES :** Novice, Sportsman Stock, Expert Stock, Sportsman Modified, Expert Modified, Indy/F1 (Formula TK)

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**AWARDS :** 1st-3rd all Mains, Running Concours 1st-3rd.

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**RULES :** NORRCA Rules apply, with exceptions, NORRCA MEMBERSHIP REQUIRED. All Novice and Stock Classes must run 24 degree motors, Indy/F1 class must run 24 degree motors as per 1994 NORRCA Formula TKS rules, 38oz. min, stock wheels with any rubber, stock spoilers and wings, any other part upgrades at race directors discretion. Call for complete rules.

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no other competitor did during the race. Quickly Joel found Barry glued to the back end of his car, matching Joel's every move exactly. At first, I thought that Joel didn't realize that it was Barry and that he was a lap down as he fought to maintain his lead. Joel told me later that he knew exactly who was chasing him and where his position was in the field.

It took Joel about two laps of fighting Barry till he found a good place on the track to let Barry go by. Joel reasoned that with all of the slamming that Barry had done, he probably wasn't going to finish the race. Not wanting to get out of his

game plan, Joel moved more than a foot off of his line to let Barry by. As much room as there was, it wasn't enough as Barry managed to get a piece of Joel on the pass. Fortunately for Johnson it was a glancing blow.

Joel was slowed down, but it wasn't enough for the next pack, consisting of Blackstock, Doseck, Radecky, and Calandra, who were still 8 seconds back. Joel ended up using some of the tactical skills that he has become famous for in holding on to what had threatened to become a runaway. Nobody, possibly including Joel, seems to remember how many of the 14 Cleveland races he was won.

With another year over with I was grateful to the NORCAR staff for running a smooth event that was done in record time allowing us to get a head start on battling some of the nation's worst holiday traffic on my 100 mile return trip to Columbus.

I used that time to reflect how far the sport has come in 14 years and how it was all seen at one time or other at this race. I also reflected on Joel's win. While it wasn't his only win here, it was a memorable one for me. Most racers who have come into the sport in the last 7 or 8 years remember Joel's 2WD Off-Road World's title he won in England with a Kyosho Ultima.

### ★ Team Class! Products ★

#### Part #

- 6000 **Motor Maintenance Center w/Fan** - Holds motor, Turbo prop supplied to keep motor cool, built in brush cutting jig. Hot Red Motor Stand.
- 6002 **Turbo Prop** - Place on motor shaft to keep motor cool.
- 6003 **Dual Motor Stand** - Use as a dyno or brush break in.
- 6004 **Spring Thing** - Match springs for ultimate performance.
- 6005 **Brush Hood Aligner Plus** - Centers brushes perpendicular to commutator for ultimate performance.
- 7500 **High Frequency Capacitor Kit** - (3) .1 uf capacitors.
- 7501 **Stock Performance Kit** - .1 uf cap., pair purple springs and pair soft Venturi brushes.
- 7502 **Oval Performance Kit** - same as 7501 w/black springs.
- 7505 **Liquid Horsepower** - Stops brush glazing, increase performance, extends life of motor and brushes.
- 3303 **MicroWire Retainers** - self stick wire clips to keep servo and motor wire in place.
- 3000 **1/10 Lightweight Collet Hub** - Left wheel hub - no set screws to damage your axle. The best balanced hub on the market.
- 3001 **1/12 Lightweight Collet Hub** - Same as 1/10 Scale.

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Our brushes are constantly being race tested so that we can provide you with the best brushes available. Our hard compound produces good power with very long motor life. For gear ripping punch and speed, our soft brush produces plenty of power. Our new "Silver Streak" brushes are made of low resistance silver to increase power and battery life. All of our brushes are available with or without eyelets.

#### NEW

Available September 10, 1993: Our brush part # 7001, 7002, 7003, 7013, 8001, 8002, 8003, and 8013 will be available in 6 packs. This means you can purchase Class Brushes in lots of 6 pairs per package. The demand has increased for bulk sales to individuals. Keep up the requests. We'll try and fill your requests as fast as we can.

More new products due the first of the year. Watch for our announcements starting January 1994. We're going all out for better products designed from sound ideas.

Our Number 1 Team Class Driver, Everett Pietras, used all of the needed Team Class Products toward his capture of the 1993 Stock Triple Crown.

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Whether deserved or not, many at that time viewed Joel as egotistical or even unapproachable to some extent. My first time at Cleveland some portions of the crowd let out a subdued cheer when Joel lost a pinion gear in a qualifier. In my couple of years as a reporter for this magazine I haven't seen these traits in Joel. I've always found him to be a pretty straight forward kind of guy.

However, At the PROCAR Worlds and at Cleveland I began to see a new Joel Johnson, a team leader emerging. Clearly Joel is getting comfortable with his position at Team Trinity. Off the track he makes as good a spokesman as he does on the track with his driving. I also noticed a real commitment to the other team players, particularly those in the stock class.

I don't know how long a young man like Joel can make a career out of RC racing, but after a year like '93, Joel is clearly at the top of his game and his team.

#### **MODIFIED CLASS**

##### **B MAIN**

- 1st - Cyrul
- 2nd - Neisinger
- 3rd - Jeric
- 4th - Rott
- 5th - Decker
- 6th - Whitrock
- 7th - Martin
- 8th - Schoenau
- 9th - O'Malley
- 10th - Jelech

##### **C MAIN**

- 1st - Ferguson
- 2nd - Gerber
- 3rd - Smaltz
- 4th - Starkey
- 5th - Phillips

6th - Chester

7th - Louis

8th - Lewis

9th - Glazer

10th - Pietras

##### **D MAIN**

1st - Sweeney

2nd - Tonogai

3rd - Koepp

4th - Creado

5th - Hoffman

6th - Temme

7th - Rossi

8th - Jones

9th - Arnold

10th - Smith

##### **E MAIN**

1st - Pepe

2nd - Wenzel

3rd - Hallmark

4th - Ramos

5th - Alff

6th - Pulfer

7th - Kemery

8th - Ivy

9th - Sullivan

10th - Fogleson

##### **F MAIN**

1st - Howell

2nd - Hallmark

3rd - Powell

4th - Smith

5th - Pritchard

6th - Mulherin

7th - Collins

8th - Emad

9th - Rodi

10th - Cutman

##### **G MAIN**

1st - Schneider

2nd - Hodson

3rd - Reedy

#### **SPORTSMAN CLASS**

##### **B MAIN**

1st - Lawrence

2nd - Showler

3rd - Hodge

4th - Sommers

5th - Berg

6th - Witteman

7th - Carrubba

8th - Boice

9th - Rice

10th - LaFara

##### **C MAIN**

1st - Lonegran

2nd - Ellis

3rd - Riggle

4th - Cyrul

5th - Heath

6th - White

7th - Norton

8th - Hughes

9th - Henderson

10th - Miles

##### **D MAIN**

1st - Berry

2nd - Everhart

3rd - Walter

4th - Murray

5th - Calandra

6th - Adams

7th - Machin

8th - Gilligan

9th - Nidd

10th - Bailes

##### **E MAIN**

1st - Abler

2nd - Kaudle

3rd - Wolf

4th - McNealey

5th - Berry

6th - Keely

7th - Barber

8th - Blaszcak

9th - Melone

10th - Hirsch

##### **F MAIN**

1st - Brink

2nd - Lee

3rd - Walsh

4th - Mync

5th - Palmer

6th - Duncan

7th - Levy

8th - Curtis

9th - Schacht

10th - Klugh

**G MAIN**

1st - Jucha  
 2nd - Bach  
 3rd - Gregoire  
 4th - Ezrow  
 5th - Gorney  
 6th - Powell  
 7th - Zimmerman  
 8th - VanEs  
 9th - Klein  
 10th - Greenwell

**H MAIN**

1st - Thomas  
 2nd - Burns  
 3rd - Brown  
 4th - Hahn  
 5th - McWethy  
 6th - Bury  
 7th - Geltz  
 8th - Rice  
 9th - Hadley  
 10th - Worrel

**I MAIN**

1st - Xavier  
 2nd - Temme  
 3rd - Knaus  
 4th - Ozipko  
 5th - Smith  
 6th - Arsenault  
 7th - Willcomm  
 8th - Kocher  
 9th - Elenz  
 10th - Larkin

**J MAIN**

1st - Esposito  
 2nd - Oehman  
 3rd - Carbone  
 4th - Elliot  
 5th - Acey  
 6th - Zuccarell  
 7th - Elenz  
 8th - Clark  
 9th - Pavlick  
 10th - Johnson

**K MAIN**

1st - VonWeiland  
 2nd - Andrews  
 3rd - MacTavish  
 4th - Maslin

5th - Detmers  
 6th - Mackin  
 7th - Giordano  
 8th - Oehman  
 9th - Ruggles  
 10th - Honsberger

**L MAIN**

1st - Saveland  
 2nd - Ross  
 3rd - Calvarese  
 4th - Peletski  
 5th - Thompson  
 6th - Swartz  
 7th - Bonn  
 8th - Mancinelli  
 9th - Santoro  
 10th - Snyder

**M MAIN**

1st - Steineke  
 2nd - Donaldson  
 3rd - Kerricks  
 4th - Rees  
 5th - Larkin  
 6th - Ede  
 7th - Ruszkowski  
 8th - Warren  
 9th - Holmes  
 10th - Allmendinge

**N MAIN**

1st - Kaiser  
 2nd - Ruggles  
 3rd - Wolff  
 4th - Whitaker  
 5th - Koerner  
 6th - Grigsby  
 7th - Seeman  
 8th - Wagner  
 9th - Cooper  
 10th - McArthur

**O MAIN**

1st - Ager  
 2nd - Greer  
 3rd - Whitaker  
 4th - Redlin  
 5th - Hinshaw  
 6th - Scammell  
 7th - Kaczmarek

8th - Wellbaum  
 9th - Rowley  
 10th - Sanchez

**P MAIN**

1st - Pontius  
 2nd - Colligan  
 3rd - Verbridge  
 4th - Briscoe  
 5th - Spitulski  
 6th - Vodila  
 7th - Mruk  
 8th - Lorello  
 9th - Johnson  
 10th - Sherman

**Q MAIN**

1st - Smith  
 2nd - Gillhouse  
 3rd - Eda  
 4th - Brown  
 5th - Cowden  
 6th - Beachy  
 7th - Pritchard  
 8th - Snyder  
 9th - Rowley  
 10th - Owens

**R MAIN**

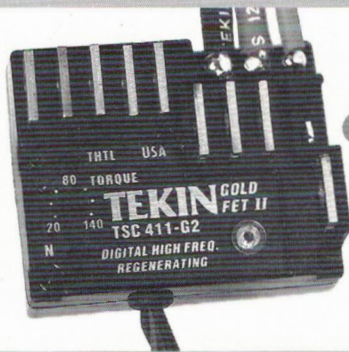
1st - Bury  
 2nd - Wright  
 3rd - Ackler  
 4th - Johnson  
 5th - Smith  
 6th - Bury  
 7th - McClellan  
 8th - Mayerat  
 9th - Griffin  
 10th - Clark

**S MAIN**

1st - Greer  
 2nd - Colon  
 3rd - Belovicz  
 4th - Green  
 5th - Foster  
 6th - Greer  
 7th - Smith  
 8th - Smith  
 9th - McNerney  
 10th - Aholt

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Speed Control**

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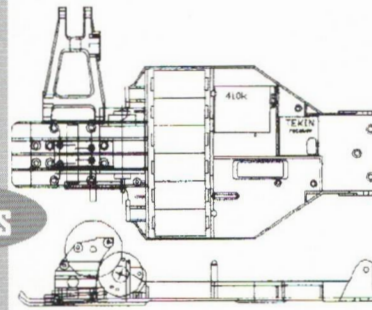


**411-G2**



**NEW - BC 67 AC/DC  
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**Chassis**

**NEW - High Voltage  
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**420-G2**



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**BC 100L**

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# *MRC's World Electric Racing*

**By Bill McCall**



# *Scale Baja King Truck*



Readers of this magazine have gotten to read about the new World Scale vehicle that is being sold by MRC. This magazine also brought you a report on the MRC race last November. Perhaps a few of you have also seen a remarkable marketing video from MRC that promotes the toughness of this scale of vehicle.

With this in mind I decided to look into World Scale for my-

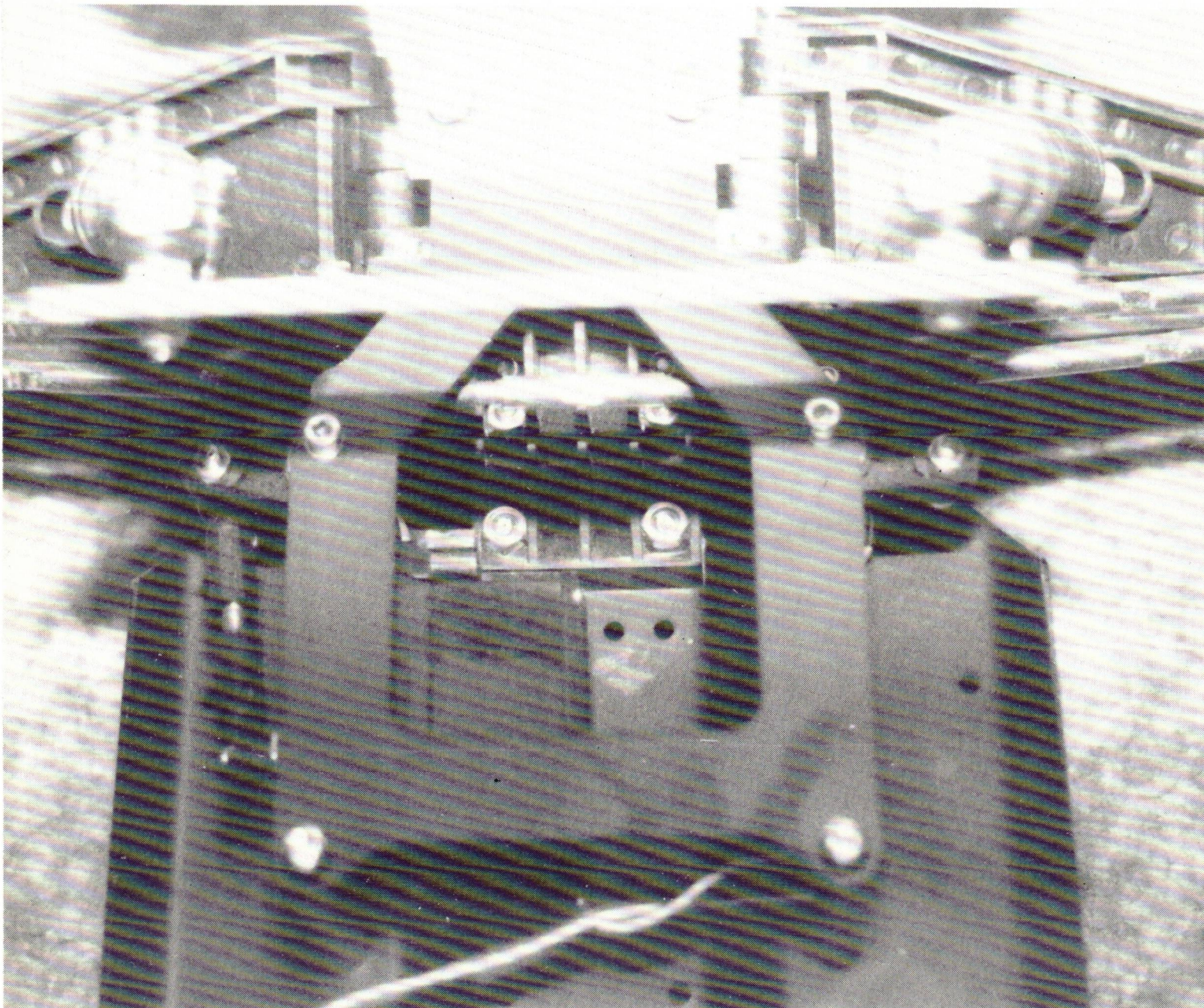
self. Having done a great deal of truck racing over the last few years, I chose their Baja King truck. This is their racing version of this class. The kit contains most of the advanced features that we've come to expect in a racing truck such as a ball diff, slipper clutch, and a racing suspension.

Opening the large box, the wheels and tires quickly attract your attention. The packaging

is clearly designed to let you know you are getting more of a truck than what you get in 10th scale.

The wheels are single piece nylon rims that are common in racing circles. The front tires are similar to the type that come on an RC-10T. On the back are soft to medium compound mini-pin type tires.

The chassis is an aluminum plate. Around that chassis expe-



rienced builders will find the familiar things that make up a 10th scale electric racer. Early on you will mount the battery box to the chassis. Two set of holes are provided. Which set you use depends on what type of battery packs you intend to use. According to the World Scale Racing Rule Book, provided by MRC, stock uses 7 cells and modified uses 8 cells. With the 2 sets of holes you can use either a 7 cell pack that has the 7th cell on the end or a hump pack.

Next you build the truck's front end. This is exactly what you would expect in a racing truck. Up front is a fully adjustable suspension that includes adjustable turnbuckles and quality oil filled shocks. A large front bumper and fiberglass shock tower add strength.

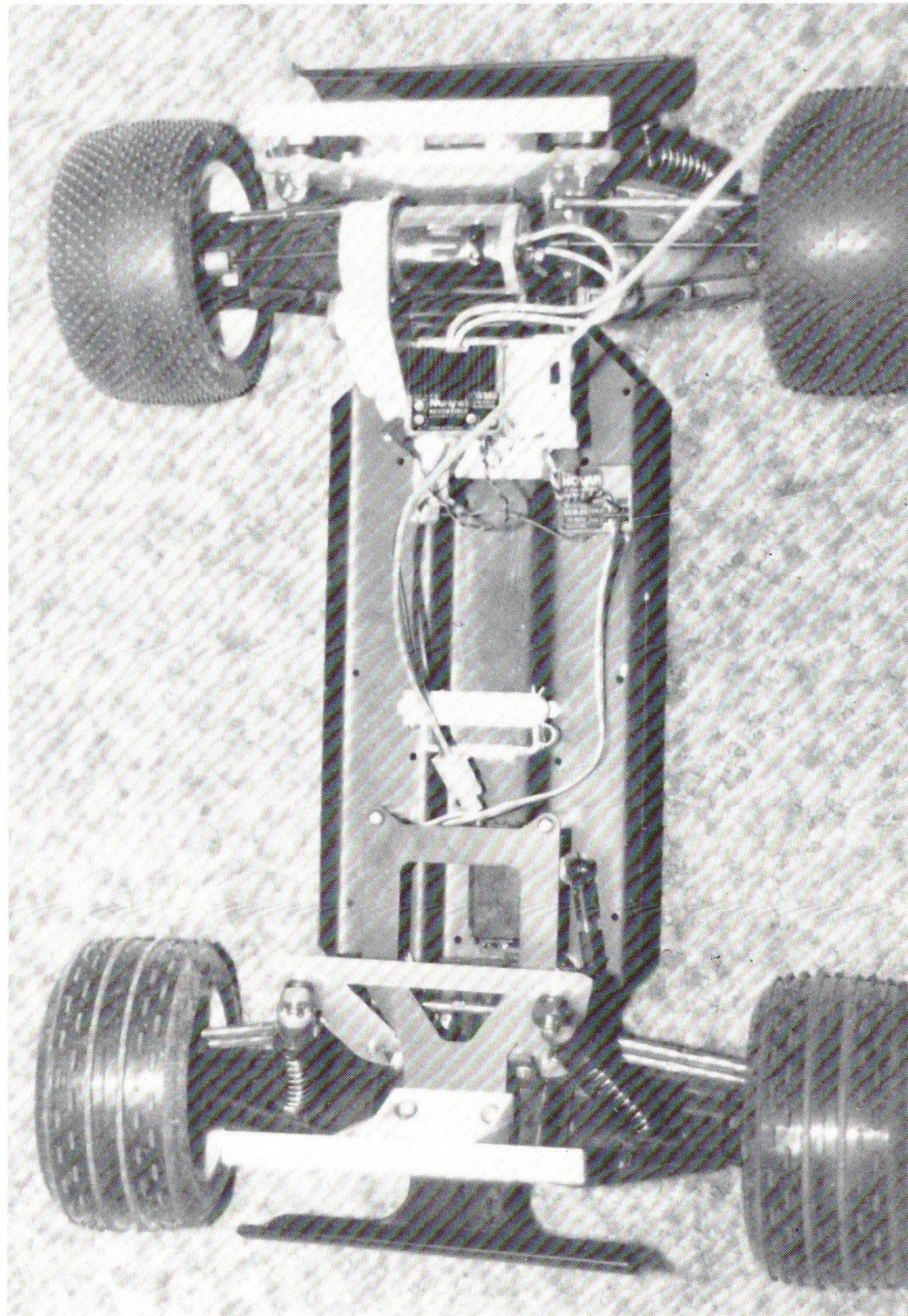
Early on I found the manual to be fairly clear and well written. The parts are separated into clearly marked and easily identifiable bags. The only way MRC could improve this part of the truck is if they further separated the parts so that once you opened a bag, you used up all the parts in that bag, and didn't open others until that bag was used up.

Putting together the servo saver was the only part of the assembly that wasn't totally obvious as to how to proceed. The servo saver uses a 2 piece design that includes a spring. At first I  
*Left: The Baja King utilizes 1 or 2 steering servos. Right: The spacious chassis makes modifying and assembly easy.*

thought it was going to be an adjustable type such as the one found in the RC-10T. However, there is no adjustment on the spring. Securing the 2 piece servo saver, while compressing the spring far enough to install the retaining clip is a real test of hand strength! There also might

be some confusion at this point as to why two servo savers are built. It isn't till further on in the manual that you learn the kit can utilize two steering servos.

Next comes the building of the differential. This being a bigger scale is an advantage, in this case, as the delicate trans-



mission parts are easier to handle than that of smaller classes. My only complaint here is that they pack two different sized diff balls in one bag. If your eyesight isn't 20/20 make sure you put your glasses on when you install the diff balls. Once completed the diff goes into the transmission case which includes full ball bearings and mounts to an aluminum motor

them to the motor plate and attached the supplied 19 tooth 32 pitch pinion gears. Unlike some dual motor trucks, both of the motors rotate in the same direction. This allows you to put in two of whatever motors you choose. The transmission shouldn't be a limiting factor in motor selection as it appears to be built as tough as the rest of the truck. I have been told of

ing the smaller gear for this part of the assembly. The smaller gear will also allow easier motor replacement and gear mesh setting.

The rest of the kit is fairly easy and straight forward. The only thing I did different was to cut my own foam inserts, out of upholstery foam, for the front and rear tires. I didn't do this for the usual reason truck racers put foam in their tires. I felt that due to the size and weight of the truck that in addition to helping to keep as much of the tire on the road, it would also add cushion to the suspension parts when you start running over lawn ornaments in your backyard.

When it came time to mount the electrics I read the instructions concerning the use of 2 steering servos. I examined the steering mechanism and tried turning the wheels while the truck's weight was on the tires. The steering parts are well supported and relatively free of friction for such a large mechanism. Based on that, and just instinct, I decided to try going with a single hi-torque servo rather than 2 stock servos.

As mentioned above, I threw out the mechanical speed controller. I took the tray that is provided for the mechanical ESC and cut off the section for the speed control servo. This provides easier installation and removal of the truck's battery pack. I then used this tray to mount my electronic speed control.

For this project I decided to use a reversing ESC that could

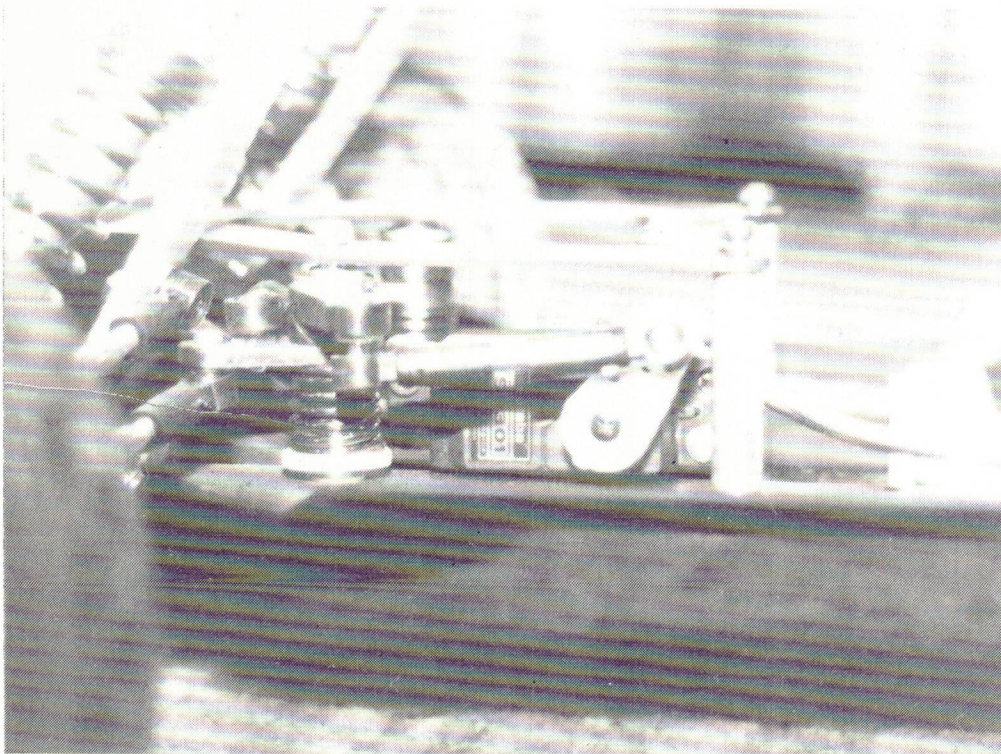
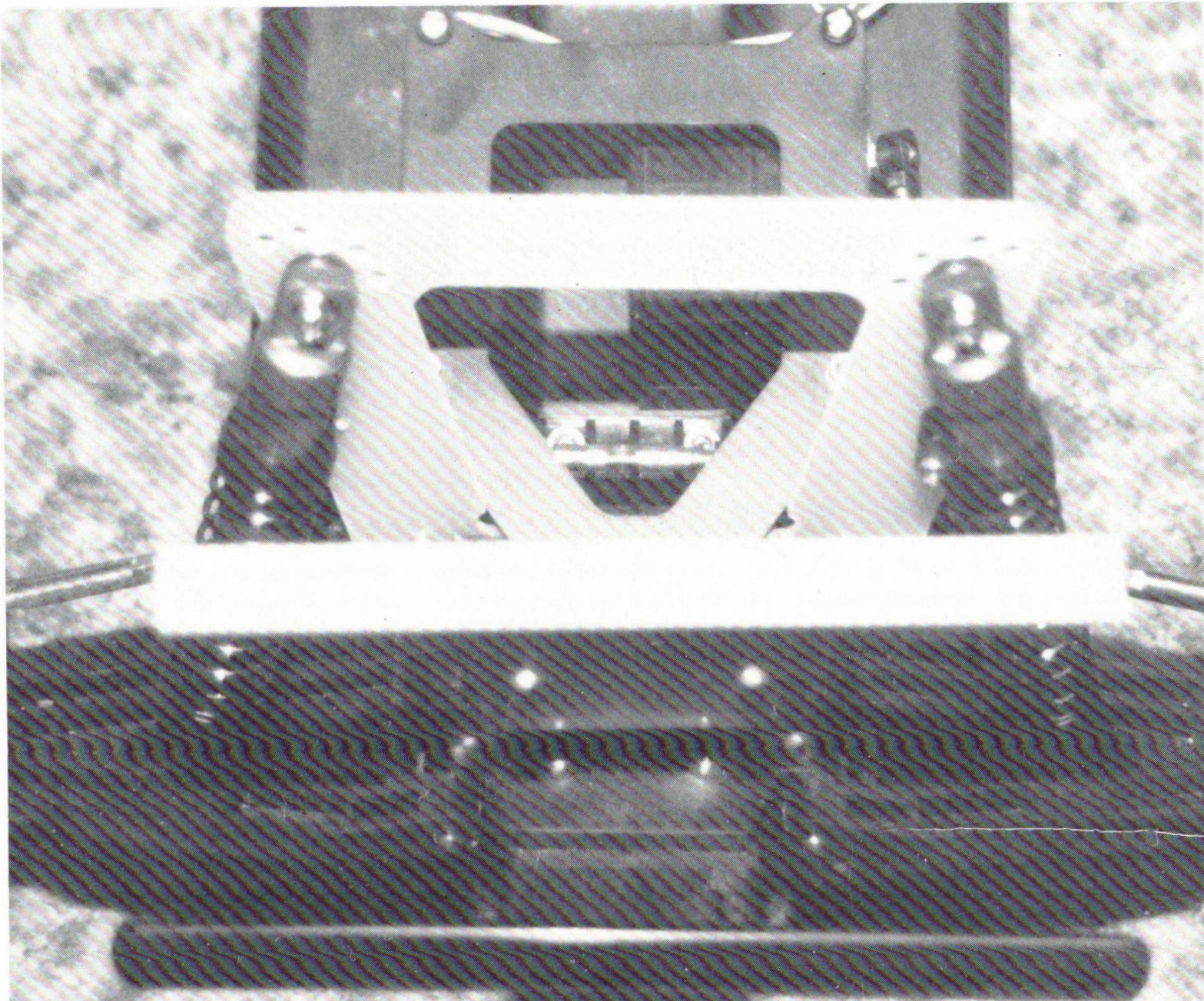


plate. I guess I haven't mentioned it yet, but World Scale vehicles utilize two motors.

This particular kit came with two 540 type motors and a mechanical switch plate speed controller. I have a hard time imagining a switch plate holding up with the current drain of two motors and the higher voltages of a 7 or even 8 or more cell packs. I went ahead and used the 540 motors and mounted

people running as high as 12 cell packs with no problems.

Once the motors are mounted you add on the spur gear and slipper clutch assembly. At this point the manual tells you to use the larger spur gear. What they don't tell you, till the end is that they include two spur gears to give you a little range of gearing. If you plan on replacing the 540 motors with some peppy modified motors consider us-



take a higher voltage. As durable as this truck appeared to be, along with its demonstrated ability to go just about anywhere, I don't plan on limiting this truck just to race tracks. I imagine I'll drive this truck into some unusual spots. That is why I chose the Novak 610 HRV. Novak was one of the first companies to

*Left: For this project, the author used a simple Futaba 9301 servo.*

*Above: The MRC Baja King has a strong front end, a trademark of the entire kit.*

provide us with a quality reversing speed controller and for applications like this I always turn to Novak. Novak does add a nice reminder in with their new ESC package that reminds you not to use the Schottky diode on a motor when using a reversing ESC.

If you are planning on running two hot modifieds in your World Scale vehicle, I suggest you forget the reversing speed control and go for one of Novak's higher current models.

The remaining parts of the truck's assembly dealt with the body and wheel mountings. These steps were unremarkable in their simplicity. Those of you that enjoy painting up artistic vehicle bodies, the large body on the Baja King will give you endless possibilities for a beautiful paint job.

After a fun time of building the truck and setting up the electrics, I installed an 8 cell 1700mah SCRC pack built by Elite Speed products. ESP was

one of the first in the industry to offer packs made specifically for the World Scale. When you start driving this truck you won't want to quit. Team that up with 2 motors to feed and you will want to use a high capacity cell that isn't too delicate. This pack fits the bill.

Looking at the completed truck, this is obviously a race truck. But it was Wednesday and the only local track wasn't open. So, being too impatient to wait, I took the truck for a spin in front of my house. A few quick sprints up and down the street confirmed that everything was setup properly. Remembering that this is an offroad vehicle I turned up the driveway and into the lawn. My grass was higher than it should have been, but the truck didn't seem to notice as it barely slowed through my 3.5" grass. After driving down the curb, I commented to my helpers that nothing seems to

stop it, even the curb, I decided to test the toughness that MRC brags about and did a 180 degree turn and hit the curb head on at full speed. With just a slight wheelie, it kept on going! Clearly this scale won't be as susceptible to adverse track conditions as a 10th scaler.

After the playing around, it was time to head to the track. It was early November and I live in Ohio, so that means racing is done indoors. Our offroad club had an indoor track that is a little small for trucks, but we compensate by only running 6 or 7 vehicles in a class. The track is definitely a car track and can be accurately described as tight.

My first surprise was the truck's extreme agility and tight cornering. That was a concern with only one steering servo, but the 9301 servo proved quick and strong. Next came the big jump, which for the LXTs and RC-10Ts caused some spectacu-

lar hang time. The King seemed to float down and settle with only the slightest amount of bounce. After a couple of smooth laps, I cranked out the ESC to see what it could do. With the 540 motors and the additional weight, I would say that the truck had 80-90% of the speed of its 10th scale counterparts. With decent stock motors it was easy to see how World Scale stock racing could be fun and competitive. Modified would be really exciting!

### CONCLUSIONS

I am firmly satisfied that this is a good racing truck. There are a lot of features that racers look for. A few manufacturers are offering parts for the scale, such as 48 pitch conversion kits. Others will undoubtedly follow with such things as a line of tires if the demand exists. In my area, I have seen two World Scale vehicles. I look forward to the opportunity to race. Watch this magazine for more World Scale racing details.

As far as racing goes, the only negative thing I can say is that competitive racing will require more battery cells and twice as many motors, which won't wear as long at higher voltages. On the positive side, the vehicles are race ready, easy to drive, and tough as nails. For me, this racer, won't be put away during the week. I'll take this thing to picnics, or anywhere else I have extra time around dirt or grass. If you want to impress your non-rc friends, this is the way do it. The Baja King can go anywhere and do it quick.



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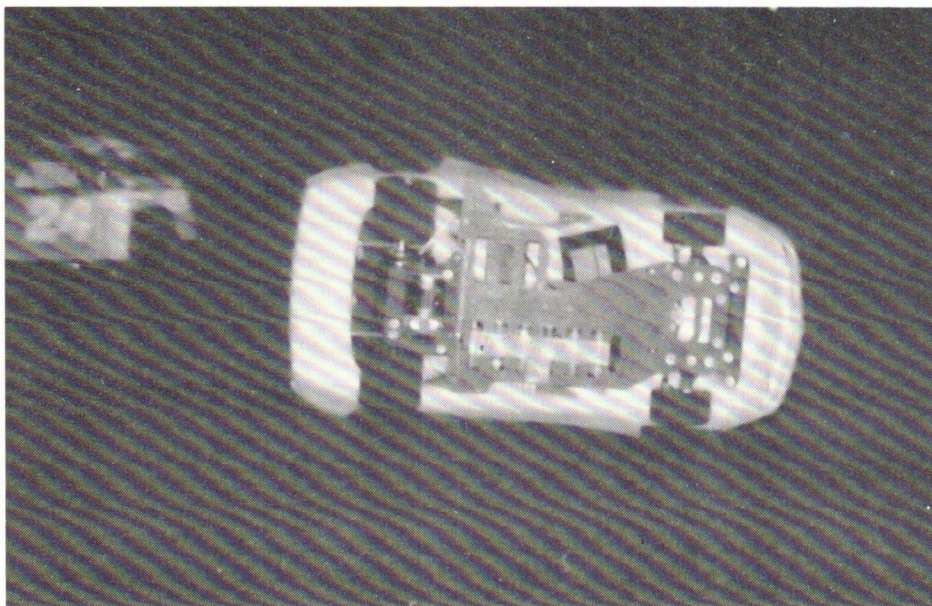
For First Class add \$15 per year - For Overseas Airmail the rate is \$68 per year - For Canadian Airmail and Overseas Surface the rate is \$39 per year

## THIS MONTH IN RACING

# THE FIFTH ANNUAL VIRGINIA STATE CHAMPS

---

By Jack Wright



Well it's cold outside, but, at Winners Circle Raceway in Richmond Virginia the indoor carpet oval racing is as hot as ever. In its fifth year the Virginia State Championships is still one of the don't miss races of the year, attendance was at an all time high for this event, over 150 racers for two days of all out oval war. Many of the big names in R/C oval racing came to Virginia to claim gold, racers like PTI's Ralph Burch, Gary Warren and Larry Flowe, as well as David Timmerman of East-coast Motors.

The format of this event had changed from last year and this allowed the addition of two new classes to the event, instead of Saturday heat races and Sunday running the main, JT the owner of Winners Circle decided to break from the norm and have two separate races on each day. The 1/10 Stock and 1/12 Modified would both qualify and run their mains on Saturday, while 1/10 Modified and 1/12 Stock would race Sunday. This allowed many of the racers to race one class Saturday and another one Sunday, instead of trying to do both in one day. This format was very popular with the drivers, as many of them could run both Stock and Modified with the same car.

**SATURDAY'S LINE UP . . .**

## THIS MONTH IN RACING

After the drivers' meeting it was time for the drivers to line up for the five lap qualifier, the purpose of the qualifier is to put cars of equal speed in the same heat so everyone has an equal chance for a clean run during the heats. With three qualifying heats and lots of practice time it would be hard to pick the fastest racer as each heat went by, as every round passed the cars would just get quicker.

The Stock classes were using CAM PROCAR handout motors instead of the traditional R.O.A.R. motors, and this move was met with overwhelming approval with the drivers as most of them race in the PROCAR series. With the heats set up, drivers were warned that the event could run late into the night. Just in Stock alone there was over 90 drivers and with three heats and the mains it would be survival of the fittest.

### IN THE HEAT OF THE NIGHT . . .

After three rounds of qualifying were over it was Warren Strong, Jr. leading the way in 1/10 Stock with his best run of 56 laps in 4:03.55 and in 1/12 Modified with the only Corally 12 in the field Matt Rogers took the top spot with a track record setting 69 laps in 4:59.00.

Now with the mains set it was

time to see if the runs put up by the TQ drivers would hold under the pressure of the real thing.

### 1/10 STOCK C MAIN . . .

Dan Jenkins' 10L took the point early and held on to take the win over a very close Jim Siegel in second only 3/100ths behind the leader and finishing third was a member of the Kyle Petty Mellow Yellow racing team Roman Pemberton.

### 1/10 STOCK B MAIN . . .

The B was a bit more hectic of a race than the C but nevertheless CAM's Terry Rufty was all alone in his own lap at the end to take the win, and that win allowed him to bump up to the A Main. In second was Larry Boyd, however, the race for third was second to none. As Bennie Wilkerson and Competition Products' Bob Pecker battled right to the wire for the third spot and Bennie crossed the line just ahead of Bob by less than 25/1000ths of a second to take third.

### 1/10 STOCK A MAIN . . .

It seemed TQ Warren Strong, Jr. could of used a little luck, as the cars raced out of the fourth turn disaster struck as Strong was on the bad end of a multi car crash that claimed his ride after only finishing one lap. As they say the race must go on and it did, Billy Morris

came from the fourth starting spot to take the win and put a lap on the field, John Eversole finished in second and rounding out the top three was Gary Krichbaum, Jr.

### 1/12 MODIFIED C MAIN . . .

McLin Racing's Jerry Draper started on the pole and never looked back, taking the win over second place Hank Giancaterino and a very unsportsmanlike Randy Smith in third.

### 1/12 MODIFIED B MAIN . . .

Sean Tabor took the lead from the start after a turn one crash at the tone and looked untouch-

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## THIS MONTH IN RACING

able with his two lap lead to win. Second went to Power Surge's Joe Saganowich and third was Curtis Yopp.

### 1/12 MODIFIED A MAIN . . .

This had to be the most exciting race of the day, as the tone sounded TQ Matt Rogers took the lead but not for good as Kevin Trent, Kirby Hand and Matt would swap the lead back and forth throughout the race. This race wasn't decided until the last lap as Matt and his Corally regained the lead over Kevin and Kirby to take the win WHOA!

And just think all of this is only Saturday, I can't wait to see what's in store for Sunday!

### ANOTHER DAY, ANOTHER TIME . . .

Sunday proved to be less grueling than the 1 a.m. ending Saturday race day, but nevertheless with the new format 1/10

Modified was three times larger than last year's event. As in the previous day each car had to hit the track for the five lap qualifier that would determine the heat they raced in.

The heats went rather quickly, as so did both TQ drivers, after three rounds it was Stock Class TQ Warren Strong, Jr. showing the way in Modified as well with his best run of 59 in 4:02.32 in a lap by himself. As for 1/12 Stock the race for TQ was close, but in the end John Eversole and his 12L took TQ by a very narrow margin over Modified TQ Matt Rogers and John LaVoie.

### 1/10 MODIFIED C MAIN . . .

Jaco Tires' Jack Rimer took the point from his pole position start and went on to win the C with a lap on the field, second was McLin Racing's Cliff McDaniel and third went to Kirby Hand.

### 1/10 MODIFIED B MAIN . . .

Another exciting race was the B side race in Modified, as it was a four way to the win after a first lap crash 'em up derby start. So for four minutes it would be a battle between Gary Krichbaum, Jr., Competition Products Bob Pecker, Cam's Terry Rufty, and Hyperdrive's Ralph Burch to see who would wind up with the win and a chance to bump up to the A Main. And when the smoke cleared it was Gary Krichbaum, Jr. taking the win over a hard charging Bob Pecker by less than 10/1000ths of a second, and Terry Rufty edged out Ralph Burch for third.

### 1/10 MODIFIED A MAIN . . .

This race saw many lead changes, as on the start Warren Strong got on the bad end of someone's bumper and Tony LaVoie took over the lead and held it for most of the race, meantime Warren Strong was fighting his way through traffic to try and take the lead. But it was all for naught as with less than 30 seconds to go Warren began to dump, now Tony had made, well he thought so anyway just as Warren dumped Tony's batteries did the same and the motor man David Timmerman of Eastcoast Motors took the win. Warren had just enough juice to take over second and Tony LaVoie

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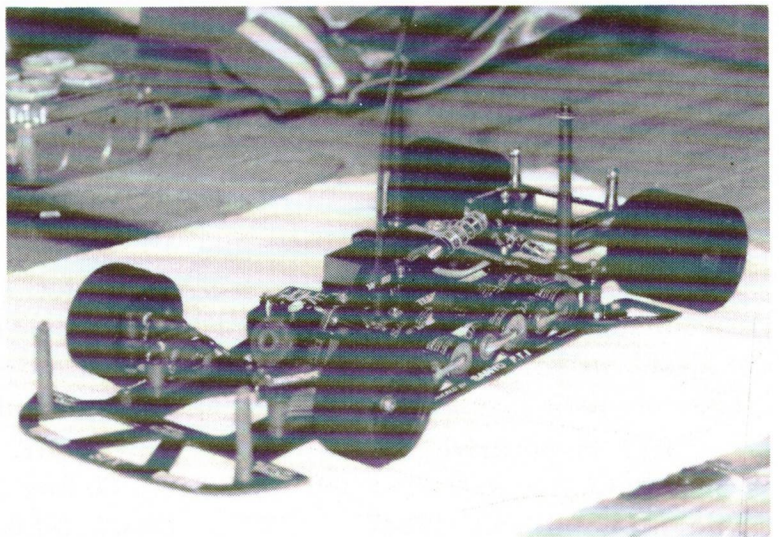
One of the benefits of coming to the Virginia Championships, is to see what's new in oval racing. Since this is one of the few big winter time races, many racing manufacturers bring out their latest hardware and put it to the test.

### **HYPERDRIVE/PTI . . .**

Hyperdrive's Ralph Burch was racing Hyperdrive's new version of the RS, with its centered motor pod and redesigned chassis that utilizes Associated's new front suspension. The new car is better balanced and the new front end is a vast improvement over the stock beam axle of the old RS. The new RS should be available as of this print.

### **BME . . .**

Another trick item at Virginia was BME's new Patriot rear axle kit, the kit includes BME's Fiberglas axle design along with new diff hubs that accept stealth diff rings, and a collet style hub for the left side of the car. The beauty of this system is with the smaller diff rings, there is less stress on the diff and diff life is increased two fold. Another advance is the collet hub, instead of set screws or clamps the collet hub uses a 1/2 nut in the center of the hub, and with just a turn the axle will center itself and tightens uniformly across the axle as well. The Patriot axle is also available for most 1/12 scale kits



*The new Hyperdrive oval chassis with the Associated front end.*

rounded out the three in third.  
**1/12 STOCK B MAIN . . .**

Chris Vaughan of McLin Racing got the jump on polesitter Linwood Folds and walked off from the pack but that was short lived as Linwood stalked Chris for the entire five minutes. But try as he may at the tone it was Vaughan taking the win just over 10/1000ths of a second

over Linwood Folds and in third in a lap by himself was Bryan Kipp who worked his way up from last spot.

### **1/12 STOCK A MAIN . . .**

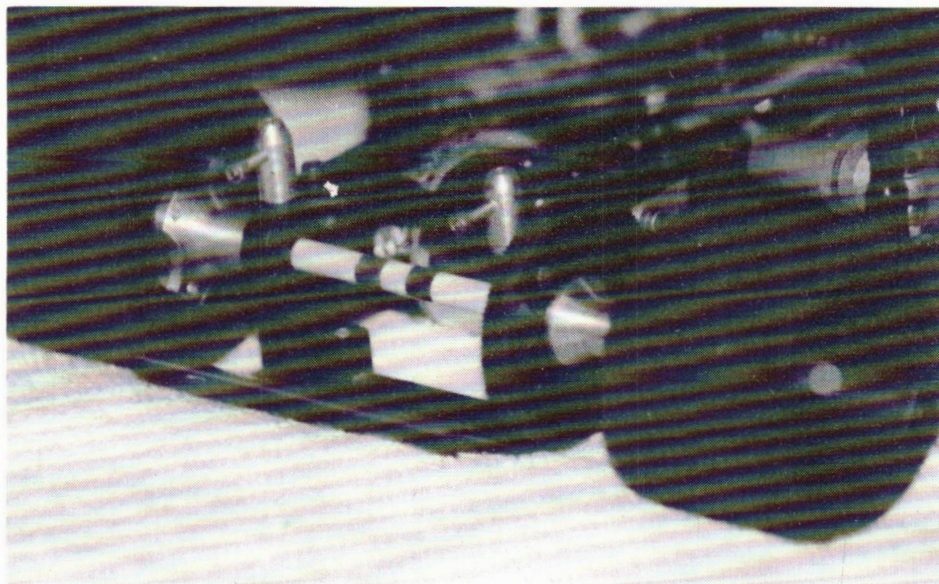
The start was a clean one but just three laps later a crash involving polesitter Eversole, Matt Rogers and Brian Eavey took out Rogers, putting both Eavey and Eversole out of

contention. The senior of the LaVoie racing team John, took the point and never looked back to take a convincing win by over two laps, in second place Jerry Draper of McLin Racing. Another good run was put in by Larry Boyd who railed from last spot to capture third.

### **HAPPY TRAILS . . .**

Racing at winners Circle is

## THIS MONTH IN RACING



as well. Another trick item is BME's support brace for the new Associated front suspension, this brace removes any flex in the suspension as well as adding strength to the car. The brace kit comes with everything needed to install it into your car, BME even includes the drill bit to boot.

### POWER SURGE . . .

Power Surge brought their new Pro Mod Modified motor brush, along with their new purple matched motor springs to the event.

The new Pro Mod brush is hard compound brush designed for less drag and Amp draw on most Modified motors and the new Purple Matched springs are tension matched for equal tension and make a great addition to the new Pro Mod brush or Power Surge's 21 turn brush for the PROCAR motor.

Here are the address for the abovementioned manufacturers:

**PTI/Hyperdrive**  
P. O. Box 950  
Pilot Mountain, NC 27041

**BME**  
P. O. Box 2066  
Brick, NJ 08723

**Power Surge**  
1901 Exrie Ct.  
Raleigh, NC 27606

*A shot of BME's new Patriot axle; this system uses the smaller stealth style diff rings.*

always a blast, JT and his wife Kay do their very best to put on a good show. And a lot goes to the drivers who did their very best to play by the rules and make racing what it should be and one more thing a special thanks for the hard work of the folks at the tech table keeping everyone straight and appraised of the rules, even though it took away from the time they had to prepare their own race cars.  
**THANKS!**

If you're ever in the Richmond area or would like info on Winners Circle's next event drop them a line at 3236 W. Clay St., Richmond, VA 23230 (804) 355-7076.

### STOCK CLASS - 1/10 SCALE

#### A MAIN

- 1st - Billy Morris
- 2nd - John Eversole
- 3rd - Gary Krichbaum, Jr.
- 4th - Terry Ruffy
- 5th - Tony LaVoie
- 6th - Brandon Tilley
- 7th - Jack Rimer
- 8th - Warren Strong, Jr.

#### B MAIN

- 1st - Larry Boyd
  - 2nd - Bennie Wilkerson
  - 3rd - Bob Pecker
  - 4th - David Timmerman
  - 5th - Roland Shotwell
- #### C MAIN
- 1st - Dan Jenkins
  - 2nd - Jim Siegel
  - 3rd - Roman Pemberton
  - 4th - Bob Huffman
  - 5th - Brian Reigle
  - 6th - Warren Strong, Sr.
- #### D MAIN
- 1st - Rick Peroe
  - 2nd - Bernie Seagle
  - 3rd - Chad Aaron
  - 4th - Steve Roberts
  - 5th - Bryan Kipp

## THIS MONTH IN RACING

6th - Dave Carpenter

### E MAIN

1st - Randy Steffey  
 2nd - Brian Burkhart  
 3rd - Mike Dunnigan  
 4th - Charlie Shotwell  
 5th - Rusty Wright  
 6th - Larry Atwood, Jr.

### F MAIN

1st - Gary Warren  
 2nd - Mark Brauning  
 3rd - Bill Edmundson  
 4th - David Fry III  
 5th - Bob Smith  
 6th - David Fry, Jr.

### G MAIN

1st - Curtis Yopp  
 2nd - Bernie Kandrac  
 3rd - Tracey Bailey  
 4th - George Verbonitz  
 5th - Hosam Abdu  
 6th - John Miranda

### H MAIN

1st - Steve Lilly  
 2nd - Joe Saganowich  
 3rd - Bubba Jones  
 4th - John Robbs  
 5th - Bob Chartos  
 6th - Randy Smith

### I MAIN

1st - Blake Williams  
 2nd - Larry Atwood  
 3rd - Albert Pelletier  
 4th - Monty Adrian  
 5th - Eddie Creekmore  
 6th - Chris Walker

### J MAIN

1st - Robert Joyce  
 2nd - Phil Elisio  
 3rd - Ben Hall, Jr.  
 4th - Robert Davis  
 5th - Jeff Duck  
 6th - Rick Keith

### K MAIN

1st - Richard Curry  
 2nd - JoAnne Pennington  
 3rd - Shawn Cumberland  
 4th - John Pennington  
 5th - Tim Hammond  
 6th - Ron Klute

### L MAIN

1st - Henry Cross  
 2nd - Ronnie Armstrong  
 3rd - Steve Walker  
 4th - Roger St. Clair

5th - Jeff Ratledge

6th - Marc Nunnally

### M MAIN

1st - Thomas Coppedge  
 2nd - Jeremy Upchurch  
 3rd - Pete Fuller  
 4th - Jason Eberth  
 5th - Bruce Miller  
 6th - Vance Williams

### N MAIN

1st - Gary Price  
 2nd - Baen Caldwell  
 3rd - Dave Fenwick  
 4th - Jeff Roberts  
 5th - Ricky Hinkle  
 6th - Chuck Shoupe

### O MAIN

1st - RV Glover  
 2nd - Chris Randall  
 3rd - Mike Clark  
 4th - Bob Randall  
 5th - Joe Kroh  
 6th - Brad Cobb

### MODIFIED CLASS - 1/12 SCALE

#### A MAIN

1st - Kirby Hand  
 2nd - Kevin Trent  
 3rd - Matt Rogers  
 4th - Larry Flowe  
 5th - Lin Vaughan  
 6th - Ralph Burch

#### B MAIN

1st - Sean Tabor  
 2nd - Joe Saganowich  
 3rd - Curtis Yopp  
 4th - Brian Eavey  
 5th - Cliff McDaniel

#### C MAIN

1st - Jerry Draper  
 2nd - Hank Giancaterino  
 3rd - Randy Smith  
 4th - Jack Wright  
 5th - John LaVoie

### MODIFIED CLASS - 1/10 SCALE

#### A MAIN

1st - David Timmerman  
 2nd - Warren Strong, Jr.  
 3rd - Tony LaVoie  
 4th - Billy Morris  
 5th - Gary Warren  
 6th - Billy Spence  
 7th - Bob Smith  
 8th - Gary Krichbaum, Jr.

#### B MAIN

1st - Bob Pecker  
 2nd - Terry Ruffy

3rd - Ralph Burch

4th - Steve Roberts

5th - Brandon Tilley

6th - Jim Siegel

### C MAIN

1st - Jack Rimer  
 2nd - Cliff McDaniel  
 3rd - Kirby Hand  
 4th - Larry Flowe  
 5th - Tim Dooley  
 6th - Sean Tabor  
 7th - Kevin Trent

### D MAIN

1st - Lin Vaughan  
 2nd - Mike Wollard  
 3rd - Roland Shotwell  
 4th - Mike Smith  
 5th - Roman Pemberton  
 6th - Mark Brauning  
 7th - Brian Burkhart

### E MAIN

1st - Doug Butz  
 2nd - Charlie Shotwell  
 3rd - Robert Joyce  
 4th - George Verbonitz  
 5th - Warren Strong, Sr.  
 6th - Brian Reigle  
 7th - Joe Saganowich

### F MAIN

1st - Dave Carpenter  
 2nd - Joe Mikus  
 3rd - Jamie Harbell  
 4th - Steve Woodson  
 5th - John Robbs  
 6th - Linwood Folds

### G MAIN

1st - Blake Williams  
 2nd - Shawn Cumberland  
 3rd - Ryan Carag  
 4th - Ronnie Armstrong  
 5th - Carlton Coleman  
 6th - Matthew Rogers

### STOCK CLASS - 1/12 CLASS

#### A MAIN

1st - John LaVoie  
 2nd - Jerry Draper  
 3rd - Larry Boyd  
 4th - John Eversole  
 5th - Brian Eavey  
 6th - Matt Rogers

#### B MAIN

1st - Crhis Vaughan  
 2nd - Linwood Folds  
 3rd - Bryan Kipp  
 4th - Carlton Coleman  
 5th - Larry Atwood

# ***1ST ANNUAL NORRCA SOUTH PACIFIC OFFROAD CHAMPIONSHIP RACES***

**BY NORRCA STAFF**

Paperwork, anxiety, contact sponsors, more paperwork, more anxiety, STRESS! The five day weather forecast for the week - RAINY with sunny periods. Get the track crew lead by Sidney Sakamaki out there every day and hope that they are able to work on the track and finish on time, MORE STRESS!

The NORRCA 1st Annual South Pacific Off-Road R/C Championships were held on November 13 & 14, 1993, in Honolulu, Hawaii. On Saturday, the Race Coordinator, Harry Ono, owner of the Toy Connection Hobby Shop was breathing a sign of relief. J.R. Sitman,

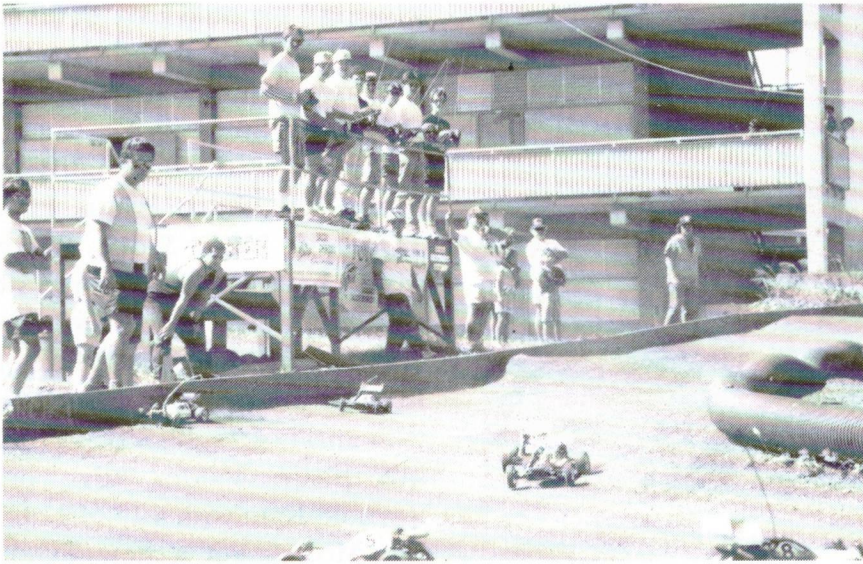
President of NORRCA had arrived in town to act as Race Director and had brought his lap counting equipment. Bobo ("Da Flyin' Hawaiian") Butires, Hawaii NORRCA Director, was handling tech inspection. The weather was a balmy 85 degrees under sunny skies. The track had been carefully prepared. Everything was going well.

Since this was the first race in Honolulu to be held under NORRCA, part of the drivers' meeting was spent going over the rules. Careful explanation by J.R. of the mixture of local and NORRCA rules and IFMAR starts for qualifiers satisfied the

local racers who were not use to the format, but were very willing to cooperate and make the race a success.

For the staggered starts, the racers began at the bottom of the track, just before a hairpin turn. They would then climb an elevation of five feet through a "S" turn, followed by a series of "S" turns. At the top of the track, a total change in elevation of seven feet, they would turn through an offset left hand sweeper. From there it was downhill through a series of small curves punctuated by jumps back to the hairpin turn. Over the total track length of

## THIS MONTH IN RACING



(360) feet, the premium would be on having just enough power for your driving ability, suspension and tires.

On the first qualifier of the day, 2WD Stock Buggy, Harry Ono set the pace with a 10/4:03.77 only to have Mitchell Lum break that with a 10/2:02.53. the second qualifier saw Hiram Cuarisma, Jr. set a new pace with an 11/4:15.71. In response Mitchell Lum ran a 11/4:14.26.

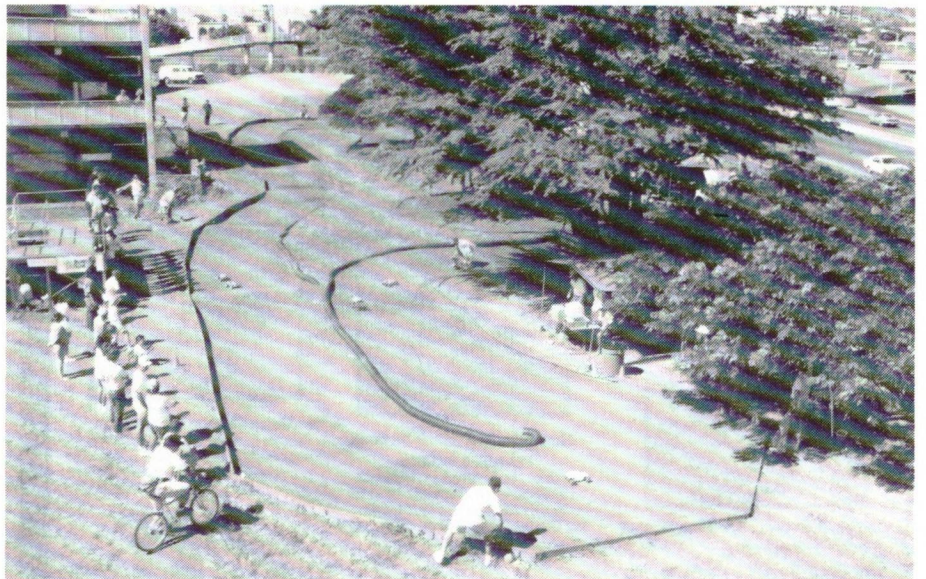
Stock Truck, the largest

group, had the TQ reset after each heat until Reynold Kam set the first round TQ at 12/4:18.58, followed by Justin Valdez's 12/4:42.56. Back in the pits, the racers fine tuned their trucks for next qualifier which saw

Justin turn a 12/4:15.67. Not enough, Reynold reset the TQ with a 12/4:14.56. These were the racers to watch on Sunday.

The first round TQ in 2WD Modified Buggy was set by Randy Au with a 11/4:14.23. The second round TQ was set by Jeff Goodier with a 11/4:02.23, followed by Jim Molnar's 11/4:11.08.

When Modified Truck began, everyone's attention was on the race between Justin Valdez and Reynold Kam. They were totally awesome in Stock Truck. Would someone else sneak in and set a new TQ? It was not to be. Reynold set the first qualifier TQ with a 12/4:17.60, followed by Justin at 12/4:22.13. In the second qualifier Reynold broke his



*Above: As you can see in the background, the track is located on Farrington High School Technology Center. All tracks in Hawaii are on government property whether it be parks or schools. There are no private tracks on the islands. Right: An aerial view of one of the longest tracks you'll probably ever see. They like 'em long and smooth in Hawaii.*

## THIS MONTH IN RACING



*J. R. Sitman, NORRCA President flew to Hawaii with all of NORRCA's equipment to help direct the first NORRCA offroad race on the islands. The turn out was good and you'll be seeing a lot more of NORRCA in 1994.*

own TQ with a 12/4:12.82. Just wait till tomorrow!

The last, and smallest (literally) group, was Novice Stock Truck. This class is for beginner's only and was made up of Dez Kaai (a racer's wife who has always helped at the races) and

children, some of whom had to hold their radios through the railing on the drivers' stand as they peered through the bars. The more experience racers usually enjoy watching them (least we forget from whence we came). This group's biggest

problem is the NEED FOR MORE SPEED! Drivers trying hard to concentrate, fathers wincing ("I should have detuned the truck more"), and through the dust David Pang set the TQ at 9/4:01.72.

Sunday's third qualifying round saw the previous day's TQs fall. 2WD Stock Buggy would have Garrett Uyesugi sitting on the pole with an 11/4:10.80, followed by Mitchell Lum in the number 2 position with an 11/4:11.42. Stock Truck saw Justin Valdez edge out Reynold Kam with a 12/4:12.08. Jim Molnar set a new TQ in 2WD Modified Buggy with a 12/4:19.00, followed closely by Randy Au's 12/4:19.06. Four more racers made it to 12 laps in Modified Truck and Reynold Kam beat his best time with a 12/4:11.53; but Justin Valdez was on the pole with a 12/4:02.67.

In the mains, the starts were "heads up", rather than IFMAR, and the starting line was moved further up the track to give the racers time to spread out before hitting the hairpin turn. Although the racers enjoyed the IFMAR starts, they were use to the group start, and lap times were quicker than the qualifiers. The mains were run in reverse order with the "A" Main for each class running last.

Hiram Cuarisma, Jr. came from the No. 3 position to win the "A" Main 2WD Stock Buggy

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## THIS MONTH IN RACING

Class with a 12/4:06.79, followed by Mitchell Lum (No. 2), Harry Ono (No. 6) and Paje Butler (No. 4), all with 12 laps. Ed Kaukani won the "B" Main with 11 laps, followed by Marvin Mau.

Smarting from having his TQ taken from him, Reynold Kam blasted his way to a 13/4:06.60 win the "A" Main Stock Truck. Behind him were Garrett Uyesugi, No. 7 (12/4:00.09), and Justin Valdez, No. 1 (12/4:00.13). Other "A" Mainers to go 12 laps were Dennis Morris, Derek Canite and Keola Naholowaa. "B" Main winner, Bobo Butires, came from the number 4 position, knees shaking, to turn 12 laps, followed closely by Howard Kaai, also with 12 laps. The first two finishers in "C" Main also turned 12 laps - Adam Morris (No. 1) and Mitchell Lum (No. 3). "D" Main winner, Michael Lum, turned an 11/4:09.84, which would have put him in 9th position on the qualification list; followed by Dale Uehara, who fought his way from the back of the pack to finish second.

Power, power everywhere, but can you control it? Tire selection and throttle control were especially critical in 2WD Modified Buggy. "A" Main winner, Jim Molnar, likes to run ovals and has mastered the 3/4 throttle technique, ran a 12/4:10.40, a little slower than the "A" Main 2WD Stock Buggy winner. He was followed by Lane Petrich, Paje Butler and Randy Au. Bobby Sabanal, Nathan Hirayasu and Daniel Arakaki finished 1, 2, & 3 in the "B"

Main in 2WD Modified Buggy.

When the "A" Main Modified Truck came to the line, there was an air of anticipation. Justin Valdez and Reynold Kam had fought it out all weekend in the Truck Class - hard, intense, clean racing. Who would win, or would a "dark horse" emerge to snatch it from them? You can buy power, but you have to practice to win. Everyone in the "A" Main had a chance. When the horn sounded, Justin was in the No. 1 position and Reynold was in the No. 2 position. Seconds later the two of them tangled, and by the time the Marshals could get to them, they were at the back of the pack! Using all of their driving skill and through the courtesy of the other drivers, they slowly picked their way through the pack. Justin was cut off by the horn and finished with a 12/4:02.38,

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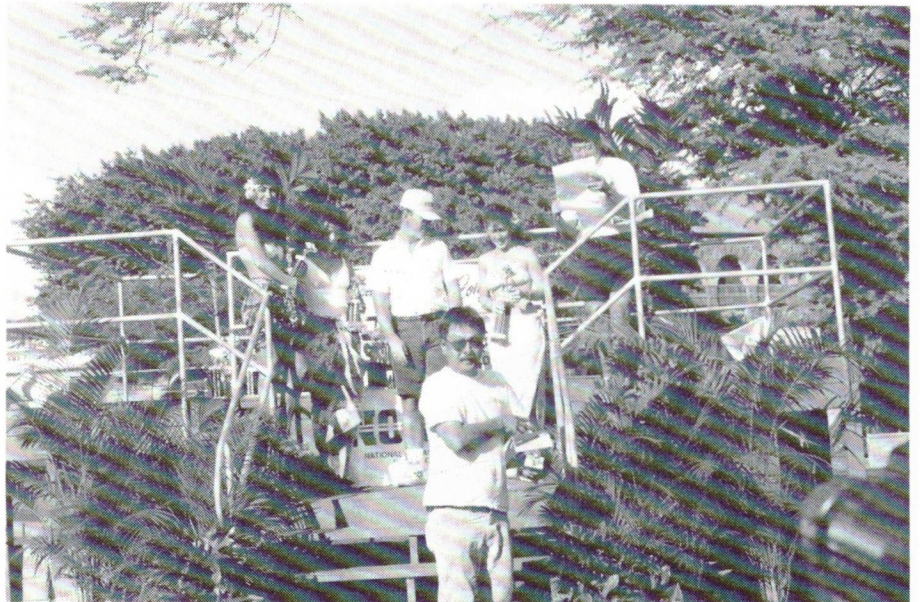
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leaving the leader, Jeff Goodier, second place Dennis Morris, and Reynold on the last and final lap. Suddenly Dennis, deciding

*The best part of the day (in my opinion) was trophy presentation. Harry Ono (Toy Connection) and J.R. Sitman gladly help hand out the trophies with three beautiful girls. The trophy girls were provided by NORRCA Director, Bobo Butires.*



## THIS MONTH IN RACING

he had nothing to lose, squeezed the trigger hard and came flying up on the leader, Jeff. As they approached the hairpin turn just before the finish line, they were neck and neck with Jeff on the inside and Dennis on the outside. Jeff slowed to cut the corner tight. Dennis, in a move that awed the crowd, wrenched his truck (everyone was sure that at that speed he would fly out of the truck), made the turn, and flew over the finish line. Not quite enough, Jeff Goodier finished with a 13/4:17.31. Dennis Morris finished with a 13/4:17.65. Thank goodness the AMB lap counter was working!

Other winners were the "B" Main Modified Truck, Lane Petrich (winner) and Scott Takemura, both with a solid 12 laps. "C" Main winner, Avery

Tsui and Mike Kaahanui beat the horn to turn 12 laps. First and second in the "D" Main went to Glenn Ege and Daniel Naholowaa.

With the excitement still hanging in the air from the fantastic "A" Main Modified Truck, the Novice division took the drivers' stand. Would they remember the awesome speed of the Modified Trucks, or would they remember the talented driving that occurred? David Pang won with an 11/4:21.25, beating his best qualifying time of 10/4:08.33, followed by Dwight Ono (10/4:05.11) and Dez Kaai (10/4:15.74). Say goodbye to "Novice" next season the three of you.

Following the trophy ceremony during which the winners received their trophies, and the

recognition of Harold Sung (Farrington High School Technology and Innovation Club) for his work related to setting up the race and getting high school students involved; Dez Kaai (now a former "Novice" racer after two races) for her assistance during this race and others (who can yell at a wife and mother who is being nice to you); Nathan Hirayasu for supporting, teaching, and coaching three (3) novice racers, all with a smile; and Sidney Sakamaki for his work on the track during the season (he would be there every week, by himself if necessary); door prizes were awarded, dinner was provided by Da Smoke House, and musical entertainment was provided by the talented Roland Cazamero and friends.

This was how racing should be. Race hard, race clean, help your fellow racers, share information, and most of all, enjoy their company off the race track. (If you think you would like to join us next year, send a self-addressed stamped envelope to The Toy Connection, 1564 N. King Street, Honolulu, Hawaii 96817.

Our thanks to local sponsors, The Toy Connection, Hobbitat, Island Sound and Holiday Inns, and mainland sponsors, Sassy Chassis, Twister, Pro-Line, HPI, Stealth Batteries, MIP, Andy's, Traxxas, McAllister, Great Planes and Horizon Hobbies.

CP

*Bobo Butires, NORRCA Hawaii Director showing off his custom painted Losi LXT. Bob qualified in the top three in his class.*



# dynos:

## *part two*

by erik soderquist

### ● finding the proper gear ●

In the last issue, we discussed the uses of dynos. As you may have learned they most definitely have their place in our sport. Possibly the most important aspect of a good dyno is its ability to get you very close to the proper gear.

Each dyno comes with some kind of way to gear your motor. While this is great in the perfect world, it is just not very reality based. In my opinion, this is where the old "E" word comes into play: EXPERIENCE!!!

Every one seems to know of a motor that works good at a certain track. Let's say that a 12 double works great on a 240 foot asphalt track near your house. This 12 double with x timing, x brushes, x springs and x gear ratio with x tires seems to just be the absolute rocket of the track. Even if it is not the rocket of the track, maybe it is your own personal rocket. In any case, you have something to work from.

Loaded with the knowledge that you have a motor that works well at your favorite track, and armed with your latest high tech Christmas present (your dyno), you can now see just exactly what you have been doing. After strapping in your motor, you find that you generate 26,000 rpm's at a 30 amp load. Hummm

you say, what do I do with this??? Well, you can begin to experiment a bit.

With all of the following figures: tire diameter, gear ratio, and rpm's you can now make a relative figure come to life for you.

TIRES: 2.30" - Gear Ratio 5.0/1 - RPM'S 26,000

using the following equation, you will be able to generate a relative miles per hour figure.

RPM/RATIO X TIRE D. X .002983 (This is simply a conversion for all of the other inputs)

$26,000/5.0 \times 2.3 \times .002983 = 35.68 \text{ MPH}$

There are some extremely important things that you remember about this figure. First, it is not exactly how fast your car is going. It is a relative number that will help you compare motors in the future. Second, it is critical that you use the same test load, in this case 30 amps every time. This is the only way that you can make a fair comparison. Now, lets look at just how this number can be used.

As you will begin to notice, lower turns operate more efficiently at higher amp ranges. With this in mind, lets pretend that your favorite track here has some very tight corners. With this in mind, lets look at an 11 turn as a possibility.

Once put on the dyno and tested at the 30 amp range, we find that the motor turns say 29,000 rpm's. Now what??? Simple. In order to get the motor to run roughly the same type of speed, you need to run it at a

similar mph range as the 12. So all we do is work backwards.

$29,000/35.68 \times 2.30 \times .002983 = 5.576$ . This would then be the new gear ratio that would be needed to run in order to get similar type of speed.

It is important to note that this will get you close. This will allow you to try different combinations and winds without Huntington too long for the correct ratio. It will be up to you to analyze your runtime difference, the change in acceleration and top end, etc. etc. . . .

There are also some very important notes that should be made. When showing up at an unfamiliar track, you may not be necessarily as lost as you might think. The first thing to do is look at some of the similarities. Does this track have the same overall length? Are the straits longer or shorter? Are the corners tighter? Are the turns banked? All of these figure into the overall analysis. The bottom line is just how much difference is there???

If the track has longer straits, but tighter corners, it may be

that you will be very close to gearing the motors as you would on your own track. If the straits are longer and the turns banked, you most definitely will need to gear up. In the end run, you must use what you know to analyze what you don't. ALWAYS, ALWAYS be conservative in your estimates. If there is any possibility of being close on the gearing on your first couple of runs, back off a tooth or two. It is much easier to work your way forward than it is to work your way backwards. You can at least see where you are going!!!

This little technique is hardly scientific and does not address all the little problems. What it does do, though, is allow you to be competitive right out of the gate and spend less time trying to figure out what you are doing wrong!!! Practice time at a foreign track is limited. At least now, you may waste less.

Once again, if you have any questions, please give me a chance to answer them. You can call me at Extreme Motorsports 8 a.m. to 5 p.m. Monday through Friday.

## CALANDRA RACING CONCEPTS

### Killer Brushes!!!!

Soft Compound for Stock

#5007 - "Pro-Flow" Vented brush-Cool air flow for greater power!  
#6007 - LAYDOWN "Pro-Flow" Vented brush - as above for laydown hoods  
#5017 - Soft Full Brush-fast + economical  
#6017 - LAYDOWN Full Soft brush

"Precious Metal" Silver for Modified  
#5008 - Silver "Pro-Flow" Vented brush-air flow design for better efficiency  
#6008 - LAYDOWN Silver "Pro-Flow"  
#5018 - Full Silver brush - good power with long comm life

#6018 - LAYDOWN Full Silver brush - for new laydown stock and modifieds

### Associated "L" Car Owners!

Team CRC Solid Teflon Damper Discs-w/ teflon tape smooth - #4010 - \$6.95 Also - Round Stick-on Teflon Washers - apply to stock discs - #4011 - only \$3.95 Alum ant/shock mnt.-10L, Trick! #4016 - \$16.95

### Revolver 12 Owners!

New from Team CRC Nylon bushings for the front susp. on the Rev-12. Super smooth, no play- #4025 - \$3.99 Lightweight motor mnt. plate!! - #4026 - 24.99

Hollow Brushes  
#5037-Soft /5038-Silver Laydown Hollow  
#6037-Soft /6038-Silver

Speed Juice  
#5004  
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Rome, NY 13440  
Phone \* Fax 315-338-0867

# RACING SCHEDULE

## ALABAMA

### PERFORMANCE R/C HOBBY & RACEWAY

Racing for 1/10th and 1/12th cars. Indoor carpet and oval course. Racing every Saturday night at 6:00 p.m. (also off-road - call). 1/10th scale off-road racing every Sunday at 2:00 p.m. (call for oval races). Track is at 2600 Bellline Rd. Decatur, AL. (205) 353-3399

## ARIZONA

### HOBBYTOWN U.S.A., PHOENIX

Racing for 1/10 scale asphalt oval every Sunday at 1:00 p.m. at "Bell Canyon" Pavillions. Located at 2814 W. Bell Rd. Phoenix, AZ 85023. Phone (602) 993-0122.

### HOBBYTOWN U.S.A., GILBERT

1/10th and 1/12th electric outdoor asphalt 100 ft. oval. Racing held twice a week, 12 months a year. Drag racing held on the 1st and 3rd Tues. of every month. Fully stocked hobbyshop, classes for all cars, and computer scoring make for a great racing experience. For race times and more information contact HobbyTown; Gilbert & Baseline Rd., Gilbert, (602) 892-0405.

### HOBBYTOWN U.S.A., SCOTTSDALE

1/10th and 1/12th electric outdoor asphalt oval. Year 'round racing twice a week in the warm Arizona sun. Fully stocked hobby shop and nearby restaurant/hotel accommodations make this a perfect R/C getaway. For race times and information contact Hobbytown; Indian Bend and Pima, Scottsdale, AZ (602) 948-3946.

## CALIFORNIA

### R/C OFF-ROAD RACEWAY

1/10 indoor off-road racing. Call for racing schedule and date information. Jeff Paul at (714) 965-9615. Track is located at 10810 Talbert Ave, Fountain Valley, CA 92708.

### OUTLAW MOTOR SPEEDWAY

1/4 Scale Dirt Oval every first and third Saturday. 1/10 scale: Tues. Tamiya Off-Road, Thur. Off-Road & Dirt Oval, Fri. 1/10 and 1/12 on-road, first Sunday Dirt Oval, second Sunday 1/10 & 1/12 On-Road, 3rd and 4th Sun. off-road. 7920 Webster, Highland, CA, (714) 864-1770.

### THE RANCH PIT SHOP

1/10 Scale: Every Wednesday night at 6 p.m. Alternating Oval and Off-Road. Every fourth Sunday 1/12 & 1/10 on-road combined program. 1655 E. Mission Blvd., Pomona 91766, (714) 623-1506.

### SMR/CRC

1/8 Scale & 1/10 On-Road: First Sunday of each month at G.I.A., 1660 Stewart Street, Santa Monica, CA. Sign-up 8:30 a.m. For more info call Glenn Williams (213) 734-7888, Chris Chan (213) 393-3735, or Tom Wong (213) 821-5472.

### REECE'S R/C RACERS

1/10 Scale: 1st & 3rd Sundays at Spinner's Airport Raceway, 2nd & 4th Saturday's at Reece's R/C Racers, (209) 784-0922.

### SROKA'S INDOOR R/C

1/10 Scale: Every Sunday - Oval racing every 4th Sunday. 5216B Arboga Rd., Marysville, CA 95901. Call Michael or Vickie Sroka (916) 742-6148 or (916) 741-3051.

### HOBBY HAVEN RACEWAY

1/10 Scale: 1756 First Street, Livermore, CA 94550. For further info call (415) 443-5828 M-F 10 a.m. to 6 p.m.

### FAST LANE R/C

Address is 25845 San Fernando Rd. #21, Saugus, CA 91350. Contact John or Darlene at (805) 255-2404. Racing is off-road, dirt oval, asphalt road course and asphalt oval.

### THE SQUARE ROUNDHOUSE SPEEDWAY

1/10 Scale: Saturdays 3 events per month, Off-Road, Monster Truck Pulls and Oval Race. Oval dirt track and Off-Road tracks. 1468 Lander Avenue, Turlock, CA 95380, (209) 668-4454. Ask for Harold Lindquist.

### BROTHERS-IN-LAWS R/C RACING

1/10 Scale Dirt Oval. Racing every Sun. Call Bob (619) 949-5252.

## ANTIOCH RACEWAY

1/10th Dirt Oval racing every Friday 7 p.m. All classes. Sat. & Sun. 1/10 dirt oval and off-road 10:30 a.m. Also night racing, 5631 Lone Tree Way, Antioch, CA 94509. Call (415) 754-5700.

## R.C. CITY RACEWAY & HOBBIES

Off-road racing every Tues., Fri., Sun., Oval racing every Sat./Practice time and rentals available. Call for more info. (408) 262-3188. 1453 N. Milpitas Blvd., Milpitas,

## MOUNT SHASTA R/C RACEWAY

1/10 Scale: Lassen Lane and Smith Road. (916) 926-4717. Home of Cal-Ore Off-Road Championships. 1/10 off-road racing every other Sunday. May through October. Indoor carpet racing 1/10 & 1/12 Nov. through Apr. 826 Pine St., Mount Shasta, CA 96067.

## HOBBY HUT

1/10 Scale: 2665 Park Marina Dr., Redding, CA 96001, (916) 241-3737. Off-Road racing. Norcal Mini Off-rovers. Ask for Kevin.

## DESERT HOBBIES & RACEWAY

1/10 Off-Road racing 1st & 3rd Sundays. Every Friday 7:30 p.m. 25 min. from San Bernardino, 17210 Main St., Hesperia, CA 92345.

## NORRCA (National Organization for Radio Controlled Autos)

331 Mariposa Ct, Upland, CA 91786. (714) 981-9641 or fax 981-0527

## D & B HOBBIES AND RACEWAY

Off-road Thursday and Saturday, dirt oval Fridays. Special events on Sunday. Call (408) 280-6539, Wed. thru Sun. 2:30 to 6:00.

## BOB & JIM'S R/C WORLD

1/10 and 1/12 scale road course racine every Mon., Wed., & Fri at 7:00 p.m. 1/12 and 1/10 scale oval racig on Sat. at 5:00 p.m. For more information call (714) 684-6314. Track is at 3485 University Ave., Riverside, CA 92501.

## JD HOBBIES

Racing for 1/12 and 1/10 gas and electric cars, on both on-road and paved oval courses. Racing is done outdoors, on an asphalt surface. The facility has a hobby shop, snack bar, AC power and scores races with an auto count system. The track is at 1009 W. College Ave., in Santa Rosa, California. For more information call (707) 571-1700.

## RC RACING CENTER & HOBBIES

1/10 Scale racing every Tuesday and Friday at 7 p.m. Sunday racing at 10:30 a.m. Indoor track and hobby shop, AC power, auto lap counting and food. Located in San Diego County; 9842 Channel Rd., Lakeside, CA 92040. (619) 443-2270.

## VENTURA ROAD RUNNERS

1/10 scale off-road every Friday and 1st Sunday. 1/10th dirt oval every Wed. and 3rd Sunday. 1/10th and 1/12th asphalt road the 2nd and 4th Sunday. 1/10 and 1/12 scale asphalt oval the 5th Sunday. Freedom Park Raceway, 520 Freedom Pk., Camarillo CA 93010. Contact Ed at (805) 499-8266 or Less at (805) 484-8920. Sign-ups close at 7:00 p.m. nights and 9:30 a.m. on Sunday.

## CLOVERDALE R/C RACEWAY

We race both indoors and out, gas and electric, in 1/12, 1/10 and 1/8 scales. The facility has carpet, and dirt tracks for road racing, off-road and oval. Race scoring is done via an auto count system, and there is AC power and a hobby shop on site. Parking isn't a problem, and there's even RV access. For more information call (707) 894-4468 or visit us at #1 Citrus Fair Dr., Cloverdale, CA 95425.

## RAMS

Racing for 1/8 scale cars on the 1st & 3rd Sundays of each month at Murco Plaza (Paseo Padre Parkway & Mowry East) in Fremont, CA. Contact Mike Alton (510) 490-8734.

## SO CAL RADIO CONTROLLED RACEWAY

Racing Wed., Fri., and Sat. for 1/10th electric off-road cars. This is an indoor facility with plenty of parking, AC power, snack bar, auto count and full hobby shop. Track is also open for practice on non race days. Visit us at 11930 Valley View St., Garden Grove, CA 92645. The phone number is (714) 892-0088.

## HOBBY WAREHOUSE OF SACRAMENTO

Indoor off-road racing with AC power. Snack bar, full pro shop and friendly staff. Track is located at 8950 Osage Ave., Sacramento, CA 95828. (916) 381-7588.

**SAN FRANCISCO RADIO CONTROLLED MODEL CAR CLUB**

Holding 1/10th scale gas and electric road racing on asphalt at the Tanforan Shopping Center. Races are held on the 2nd and 4th Sundays, February through November. For more information call Jerry Imboden at (415) 589-7836 or Randy Swan at (415) 221-1978.

**MNM HOBBY RACEWAY**

On and off-road racing highlights this complete facility. Road racing every other Saturday for 1/12 and 1/10 cars. Off-road every Tuesday, Friday and Sunday. Indoor pitting, power, chairs and snack bar. Address is 137 N. Vander, Corona. For more information call (909) 272-3545.

**CANADA****MAC KAY RACEWAYS**

1/10 Electric Off-Road Sundays. 1044 W. 14th St., North Vancouver, BC Canada. 150' Straights/5' banks/moguls & jumps. Operated by the Western Canada R/C Club. Dana (604) 980-4504.

**R.R.O.L.**

1/12 carpet racing Tuesday, 1/10 carpet racing Wednesdays. Sept. to May, Asphalt & off-road in summer. Remote Racers of London, P. O. Box 7241, Stn. E. London, Ontario, N5Y-4J0, Canada. Dan Engelbreth, (519) 668-0427.

**S.T.A.R.C.**

1/12 Scale: Wed. nite - STARC Club Series. Rockton, Ontario, Canada. Sam Burke (519) 621-5424.

**S.O.R.C.R.C.C.** 1/12 Scale: Southern Ontario Radio Control Race Car Club in Toronto, Ontario, Canada. Racing alternating Sunday nites Oct. - April Scott Reynolds 298-4941 or Gary Joi 421-9061.

**HOBBYPRO RACEWAYS LTD**

100 X 50 Indoor track, 90 X 50 Indoor asphalt track and 200 X 60 Outdoor oval track all at this facility. Racing for 1/12 4-Cell Friday evenings, 1/12 and 1/10 6-Cell Saturday evenings and 1/10 off-road Thursday evenings and all day Sunday. On-site hobby shop, A/C power and 80 pit stalls. 16020-132 Ave., Edmonton Alberta Canada T5V-1M1. Phone (403) 455-RACE.

**HONDA HOUSE MOTOR SPEEDWAY**

Racing for 1/12 scale electric on-road. The track is an indoor facility, and we race on a carpet surface. We also have a hobby shop, auto count, and have AC power on hand. We are located at 384 Richmond St., Chatham, Ontario Canada, N7M1PQ. Call us at (519) 354-5530.

**CONNECTICUT****PANTHORN RACEWAY**

1/10 Scale: Panthorn Park, Burrirt St., Southington, CT. Every Saturday May 1st-Nov. 1st. Off-road, oval, Baja, truck pulling. Call (203) 628-9345 Ben Carr, 272-9326 Pete Church, 237-6976 Bob Lavoie, 879-2316 Steve Magnani.

**WALLINGFORD INDOOR RACING ASSOC.**

Connecticut's oldest indoor r/c facility. Carpet road course is 225 feet and the facility has lighted pits for 125 cars. Scoring is done by AMB with races scheduled every Friday and Sunday through the month of May. For further information call Wayne Rydzay at (203) 265-3939. Track is at 63 North Cherry St., Wallingford, CT 06492.

**CONNECTICUT R/C OFF-ROAD**

1/10 Off-Road, from end of April to middle of October. Racing every Sunday weather permitting. Call Mike Belmonte at (203) 661-0145. Track is at Old Field School in Fairfield, CT.

**R/C HOBBIES RACEWAY**

1/10 Scale: Route 163, Bozrah, CT. Racing every Sunday, May 1 to Oct. 30. For more info call (203) 886-9441, ask for Mike or Bob.

**SNORR**

1/10 Scale: Racing every 1st and 3rd Sundays. P. O. Box 438, East Haven, CT, (203) 469-2594 or (203) 481-5813, Dave Seales.

**BUCKLEY SPEEDWAY**

1/10 Scale: 37 Douglas Street, Hartford, CT. Every Sunday April 1st to Nov. 31st. Black top oval. For more info call "Ziggy" or Debbie Kwasnicki (203) 246-4778.

**LITTLES HOBBIES**

1/10 Scale: Monday - Trucks; Tuesday - Sprint Cars; Sat. - 2WD 6 yrs. to 16 yrs.; Sunday - All classes indoor clay oval and road track fast, Stock & Mod classes. 111 Main St., Tr. 66, Hebron, CT 06248, (203) 228-4942.

**CONNECTICUT AUTO RACING TEAM**

1/10 Off-Road and Sprint Car Oval. 37 Douglas St., Hartford, CT

06114, Zig (203) 246-4778.

**K & M R/C SPEEDWAY & HOBBIES**

1/10 Scale: 735 Canal St., Stamford, CT 06902, (203) 967-7255. 7,000 sq. ft. complex, ample pit with power, fully stocked hobby shop. Organized racing held weekly. Call for details.

**EAST LYME R/C KAR KLUB**

1/10 Scale: Every Sunday starting May 20 thru Sept. Racing at 11 a.m. Located at Society Rd, East Lyme, CT (Behind the Junior High School). For info call Paul Johnson, 739-4070 eves. or weekends.

**NERCAR**

Racing for 1/8 and 1/10 gas on road. For info call Phil (203) 627-5410; Larry (203) 749-6281; Wes (203) 749-6281. Enfield, Conn.

**COLORADO****MILE-HI R/C SPEEDWAYS**

1/10 Scale: Thurs. & Sat. off-road; Fri. carpet, Sun. 2 p.m. 178 S. Kalamath, Denver, CO 80221, (303) 722-6766.

**M.H.O.R. R/C RACEWAY**

Indoor 1/10 off-road racing on Wed. & Sat. Complete hobby shop, AC & DC power. For info call Jess Brockman (303) 343-0151 after 3 p.m. MST. 155540 E. Batavia Dr., Aurora, CO 80011, (East on 17th Ave. at Chambers Rd.)

**FLORIDA****JAY'S R/C**

1/10 Scale indoor carpet oval and road course. 5018 14th Street West, Bradenton, FL 34702, (813) 756-6393, 758-2565, 746-8649.

**LOU'S R/C HOBBIES & RACEWAY**

Racing on Saturday is at 12:30 for 1/10th scale clay oval. Sunday racing is 1/10th off-road. Both tracks have handicap access. There is computer lap counting, a hobby shop and food available. The track is located at 4931 Oleander Ave., Fort Pierce, FL 34982. Call Lou at (407) 464-3207.

**LAKE WHIPPOORWILL SPEEDWAY**

1/10 oval racing every Saturday. Open practice other days. 12345 Narcossee Rd., Orlando FL, 32827 - (407) 277-9586.

**B & T R.C. CENTRAL**

Racing for 1/10 off-road on the 2nd and 4th Saturday. Track at 811 Playground Rd., Fort Walton, FL 32548. Phone (904) 863-2666.

**DOC'S INDOOR R/C RACEWAY**

Florida's state of the art facility. Plenty of pitting space, slot car track, bathrooms, snack bar and hobby shop. Located at 16803 US 19 N. Clearwater, FL 34624. For information call (813) 538-3096.

**BROWARD COUNTY R/C RACE CLUB**

Racing for 1/10 and 1/8 cars in gas and electric models. We run on-road, off-road and paved oval. Racing is done outdoors, and there is AC power and an auto count scoring system. For those with motorhomes there is RV access. We race at 2201 N.W. 9th Ave., in Mill's Pond Park, Fort Lauderdale, FL. For further information call (305) 525-3304.

**RIVER CITY R/C CAR CLUB, INC.**

Racing for 1/12 and 1/10 on road electric cars. We race outdoors on asphalt and score with an auto count system. Club address is 9711 Sharing Cross Dr., Jacksonville, FL 32257. Call (904) 268-1948.

**GEORGIA****GEORGIA HOBBY CENTER**

1/8 and 1/10 off-road and clay oval every Sat. and Sun. at 2:00 p.m. 112 Kenwood Rd., Fayetteville, GA 30214. (404) 460-1753

**SILVER WINGS HOBBIES & RACETRACK**

Indoor 260 ft. 1/10 scale clay oval. Complete hobby shop, plenty of electrical. Racing Tuesday & Saturday 7:00 p.m. Snack bar on site. 5611 Riverdale Rd., College Park, GA 30346 - (404) 991-2225.

**LAKE MAYER RACEWAY**

Home of the S.C.O.R.E. 1/10 dirt oval and off-road track. Raceway is located at the Lake Mayer Park, Montgomery Crossroads, Savannah, Georgia. Please call (912) 355-6033.

**IDAHO****CAPITAL DIRT BURNERS**

Racing for 1/10 dirt oval and off-road every other Sunday at Fort Boise.

For schedule call Mike (208) 345-3906 or Jim (208) 383-0426.

## ILLINOIS

### MACHESNEY PARK RACEWAY

1/4 scale, and 1/10 scale: Large asphalt oval racing alternating every Saturday and Sunday April thru October. 1220 Shappert Dr., Machesney Park, IL 61111, (815) 282-1311.

### R & R HOBBY

1/10 Scale dirt track inside and outside, also 1/12 tracks inside and outside. 1414 N. 24th St., Quincy, IL 62301, (217) 228-1133.

### THE INSIDE TRACK

1/10 Scale: Every Wednesday 7 p.m. and Saturday 6 p.m. For more info call (312) 898-5649. 725 Hill Ave., Aurora, IL 60505.

### RECTOR'S R/C

1/10 Scale: Indoor dirt oval/off-road. Alternate months. 6 p.m. Saturdays, 2 p.m. Sundays. RR3, Albion, IL 62806. (618) 447-3282.

### CARPETBURNERS R/C CLUB

436 East Main Street, (Rear) Danville, IL 61832, (217) 442-7466.

### C & C HOBBIES AND RACEWAY

Off-road every Fri. night and Sun. 2081 W. Station St. Kanakee, IL Call Chris at (815) 935-2600 or Ken at (708) 485-6366.

### AMERI-TRAC SUPER SPEEDWAY

400' center line high bank tri-oval. Large pit area, AC power, close to I-57. Phone (217) 234-8707. RR3 Box 242, Mattcon, IL 61938.

### MIDWEST HOBBY TRAX R/C RACEWAY

1/10 scale indoor off-road and oval racing every Friday 8 p.m. and Sunday 10:00 a.m. AMB scoring, AC power, snack bar, full hobby shop. 114 Kirkland Circle - Unit A, Oswego, IL. (708) 978-RACE.

### EAGLE SPEEDWAY AT PONTIAC

1/10 & 1/12 Indoor carpet oval and road course racing held Wed., Sat. and Sun. Practice on Tue and Sat. AMB counter hobby shop, snack bar, etc. 313 N. Plum St., Pontiac, IL 61764. (815) 842-1738

## INDIANA

### RPM R/C RACEWAY

1/10 Scale Indoor off-road racing every Sunday at 12 Noon. 1112 S. 16th, Elwood, IN 46254. For more info call (317) 552-7758.

### R/C RACEWAYS

1/10 indoor dirt oval. Wed. 6 p.m. oval. Fri. 6:30 p.m. Sun. 12 noon oval or off-road. Call (219) 747-6414. 2710 Nuttman, Ft. Wayne,

### ARVIN'S HOBBY CENTRE

1/10 Scale: 2,600 sq. ft. carpet track with movable rails so we can change from oval to off-road. We run off-road and on-road cars on Sat., Sun., and Wed. 1403 E. Spring St., New Albany, IN 47150, (812) 945-3745.

### RACEWAY PARK

Mishawaka, IN (Northern Indiana)

Winter - Large indoor carpet track - two Sundays a month. Summer - The Mid-West's Best Off-Road track - two Sundays a month. Off-road track is on N. Main Street. For info call Bob (219) 256-1020.

### HOBBY WORLD RACEWAY AND HOBBIES

Indoor dirt oval and off-road. Racing every Wed. and Sat. at 7:00 p.m. Full hobby shop, AMB scoring, AC power and snack bar. 1508 N. Harlan, Evansville, IN 47711. (812) 421-1100.

### RC ZONE & RACEWAY

Located inside the Indy Indoor Sports at 34th & Highschool Road, we feature an indoor carpet track with racing every Saturday - April through October. Rentals available for racing on Friday nights. Full service hobby shop and facility. For more information call Greg or Russ at (317) 290-0067 or write to 6380 W. 34th St., Indianapolis, IN 46224.

### GONZO RACEWAY

1/10 outdoor off-road racing on Sundays May thru September. Racing starts at 10:00 a.m. Indoor carpet racing November thru March. Computerized scoring. For more information call (219) 980-8409. 418 Roberts Rd., Chesterton, IN 46304.

### BJ'S RIVERSIDE RACEWAY

1/10 scale lighted 450 foot outdoor off-road dirt track. 1/10 scale 115 foot in-door high banked dirt oval with jumps. Outdoor racing Friday at 6:30 p.m. Bomber class (6-cell and bag motor, 6:00 min. heats) Saturday 6:30 p.m. oval racing (all classes, 4:00 heats) Sunday 6:30 p.m. off-road (All classes, 4:00 min. heats) A/C power, computer lap count, snack bar & R/C sped shop. 265 South Clay St., Jasper IN, 47546. Call Joe "BJ" Lorey (812) 482-3484.

### P & T HOBBIES

1/10 off-road and oval racing on one of the midwest's finest circuits. Full

service hobby shop on site and ample pitting with AC power. Oval is 220' long and off-road circuit offers more than 300' of racing. Racing Fri. night and Sat. R.R. #2, Box 450A, Mitchell, IN 47446, (812) 849-6666.

## IOWA

### BOB'S R/C SUPPLY & RACEWAY

1/10 Scale: Indoor carpet racing! Tues. 1/10 oval; Fri. 1/12 Road Course; Sat. Monster Trucks. Stock & Modified. Call Bob, Nancy or Kevin (319) 232-2235, 935 Sheerer Ave., Waterloo, IA 50701.

### NORTH PARK R/C SPEEDWAY

1/10 and 1/12 electric, 1/8 gas and 1/4 scale: For further information write c/o Mike Beisch, 805 South Jerome, Algona, IA 50511 or call (515) 295-9352.

## KANSAS

### EBERSOLE HOBBY & R/C RACEWAY

1/10 Scale off-road and oval. Races Wed., Thurs., Sat., and alternate Sundays. 11417 W. Highway 54, Wichita, KS 67209. Len Ebersole, (316) 722-8888.

### KANSAS R/C RACING CLUB

Every Second Sunday, Junction City; Every 4th Sunday Enterprise.

### DEE & MEE HOBBIES

Two tracks; dirt oval and off-road, oval on Mon. and off-road on Fri. Both at 7:00 p.m. Carpet 1/12 on Tue. at 7:00 p.m. 628 Kansas, Topeka KS 66603. 357-4232.

### EBERSOLE R/C SUPER SPEEDWAY

High banked asphalt oval, road course, dirt oval and off-road. Electronic lap counting. track at 11417 W. Hiway 54, Witchita, KS 67209. Phone (316) 722-8888.

### RCRC RACEWAY

Outdoor dirt oval and off-road track with full hobby shop, AC power, concessions and lights for night racing. Track is 95 by 65. For more information contact Bob Dunker at (913) 626-3261 day or (913) 626-9681 nights. Track is 507 N. 4th St., Atwood, KS 67730.

### R/C WORLD RACEWAY

Corky and Pam Green are your hosts for 1/10 electric off-road and dirt oval racing on their indoor track. This facility has a hobby shop, snack bar, auto count and AC power. Racing for the dirt off-road cars is Saturday and the dirt ovals race Thursday. Call (913) 793-2313 for current start times. They are located at 217 Brownie Ave., Scranton KS, 66537.

## KENTUCKY

### HOBBY CENTER

Hobby Center, INC. 2106 Triplett St., Owensboro, KY 42303. Phone: (502) 683-7611. Full service facility including hard surface flat track with a straight 75 feet long! Track indoors, regular racing every Thursday at 7:00 p.m. Track open daily for practice. Hours 11:00 a.m. to 7:00 p.m. Mon. - Fri. On Sat 11:00 a.m. to 5:30 p.m.

### RIVER CITIES R/C RACEWAY

1/10 Scale: Racing at 5:30 Saturday evenings under a light area. Call Randy Aust (606) 836-4273 or Jason Graham (606) 836-2613. Ashland, KY 41101.

### PIT ROW HOBBIES

Both gas and electric, 1/12 and 1/10 cars will find a home racing here. There are also classes for on-road, off-road and dirt oval cars. This complete facility features a Hobby shop, AC power and scoring is done by auto count. Pit Row races both indoors and out, and with the number of classes it's a good idea to give them a call for the latest schedule. They can be reached at (502) 782-2419. They are located at 281 New Porter Pike, Bowling Green, KY 42103.

## LOUISIANA

### CAJUN R/C & RACEWAY

1/10th scale off-road dirt track (outdoors) Complete hobby shop, A/C power, food. Races every Sunday at 1:00 p.m. Route 2, Box 288 - Hwy. 343 (Bosco), Church Point, LA 70525. For more info call Ray or Sandy at (318) 873-3855.

### CAJUN R/C & RACEWAY #2

1/10th scale dirt oval track (outdoors). Complete hobby shop, AC power. Races every Saturday at 2:30 p.m. Address is 110 A Darbonne, Sulpher, LA 70663. Call Randy or Sandy at (318) 527-9129.

## MAINE

### CENTRAL MAINE R/C SPEEDWAY AND HOBBIES

This facility features two carpeted tracks, an oval and a road course. There's also off-road racing. We have a complete r/c pro shop and race on Fridays and Sundays. This indoor facility also has a snack bar, AC power and an auto count system. The track is located at 18 Lithgow St., Winslow Maine. For information call (207) 877-2232.

## MARYLAND

### MASON DIXON R/C CAR CLUB

1/10 Scale: Every Sunday at 1 p.m. Track location at Hagerstown Fairgrounds, Hagerstown, Maryland. Call King's R/C Cars, 219 E. Washington St., Hagerstown, MD 21740, (303) 739-0080.

### CENTRAL MARYLAND ELECTRIC

#### RACING CLUB (CMERC)

#### Community R/C Speedway

1/10 Scale: Racing every Saturday dirt oval. Middletown Park, Middletown, Maryland. Contact John Mauchamer, (301) 698-9545. 1/12 Scale: Mark Coats (301) 694-7420.

#### TEAM R & R, INC.

1/10 & 1/12 scale indoor oval carpet racing. Every Sunday. for more info (301) 848-2144 or (301) 876-2983. Westminster, MD 21157.

#### MARYLAND R/C CLUB

1/10 & 1/12 racing indoor carpet. Toy World R/C, (301) 424-0430.

#### THE COCKEYSVILLE ASTRODOME

1/10 Scale: C.A.R. Cockeysville Astrodome Racers, Inc., 10854 York Rd., (Rear) Cockeysville, MD, (301) 666-1098. For further information call Art LaPole (301) 889-2070.

#### GPA HOBBIES, INC.

GPA Speedway races 1/10 off-road and 1/10 and 1/12 indoor road. For schedule information call (301) 805-9004 or write to GPA at 3498 Crain Hwy., (Collington Plaza), Bowie, MD 20715.

#### THE TRACK/MARYLAND R/C CLUB

1/10 & 1/12 carpet indoor banked oval and road course. Track at 16806-08 Oakmont Ave., Gaithersburg, MD 20877. (301) 417-9630 or 424-0430.

#### BEL AIR R/C RACEWAY

Mon. Monster trucks and off-road cars starting at 5:30 'til 9:00 p.m. Tuesday practice night from 5:30 - 9:00 p.m.. Friday NASCAR & GTP on road racing. Saturday novice races from 10:00 to 3:00 p.m. Track at 227 G Gateway Dr., Bel Air, MD 21014. For information phone (410) 838-1229 or 836-5087.

## MASSACHUSETTS

### BROCKTON INTERNATIONAL SPEEDWAY

1/10 & 1/12 Oval racing on Mon. 7:30 p.m. 1217 Main St., Brockton, MA. For information call (508) 588-9355.

#### R/C PERFORMANCE CENTER

1/10 Scale carpet oval and indoor off-road dirt track. Racing Tues., Thurs., Sat., & Sun. 4 Manley Street, West Bridgewater, MA 02379. Ask for John (508) 588-9666.

#### HOBBIES ETC. RACEWAY

1/10 & 1/12 scale: Every Sunday Racing at 1 p.m. Indoor on-road carpet. For more information call (617) 389-3331. Medford High School, Winthrop St., Medford, MA.

#### NORTH EAST AUTO RACERS (NEAR)

The club hosts 1/8 gas and 1/10 electric road racing. Track is behind Cobblestone's Restaurant. Races are scheduled May through October. For full schedule contact George at (508) 346-8456.

#### MEGADROME RAEWAY/BRCCR CLUB

One of the largest facilities on the East Coast. Racing for 1/10 electric and nitro on, off-road and clay oval tracks. Track is located at North Adams Plaza, Rt. 8 Curran Hwy., North Adams, MA 01247

For race and practice information call Gordon at (413) 663-9593, Richard (413) 445-4777 or Warren (413) 442-2566.

#### WEST STREET HOBBIES RACEWAY

1/10, 260 ft. banked carpet oval. Racing Wed. & Sat. at 7 p.m. (508) 533-1231. 114C Main St., Medway MA 02053. NORRCA rules.

## MICHIGAN

### USA RACEWAYS

1/10 & 1/12 Scale: Road racing Wed. and Sat. 1/10 oval Friday and

Sunday. Stadium 1/10 on Saturday. 6083 Dixie Highway, Bridgeport, MI, (517) 777-7USA.

### HARRISON INTERNATIONAL SPEEDWAY

1/10 Scale: Friday night high banked small oval. Sunday large flat oval. 3519 N. Clare Avenue, Harrison, MI 48625, (517) 539-7959.

### GLASS CITY RADIO CONTROL

Racing 1/10 & 1/12 scale: Clayton White (1/12) (419) 882-2518 or Mike Marshall (1/10) (313) 241-5321.

### BAJA BAYOO R/C RACEWAY

1/10 scale off-road racing May through September. Racing every Sunday at 1:00 p.m. weather permitting. 5313 West 22 Mile Rd., Tustin MI. Track is 8 miles south of Cadillac. (616) 829-3447.

### R & L HOBBIES

Indoor dirt stadium track. Race at 1 p.m. Sat., 7 p.m. Wed. Practice other days. First class facility, come see us at 9782 Portage Rd., Kalamazoo, MI 49002. Call us at (616) 323-3686 or fax us at (616) 329-1744.

### RIDERS SUPER SPEEDWAY

Racing for 1/10 and 1/12 electric cars. We have an indoor carpet oval course, with a complete hobby shop, snack bar, AC power and score by auto count. Located at 4415 S. Westnedge, Kalamazoo, MI. Call us at (616) 349-2666.

## MISSISSIPPI

### FASTRACKERS RACEWAY

1/10 scale off-road racing every weekend. One of the biggest and most challenging off-road tracks in Region 6 ROAR sanctioned. For more information and racing schedule, write - 4909 West Gate Hills Dr., Meridian, MS 39305 - (601) 693-8368.

### JACKSON R/C RACING ASSOCIATION

Car and truck racing Sundays at 10:30 a.m. and Tuesdays at 6:00 p.m. Computerized lap counting, all classes pan stock and modified, gearbos stock and modified, truck, 4 X 4, Dominator class, and 1/12 if enough to run. Track is 2 1/2 miles west of Rt. 9 on Rt. 526. (908) 905-1593.

### CROSS ROADS RACEWAY

1/10th off-road racing every weekend. Dirt banked oval and a road course in the center of the track. Come and race those modified motors on the Big Oval. For more information call (601) 287-7169. Chief Electronics/Radio Shack, Corinth, MS 38834.

## MISSOURI

### HOBBIES 'N STUFF RACEWAY

Off-road racing for 1/10 scale electric trucks and buggies every Saturday and Sunday afternoon at 2:00 p.m. Our 280 foot outdoor dirt track is ROAR legal with 10 foot lanes and computer scoring by Victory Lane II. A fully stocked hobby store is on location. Come see us at: 102 West Pearce Blvd., Wentzville, MO 63385. Phone (314) 327-6006 for more details.

## NEBASKA

### OMAHA NEBRASKA RADIO OPERATED AUTO DRIVERS

1/10 & 1/12 Scale carpet and pavement racing. Oval and road course. (402) 331-2907.

### OVER THE WALL GANG

Schedule: Nov.-Mar. 1/10th oval, 1/10th & 1/12th road course. Apr.-Oct. outdoor off-road and asphalt oval and road for 1/10th and 1/12th cars. On site hobby shop. Located at 401 Market Pl., Norfolk, NE 68701. Phone (402) 379-0879.

### HOBBYTOWN USA

1/10 scale, 1/3 mile high banked dirt oval. Racing Tues. at 7 p.m. and Sun. at 1:30 p.m. May through October. Located in the East Park Mall; 66 & 9 streets, Lincoln, NE 68510. (402) 434-5056.

## NEVADA

### AMS R/C RACEWAY

Racing is 1/10th off-road Wed. nights at 7 p.m. & Sun. at 10 a.m. Track has a clay surface. On Sat. 1/10 oval/on-road racing on carpet at 7 p.m. This is an indoor track (110 x 44 clay off-road and 110 x 40 carpet track) and we have a hobby shop and snack bar. We are also only 2 miles away from the casinos and hotels. Open daily from 12-9 p.m., closed Monday. Track is at 1130 Icehouse, Sparks, NV 89431. For more information call (702) 355-8803.

## NEW HAMPSHIRE

### HOBBIES PLUS & R/C RACEWAY

Track is at 14 Celina Ave., Hashua, NH 03063. This is New England's largest (350 ft.) and fastest banked carpet oval. Also 26 x 72 flat carpet track dedicated to 1/12 road racing. Pit areas with electricity for over 200. Complete hobby shop, computer scoring. For more information call (603) 882-9200.

### ACTION R/C RACEWAY

1/10 Scale & 1/12 on-road, 1/10 off-road cars and trucks. Indoor carpet high banked oval. Family Fun Hobbies, 201 Washington St., Claremont, NH. (603) 543-1022.

### HOBBY ETC. RACEWAY

Indoor carpet banked oval for 1/10 and 1/12 scale. The 1/12 division also can road race. AMB scoring with a full hobby shop and concessions on the site. Telephone is (603) 595-8549. Rt. 101A, Amherst, NH 03031.

### NEW ENGLAND HOBBIES AND R/C RACEWAY

Racing for both gas and electric cars, in 1/10 and 1/8 scales. This outdoor track features off-road and dirt oval racing every Saturday from May - October. There's an auto count system for scoring, and a hobby shop and snack bar. We are at 49 Eaton Hill Rd., Auburn, NH. Call Larry at (603) 483-8371 or Chuck at (603) 483-2274.

## NEW JERSEY

### AMERICAN HOBBIES

1/10: Thurs. Oval; Sun. Off-Road & Oval. Call (201) 446-2010.

### PARLOR HOBBIES

1/10 & 1/12 Scale: Short track stock car racing on road courses. 1/10 on asphalt. Truck class with 1/12 on road, off-road. Rabbit Lane & 34 Broad St., Matawan, NJ, 566-3158.

### KIM'S R/C PIT STOP

I.E.D.A. drag racing - 10 classes including bracket. Racing every Sunday on an outdoor asphalt track. We also have an X-Mas tree, and computer scoring and printout. Call for latest schedule at (201) 942-5955. We are located at 357A Union Blvd. Totowa, NJ.

### AL & RICH'S R/C SPEEDWAY

Indoor carpet road course and 1/10 dragstrip. AMB system 20 and Dragmaster Timing System. Racing Friday, Saturday and Sunday with open practice on Thursday. Track is at 90 N. White Horse Pike, Hammonton, NJ 08037 (located at Texaco Station). For more information call (609) 561-7584.

## NEW MEXICO

### LAS CRUCES HOBBY RACEWAY

1/10 scale off-road and oval on a 7,200 square foot track. 1/10 gas truck and electric racing every Sunday. 1996-A S. Valley Dr. Las Cruces, NM 88001. Phone (505) 524-8530

### RACER'S INN

Full hobby shop and concessions. 1/10 off-road every Sat. at 6:00 p.m. on outdoor 70x120 track. Also 1/4 scale Sprints and Grand Nationals. Oval and dirt oval. Call for schedule. Located at 4300 Rankin LN. N.E., Albuquerque, NM 87107. Phone (505) 345-5988.

## NEW YORK

### WALT'S HOBBY & CRAFT

1/10 & 1/12 Scale: Two indoor tracks. 1/10 clay oval, Mon. & Sat; 1/10 Gearbox carpet, Mon.; 1/12 & 1/10 carpet, Tues. Oval and Road Course. Weight Pulling Wednesday. 2 Dwight Park Drive, Syracuse, NY, (315) 453-2291.

### REC. R/C RACEWAY

1/10 Scale Clay Oval. Saturday - Oval; Sunday Off-Road. Call Erin Clancy (914) 868-7715. Route 82 to Standfordville, NY 12581.

### ROMAC

1/10 and 1/12 on large carpet oval. Thursday and Sunday. (Northern Lights Mall) N. Syracuse, NY. For more info call (315) 468-1463 or (315) 468-6544.

### SCHENECTADY R/C SPEEDWAY

1/10 & 1/12 Scale: Indoor oval carpet and Monster Trucks. 955 State St. Schenectady, NY, (518) 3709-3747.

### BROWNIE'S HOBBIES

1/10 Scale: Off-Road Dirt Track. Friday evenings 4WD & 2WD. Track open April - November. 124 Bennett St., Staten Island, NY 10302, (718) 727-2194.

## RAPID TRANSIT RACEWAY

1/10 Scale: Mon, Tues., & Sat. - Practice. Wednesday - Stock & Mod.; Thursday Sprint Car; Friday Sportsman & Open Class. 2104 Broadway, Schenectady, NY 12306, (518) 372-0777.

### CAPITOL DISTRICT R/C OUTLAWS

1/12 Scale 4-cell carpet. Oval and road course. Every Friday at 7:30 p.m. October to April. For further info contact Capitol District R/C Outlaws, 223 Fourth St., Scotia, NY 12302, or Sam Roberts (518) 374-3801.

### QUEENS OFF-ROADERS

One of the biggest 1/10th off-road tracks in the country! Racing on Fri. at 8:00 p.m., Sat. at 3:00 p.m. and Sun. at 11:00 a.m. For latest information call (718) 392-5766. 42-12 13th St., L.I.C., NY 11101.

### VICTOR R/C ASSOCIATION

1/10 scale clay oval track & off-road racing. Fridays and Sundays, May through September. 1309 Mertensia Rd., Farmington, NY. For information call Larry at (716) 394-3754.

### BEACH HILL SPEEDWAY

ERacing for 1/10 electric off-road and dirt tri-oval. Racing is done outdoors, and the track has RV access. There is also a snack bar and AC power. The speedway is located at 1760 Beach Rd., Watkins Glen, NY 14891. To call them dial (607) 535-2616.

### R.C. WORLD HOBBY CENTER

Road racers who pilot 1/12 cars will find plenty of racing action at this indoor carpet track. Along with a hobby shop, there is a snack bar, AC power and scoring is done via an auto count system. Call them for their schedule at (718) 326-0002. They are located at 69-57 Juniper Blvd. South, Middle Village, NY 11379.

## NORTH CAROLINA

### DIXIE R/C HOBBY SHOP

1/10th Scale: Every weekend Sat. & Sun. The races will alternate between oval and motorcross starting in May. P. O. Box 135, Ramseur, NC 27316, after 6 p.m. (919) 824-2770.

### MID-CAROLINA R/C SUPER SPEEDWAY

1/10 & 1/12 high speed banked quad-oval and road course. Located on Flint Hill Rd., Off I-77/Carowinds exit, So. of Charlotte, NC. Fred Penland, (704) 373-2535 7:30 A.M. to 4:30 P.M.

### ASHEVILLE HOBBY SPEEDWAY

1/10 & 1/12 scale asphalt oval-indoors. Racing Wed. & Sat. 7:30 p.m. Highway 25, Naples, NC 28760, (704) 684-9814 ask for Jack or Sharon Murdock. 1/10 Dirt Oval & Off-Road. Racing Sat. & Sun. 1st & 3rd weekends. 6200 McGregor Dr., Charlotte, NC 28227, (704) 545-0746 ask for Steve Hill.

### RC HOBBY & RACEWAY

1/10 & 1/12 indoor carpet racing Nov.-Mar. Oval and Off-Road dirt racing every Saturday. For more info (919) 228-6809, 1358 S. Church Street, Burlington, NC 27215.

### BOOGLE BAY R/C RACEWAY

600 foot asphalt oval raceway with 30 foot wide straits and 40 foot wide turns. The track races 1/10th, 1/12th and 1/4 scale. Racing set every month in advance every Saturday and Sunday. Rt. 1 Box 324, Linden NC, 28356 - (919) 488-5408.

## NORTH DAKOTA

### NORTHERN MINI-RACERS

1/10 Scale on-road, carpet, road racing. Saturdays Sept. through May. P. O. Box 415, Minot, North Dakota. For information call Pat (701) 839-8868 or (701) 852-6254. Roger (701) 839-4731 or (701) 839-5294.

### KOUNTRY KLIN HOBBY

1/12 Scale small indoor carpet track & hobby store. Box 247, 324 Railroad Ave., N. Mohall, ND 58761, (701) 756-6307.

## OHIO

### TARCAR-TOLEDO AREA

1/8 gas stock cars. Black clay tri-oval. Sundays late April thru Mid-October. For more info call Dave Scanes, (419) 893-1916.

### 1/8 RACERS OF TOLEDO

1/8 & 1/10 scale asphalt road course. Every other Sunday from Mid-April to Mid-October at the Woodville Mall rear lot. For schedule and info contact Brent Gottfried (419) 843-3231.

### THE RACER'S CHOICE - RADIO CONTROL HOBBIES

Located at 1298 U.S. Rt. 42, Mason OH 45040. Large outdoor off-road

track, over 400' long with 100' straight, elevation changes, jumps, moguls and banks. Lighted with large driver's stand. Also banked 40' - 100' oval. Organized racing weekly. Fully stocked shop, for details and schedule call Holly, Tony or Adrian at (513) 398-5539. Track located just north of Cincinnati, near Kings Island.

#### **CORCAR - COLUMBUS, OH**

Outdoor 10th scale off-road racing May through September and indoor off-road racing October through April. Contact Ray Williams before 9 p.m. (eastern) (614) 890-2983.

#### **ALCAR INTER. R/C RACEWAY**

1/10 Scale off-road Friday nights. 1/12 & 1/10 carpet Sundays. 33501-A Lake Rd., Avon Lake, OH 44012, (216) 933-6017.

#### **ALTERNATIVE RACING ASSOCIATION**

1/10 and 1/12 on-road. Two large tracks indoors and outdoors. 2600 17th SE, Canton, OH 47306 (216) 484-2587.

#### **INNOVATIVE HOBBIES & LAKES SPEEDWAY**

Large indoor multi-layout carpet track and outdoor oval. Racing Wed., Sat., Sun. 3425 Manchester Rd., Akron, OH 44319, (216) 645-1333.

#### **AEROTECH RACEWAY**

1/10 oval/tri-oval and off-road dirt. 409 Applegate Rd. North Canton, OH. Call Ron at (216) 499-1300.

#### **MODELER'S HAVEN RACEWAY**

1/10 clay oval May thru October. Electricity, water, indoor restrooms and shaded pit area. Contact Bob at (216) 499-6000. 4255 Portage N.W. North Canton, OH 44720.

#### **MID OHIO R/C RACEWAY**

We race 1/10 off-road and dirt oval all indoors. There is a 300 foot oval track with the off-road track built inside of that. In addition to that, we have scale 1/4 mile slot car drag races. Call Bob at (513) 233-2807 for more information. Track is in Huber Heights, Ohio.

#### **D & S HOBBIES AND RACEWAY**

Racing 1/10 & 1/12 4-cell. Race days are Wed., Fri. and Sun. Closed Mondays. D & S Hobbies, 7701 Crile Rd. #3, Concord, OH 44077.

#### **AAACTION SPEEDWAY**

High banked 100' x 50' clay oval and off-road track. No AC power, but plenty of shaded parking and pit space, clean restrooms, concession stand and a good family atmosphere. Contact Tim McKnight at (614) 387-5912 for more info. All races \$5.00 per class.

### **OKLAHOMA**

#### **R.C.A.R. OF TULSA**

1/10, 1/12 Scale: Indoor racing. 3025 South Sheridan Rd., Tulsa, OK. For more info call Dave Cole (918) 745-9898.

#### **RCRC OF OKLAHOMA**

1/10th scale indoor dirt oval and dirt off-road. Racing on this large track is at 7 p.m. Tuesdays and 5 p.m. Saturdays. Complete hobby shop with plenty of pit space and AC power. 400 S. Vermont, #104, Oklahoma, OK 73108. Call (405) 947-RACE ask for Steve or Rick.

### **OREGON**

#### **R/C SPEED CENTER R/C ADDICTION**

1/10 & 1/12 scale, banked dirt oval racing, dirt off-road racing, sled pulls, mudbog. 2810 N. Pacific Hwy., Medford, OR 97501, Call Gene or Betty Skelton, (503) 779-8298.

### **PENNSYLVANIA**

#### **CARCLUB-COCHRANTON AREA**

Racing every Friday at 6 p.m.; Saturdays 9 a.m.; Sundays at noon. Large indoor carpet-dirt outdoor. Call for info Harry Turner, 120 W. Adams St., Cochranton, PA 16314. (814) 524-7788.

#### **CEB MOTORS R/C DIVISION**

This indoor facility races 1/12 and 1/10 electric cars. Racing is for both oval and road course designed cars. The track features a hobby shop, snack bar, AC power, auto score and the parking lot can handle RV's. Call us at (717) 375-4635, or stop by at 5743 Molly Pitcher Hwy., Marion, C.A.R. CLUB

Racing every Sunday. Tamarack Raceways, Contact Harry Turner, 120 W. Adams St., Cochranton, PA 16314, (814) 524-7788.

#### **WAGONHILL HOBBIES**

Indoor 1/10 & 1/12 road racing every Fri. night. Off-road every Sat. night. 225 S. Board St., Grove City, PA (412) 458-4711.

#### **TC'S R/C'S**

Inside and outside race track and RC Shop. 1537 Freeport Rd.,

Natrona Heights, PA 15065, Call 226-8802.

#### **PHILLY RADIO CONTROLLED RACERS R/C CAR CLUB**

1/10 on-road paved track. Sundays, April thru November 11 a.m. 7790 Dungan Rd., N.E. Philadelphia. Jon (215) 224-4822 or Bernie (215) 831-1835.

#### **EAST ST. RACEWAY AND ART CENTER**

Over 4,000 Sq. foot carpet track. Computerized lap counting. Racing starts at 7 p.m. each night. Friday oval racing; Saturday stadium off-road. Located at 747 E. Railroad Ave., Verona, PA 15147 - (412) 826-0602.

### **SOUTH CAROLINA**

#### **BNS COMPETITION HOBBIES**

Contact Bob Sanford, (803) 224-8591. Route 7, Box 380, Anderson, SC 29624. Racing and open practice Wed. 6:30 p.m. Every Saturday 1 p.m. 1/10 Dirt Oval.

#### **REMOTE HOBBIES INDOOR RACING**

Fri. nites - Oval 1/10; Sat. - Road Course 1/10. Shop (803) 736-9446, Track (803) 699-0528. 9005 C Two Notch Rd., Columbia, SC 29223.

#### **BEREA R/C SPEEDWAY**

Fri. Nights 1/10 conc., banked oval; Sat. nights stadium off-road for trucks and buggies; Sunday unlimited oval; 707 Sulphur Springs Rd., Greenville, SC 29610. (803) 246-4702.

### **TENNESSEE**

#### **HITT'S HOBBY & RACEWAY**

Tuesday Oval; Thursday Off-Road Stock; Saturdays Off-Road Novice; Sundays Off-Road Modified; Oval and Off-Road. 853 Wren Rd., Goodlettsville, TN 37072. Ben or Kent (615) 859-3465.

#### **MSA R/C RACING**

Racing for 1/10 and 1/8 cars, in both gas and electric versions. At this track a racer can find competition for on-road, off-road, dirt oval and paved oval. There's tracks both indoors and out, and the facility features a hobby shop, snack bar, AC power and scoring is done with an auto count system. Call them for the latest racing schedule at (615) 456-0027. They're located at Rt. 12 Box 489B, Crossville, TN 38555.

### **TEXAS**

#### **HAL'S R/C RACEWAY**

Sat. is on-road asphalt 1/10. Sun. is off-road. Registration both days is at 11:00 a.m. 1440 Bessemer, El Paso, TX 79936 (915) 591-2213.

#### **RIVER CITY RACEWAY**

On Quincy Road, Wichita Falls, TX. Every 2nd & 4th Sundays at Noon. Call (817) 691-1478.

#### **ARROW HOBBIES**

Wed. - 1/10; Every other Friday 1/8 Sprint cars only; Saturdays 1/10 dirt oval. 2710 So. 1-35 West, Burleson, TX, (817) 295-2821.

#### **VICTORIA HOBBY SHOP**

Every Sat. Off-Road; Every Sunday - Ovals. 5211 John Stockbauer, Victoria, TX 77904, (512) 575-3270.

#### **COASTAL BEND SANDBLASTERS R/C CAR CLUB**

Races first thru third Sundays, 2 p.m. start. Bill Witt Park, Yorktown Road, Corpus Christi, TX. Call Pete (512) 992-4448.

#### **AMERICAN ANGLER TACKLE & R/C**

#### **HOBBY CENTER'S "AA" RACEWAY**

Two dirt tracks, oval & off-road. Races every Sunday, 1 p.m. Tracks alternated. Races every Saturday 11 a.m. oval. Hobby shop on site. 1617 Toomey Rd., Austin, TX 78704, (512) 474-8277.

#### **WESTSIDE HOBBIES**

1/10 Racing every Sat. 1/10 on-road racing every Sun. on asphalt. Alternating oval and road course. 7214-A N. Mesa, El Paso, TX 79912. Call Tom, Mark or Tim at (915) 585-1864.

#### **FINISH LINE HOBBY & RACEWAY**

1/10 scale indoor off-road every Fri. and Sat. 8:00 p.m. 1/12 indoor carpet every Tue. 7:00 p.m. 11925 Jones Maltsberger, San Antonio, TX 78216. Call (512) 491-0088 for more information.

#### **T & T EAGLE HOBBY**

Headquarters for the "Killer Dillers" R/C Club, racing is on the first and third Sunday in front of the store. The first Sunday is road course and the third is oval. Emphasis is on fun racing. Trophies for novice class only, entry \$5.

#### **HURRICANE SPEEDWAY**

Racing Wed., Fri., Sat., Sun., alternating off-road and oval. Track is at 9600B Old Katy Rd., Houston, TX 77055. (713) 464-8020.

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**UTAH****I.R.C.D.R.A./HOBBY EXPRESS**

Race indoor off-road every Saturday at 6 p.m. 3150 Brinker, Ogden, UT info call Hobby Express (801) 621-4013.

**WASATCH OFF-ROAD RACEWAY**

Operated by IRCDRA. Races are indoor on an off-road and oval raceway. Races every Saturday at 6:00 p.m. Track at 3170 Brinker Ave., Ogden, UT 84401. Phone is (801) 773-0933.

**VERMONT****MIKES HOBBIES & RACEWAY**

Indoor banked 1/10 carpeted oval, on-road racing. Six classes every Wed. at 7:00 p.m. and Sun. at 1:00 p.m. Track at 162 N. Main St., Rutland, VT 05701 - (802) 775-0059. Ask for Lee or Chuck.

**VIRGINIA****F/X CITY RACEWAY**

Every Saturday 1 p.m. The Frame Gallery, 13340 F Franklyn Farm Road, Herndon, VA 22071. For info call Eric (703) 471-4499.

**WINNERS CIRCLE HOBBY SHOP & RACEWAY**

Racing every Saturday night at 6 p.m. Large oval carpet. 3236 W. Clay St., Richmond, VA 23230 (804) 355-7076.

**COOPER'S RC RACE CENTER**

Racing every Sunday 2 p.m. oval and off-road. Contact Norris (804) 724-4182. Rt. 4, Box 122B, Chatham, VA 24531.

**FAIRSTONE R/C SPEEDWAY**

Dirt 1/10 scale 1/4 mile oval & figure eight racing every Wed. and Sun. eves. through Halloween. Hobby shop, concession stand. Rt. 4 Box 918, State Rd. 635, Stuart, VA 24171. Phone (703) 930-3984.

**HOBBY HANGAR SPEEDWAY**

Those coming to this track can race 1/12 and 1/10 cars in both gas and electric powered versions. There's racing on carpet and dirt, for road and off-road racing. The facility boasts a hobby shop, snack bar, AC power and uses an auto count scoring system. Hobby hanger is at 4433A Brookfield Corp. Dr., Chantilly, VA 22021. Call (703) 631-8820.

**WASHINGTON****SPOKANE INDOOR RACEWAY**

A 10,000 sq. ft. facility with carpeted on-road track & indoor dirt off-road. Large indoor pit area, computer scoring (AMB), full parts shop. Located at E. 6422 2nd Ave., Spokane, WA 99212. (509) 534-RACE.

**WEST VIRGINIA****BIG BOYS TOYS HOBBY SHOP AND TRACKS**

Dirt and carpet oval tracks. Racing every Sunday evenings; Monday and Thursday evenings. Bridgeport, WV, (304) 842-5799.

**WEST VIRGINIA REMOTE CONTROL RACEWAY**

Racing every Sunday. Doors open at 12 noon, racing starts at 1 p.m. The track size is a 90 X 50 foot carpet oval. Prizes in all "A" mains. Track is at 601 Jefferson Rd., South Charleston, WV 25309. Call Russell Pauley (304) 346-7223 after 6 p.m.

**R/C RACE PLACE**

Racing on-road every Wed. night at 7:00 p.m. and carpet oval every Fri. night at 7:00 p.m. during the winter months. Racing outside for dirt oval every Wed. Fri. nights on lighted 260 foot track during the summer months. Full hobby shop. Contact Mike or Dennis Robinson at (304) 292-0811 for information.

**WISCONSIN****MADISON AREA R/C CAR ASSOCIATION, INC.**

Dirt Oval on Sun. Carpet road racing on Sat. Carpet oval on 1st and 3rd Fri. Track is at 1810 S. Park St., Madison, WI. Call 273-0519 or 837-2033 J. G. S.

Wisconsin's finest off-road race track. Groomed 100 ft. straightaway, computer scoring, driver's stand, starting lights. Racing every other Sunday 1 p.m. Menomonee Falls, WI (414) 255-2040.

**TRACKSIDE RACEWAY**

Dirt oval Thur. night 6 p.m. Menomonee Falls, WI (414) 255-2040.

**ABC R/C**

Clay track racing every Sat. 1 p.m. Truck pulls every Tuesday 6:30 p.m. 1441 B E. Main Street, Waukesha, WI 53186, (414) 542-1245.

**ALL IN 1 RACEWAY**

5612 S. 108th St., Hales Corners, WI. 1/10 scale indoor dirt track. High speed semi-oval and true off-road courses. Racing Wednesday nights at 6 p.m. Sat. & Sun. at 1 p.m. For more info call (414) 425-4060.

**RC RACEWAYS AND HOBBIES**

1/10 Indoor dirt oval Fridays & Sundays. Off-Road Wednesdays. Outdoor Asphalt Thursday (weather permitting). Fully stocked hobby shop. For more info (414) 764-9701. 181 W. Marquette Avenue, Oak Creek, WI 53154.

**GARY'S HOBBY SHOP**

Indoor banked concrete oval racing Tue. nights. Figure "8" Sun. afternoon. On site hobby shop with AC & DC power. For latest information call (414) 554-8884 or (414) 554-8636. Address is 3701 Durand Ave., Elmwood Plaza, Racine, WI 53405.

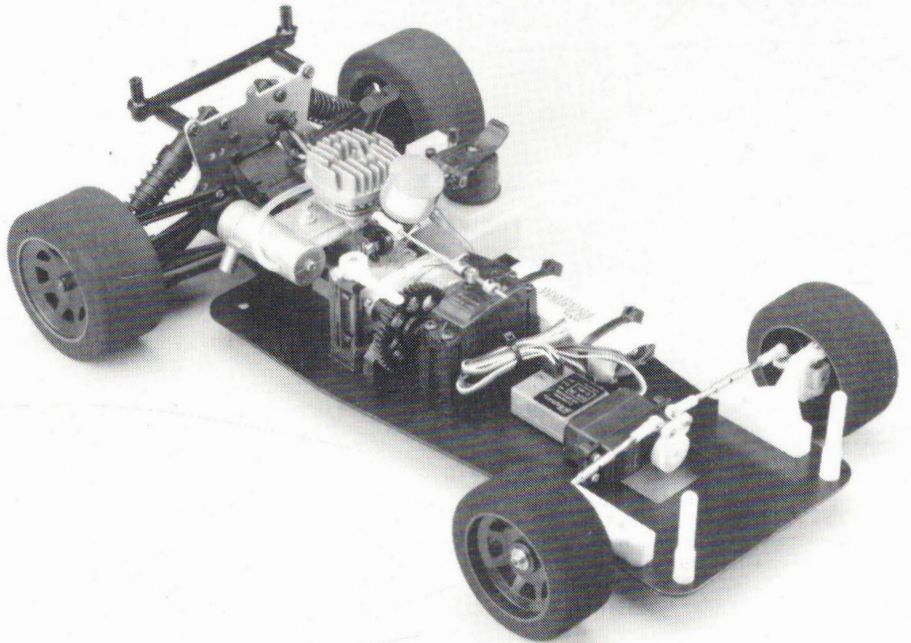
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# For The Racer

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## **New Duratrax Conversion Kit Takes Kyosho Rampage On-Road**

Modelers owning any of Kyosho's Rampage series gas models can easily and inexpensively equip their machine for high-performance on-road racing using the new Duratrax On-Road Conversion Kit. Included in the conversion package is a .090 inch thick, black anodized 7075-T6 aluminum, flat pan chassis; Bud's Supermachine on-road front end kit; complete instructions and hardware. The chassis is also available separately (DTXC2517) for use with suspensions designed for the Associated RC10L. Part No. DTXC2516 Conversion kit \$65.99 Retail Part No.





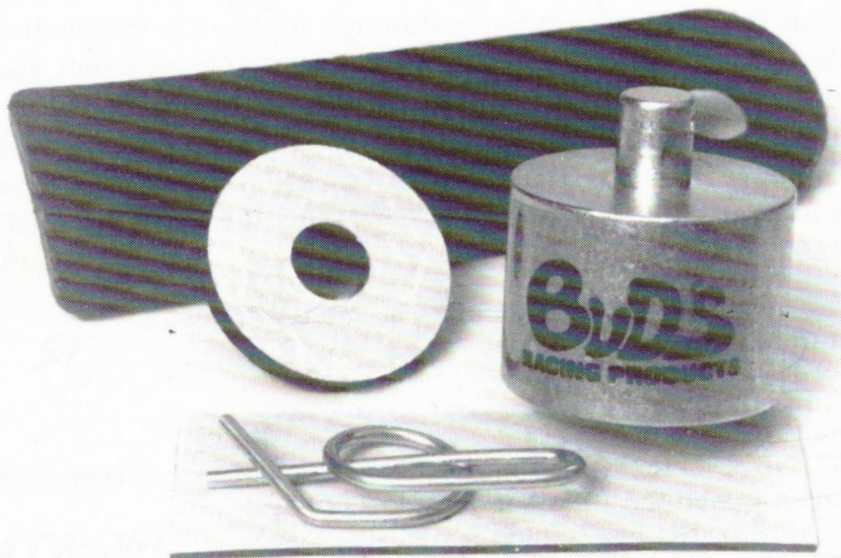
### TRAXXAS Nitro Hawk

The Nitro Hawk from Traxxas makes it easy to get started in Nitro-powered off-road racing. It comes fully assembled with the engine already installed! This 1/10 scale truck is powered by the powerful Image .12 engine specifically designed to handle the rigors of off-road racing with features like: dual ball-bearing crankshaft, high-volume air filter, bushed connecting rod, extra-large heat sink head, and a reliable recoil-starter. X-tra long suspension arms are mounted to the rigid T-6 aluminum tub chassis for superior handling. Fully-tuneable T-6 aluminum shocks provide the dampening. Lexan stadium truck body is one of the sleekest around. Available with or without the radio system. Model 3104 (assembled

without radio) \$495.00 Retail, Model 3110 (assembled with radio) \$595.00 Retail. Traxxas, 12150 Shiloh Rd., Dallas, TX 75228, (214) 613-3300.

### Practice Transponder Weight & Mount

Ever practice all day to get your car dialed in, then the first heat of qualifying comes up you install your counting transponder, start the race and your car handles differently and comes up short on run time! Try this practice transponder weight with convenient mount and those worries are over! Part No. 5350 \$6.95. BRP, 1575 Lowell Street, Dept. CP, Elyria, OH 44035.





**Ultra Torque Servo By Hitec RCH Inc.**

This Super Power Servo generates a Monstrous Output of 91 oz. at the speed of 0.13 seconds (at 6v) and an output of 77 oz. at the speed of 0.16 seconds (at 4.8v) although it is barely larger than a regular size servo. The Revolutionary Helical Gears using space technology engineering in the plastic gears makes this possible. It also incorporates Double Ball Bearing for extra smooth operation. Part Number HSE0605, Retail \$59.95. Hitec RCD Inc., 10729 Wheatlands Avenue, Suite C, Santee, CA 92071, (619) 258-4940, Fax (619) 449-1002.

**TRIVIA ANSWERS FROM JANUARY ISSUE**

1. Art Carbonell, in 1982 - Anaheim, CA
2. Joel Johnson
3. Moore's Ideal Products
4. Tamiya
5. Joel was given that nickname by Peter Barana, editor of Competition Plus after he won the 1983 Nationals in 1/12 scale .
6. 1979 in Geneva, Switzerland.
7. 1984.
8. National Off Road Radio Control Association.
9. 1/8 scale
10. F.E.M.C.A. - E.F.R.A. - R.O.A.R.

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## GENESIS POWER

Genesis introduces Horsepower with an Attitude! The Genesis line of Modifieds are not just common shelf winds. These Modifieds are built and tuned to exact specifications. Each Genesis Modified is hand wound using specific wire sizes and winding techniques which have been proven successful by racers around the world!



If you're looking for a new Modified, Genesis offers 12 Turn Triples through 16 Turn Triples. So if you go to the track to win, contact your local Hobby Shop or call us today at (314) 939-4404. Genesis Racing Products, 1327 Brandywine Lane, St. Peters, MO 63376.

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At Genesis our motors and cells must meet specific performance specifications or they won't be sold.

So if you go to the track to win...

...**Call us Today at**  
**314-939-4404**

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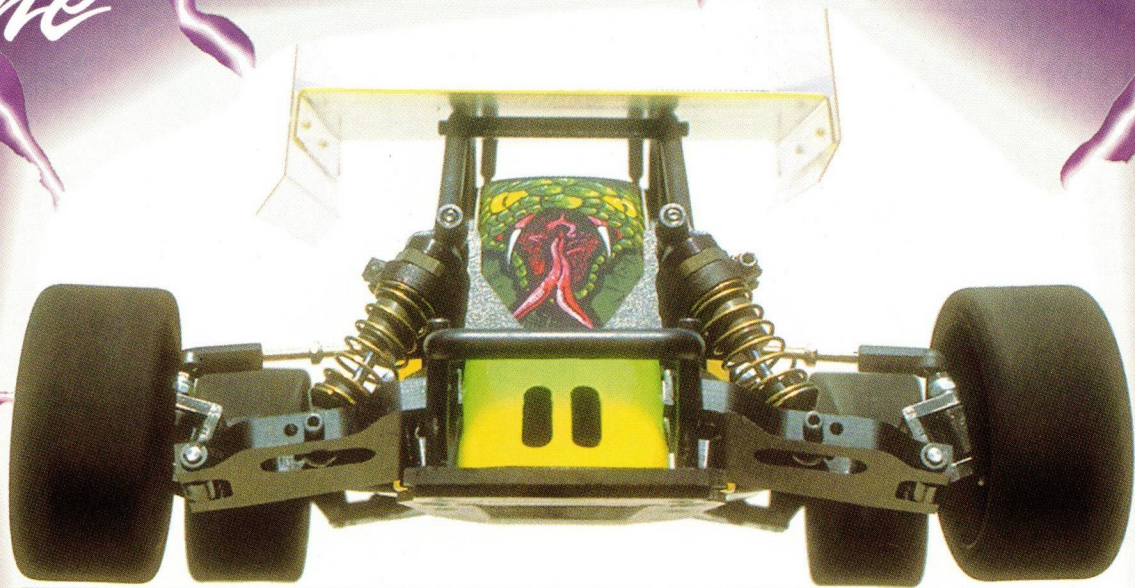
# **Genesis**

**High Performance**  
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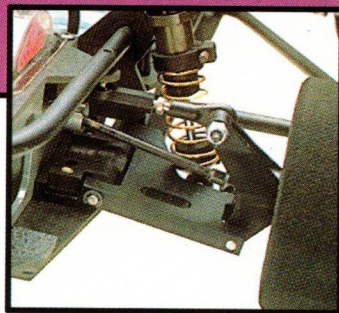


# NEMESIS

## Cobra 1:10 Scale Dirt Oval Chassis



Kits do not include wheels or electrics.  
Wedge Kit does not include body.

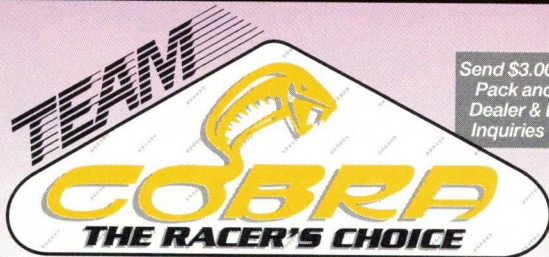


### Features Include:

- ★ Pro Graphite Chassis & Upper Plate
- ★ Hard Coated/High Volume Shocks
- ★ Topload Differential
- ★ Titanium Turnbuckles Throughout
- ★ 16 Ball Bearings Including Steering
- ★ Aluminum Front Suspension Mounts
- ★ CNC Machined "A" Arms

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At Nationals  
9 Made  
A Mains!

Part #7035 Sprint Car (Shown)  
Part #7030 2-WD Wedge Car



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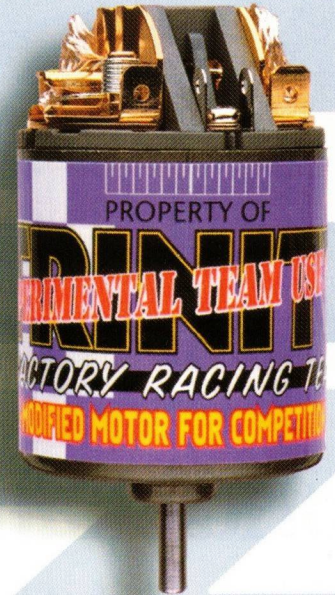
RIC

# The Fastest Man in the World.

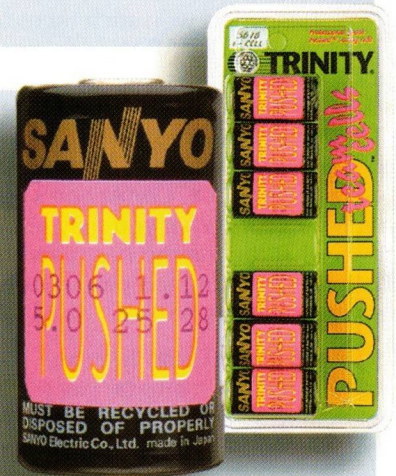
Joel "Magic" Johnson® T.Q.'d BOTH 1:10 On-Road and Off-Road IFMAR World Championships, making him the "Fastest Man In The World". How did he do it? Trinity motor and battery technologies delivered the horsepower for these World Class performances. Joel counts on Trinity for world-beating power, you should too!



**EX-Tech.** From the engineering department at Trinity came this totally new design. Initially developed as an experimental modified Team Trinity racing motor, the EX-Tech is here, now for any driver who demands the ultimate in performance. The Trinity design staff started from scratch. From the Armature Balance Concentrator™ to the capacitor installation eyelets, everything represents the state-of-the-art in motor design and technology. The EX-Tech is available in 11 different winds (7 to 17 turns), to fit any car on any track.



**Pushed™ Team Cells.** If there was a better battery anywhere, Joel would have to use it in order to be "The Fastest Man in the World". As Sanyo's Number One hobby customer, we test thousands and thousands of cells to the highest standards in the industry to insure you and Joel the absolute best matched packs in the world!



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Turbo Inferno

Inferno 10

# Introducing two new ways to get world champion Inferno performance



Perhaps you already know that the Kyosho 1/8 scale, gas-powered Inferno off-road buggy has won such races as the 1992 IFMAR Worlds, the 1992 3rd Annual Gas Off-Road World Challenge, the 1992 and 1993 Kyosho/Car Action Southeast Gas Off-Road Challenges and was named *R/C Car Action's* 1993 Car of the Year. What you may not know is that the Inferno has spawned a whole line of champion performers to meet every racing need.

### New 1/8 Scale Turbo Inferno.

Kyosho's World Champion just got even better. The new Turbo version not only includes all the built-in hop-ups

**Get \$150 worth of improvements and additional features at no extra cost with the new Turbo Inferno:**

- O-ring sealed differentials
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- Mousetrap spring fuel tank lid
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- Clutch bell
- Front stabilizer bar
- New tires
- New wheels
- Blue anodized chassis

that made the Inferno a champion right out of the box, but adds \$150 worth of add-ons and improvements at no additional cost.

**New 1/10 Scale Inferno 10.** More affordable and easier to assemble than 1/8 scale, this Inferno offers many of the same design features as the original world champion. The Inferno 10 is available with or without an O.S. .12 CZ-R engine that includes a tuned exhaust system and can be run on any 1/10 scale track.

**1/8 Scale Inferno DX.** An economical way to enter the world of 1/8 scale gas racing, the DX delivers more standard competitive features than higher-priced cars, with more potential and lower add-on costs down the road.

**1/8 Scale Inferno ST.** If the mud-slinging action of stadium truck racing is what revs your engine, this one's the biggest and baddest of 'em all. It offers the same basic layout and many of the same features as the affordable DX.

Whatever style you prefer, get the name that means champion in gas off-roading ...Kyosho Inferno.



Kyosho brings world champion performance to 1/10 scale with the Inferno 10.

For a free brochure and the location of the dealer nearest you, please call 1-800-682-8948, ext. 102P.



Inferno ST

Inferno DX



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