

December, 1989

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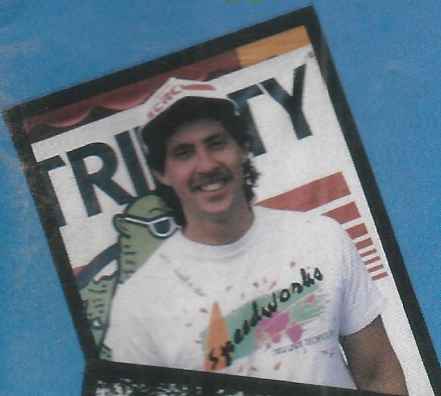
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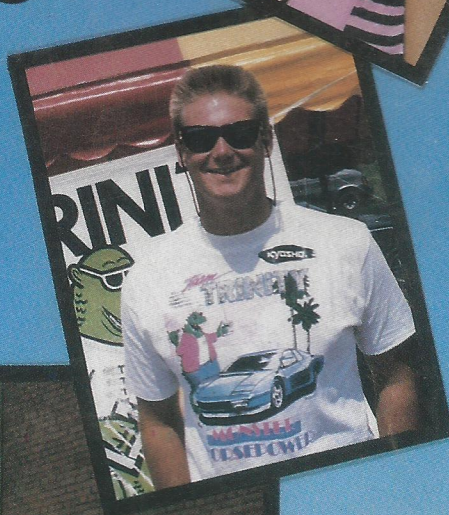
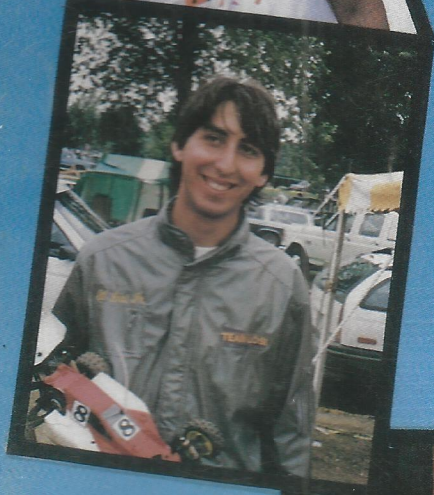
PLUS THE R/C CAR MAGAZINE



*Good
Bye*



'80s



**'80s
Best
Races
Best
Drivers**

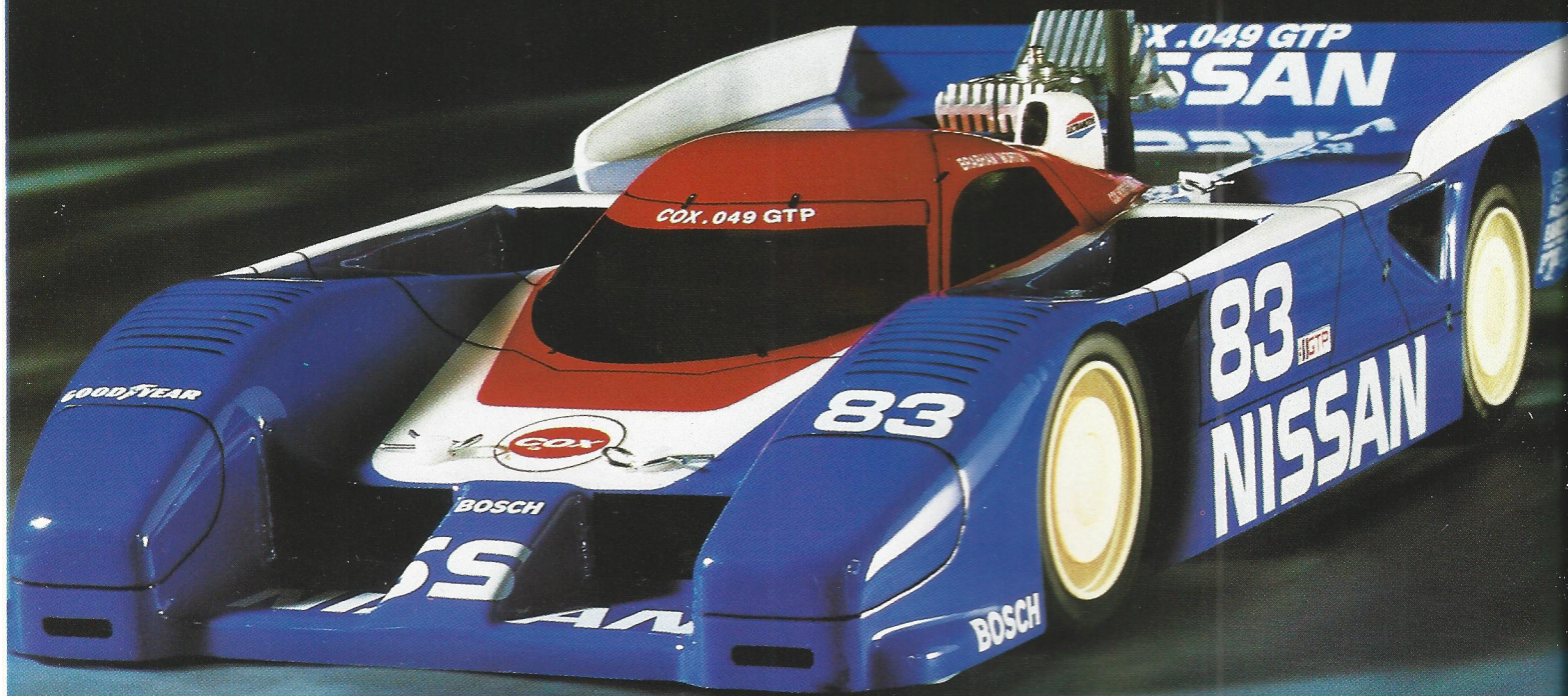


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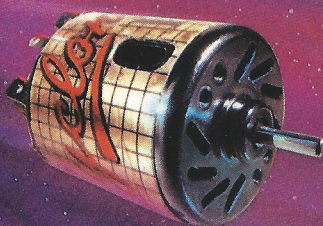
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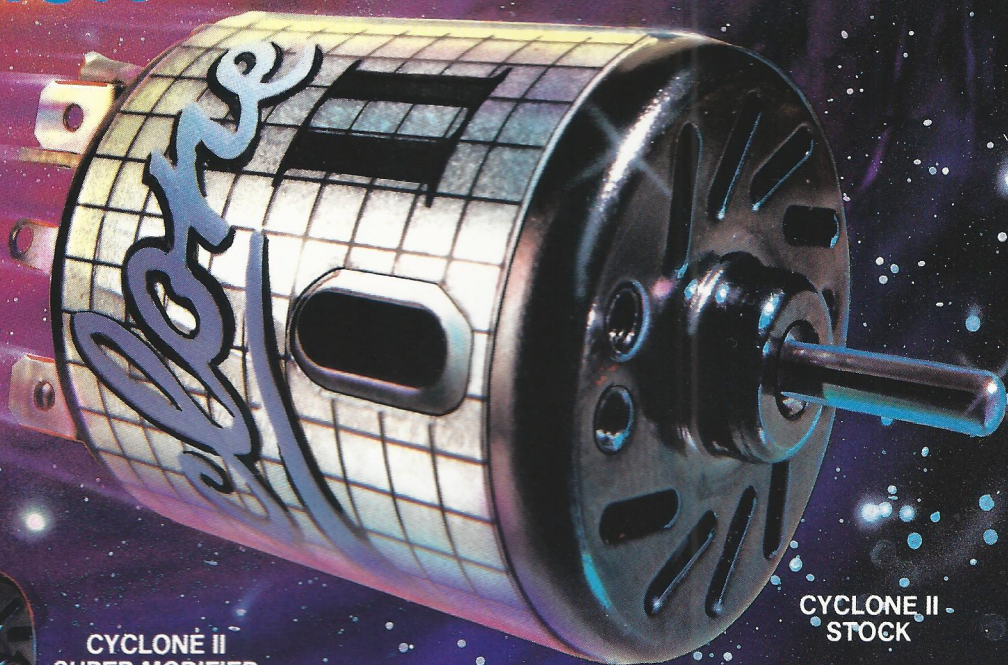


CYCLONE II SUPER STOCK

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CYCLONE II PRO MODIFIED



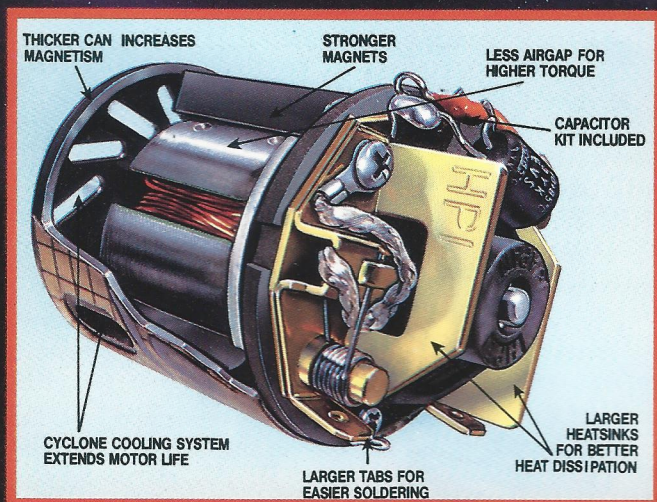
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The future of R/C motor technology is at Parma International, Inc. now! The Parma Cyclone II motor series (H.P.I. High Performance Improvement) offers you the most technically advanced motors available at a cost you can afford. These high-tech motors are available in an assortment of machine and handwound versions with your choice of bushings or ball bearings. The new 1.2 mm thick can, combined with new magnet technology provides the strongest magnetic field available today. The Cyclone cooling system and thick endbell heatsinks help prevent the build-up of horsepower robbing heat. Of special note is that the ROAR Stock, Super Stock and Ultra Stock, with all these improvements are still competitively priced.

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A look through the 80s of the changes in Competition Plus.

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A nostalgic look back at the people that pioneered our sport.



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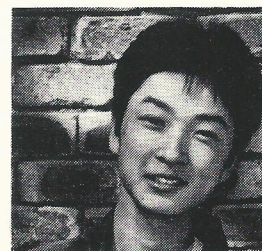
The Decades Best . . . Races

1980s Best Races. We'll take a close look at some of the biggies.

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Today's Hot Ones!

The Hot Ones of the 1990s.



About The Cover

This month's cover features a retrospect of what went on in the 80s.

MAILBOX

MONSTER TRUCK REBUTTALS

Dear Competition Plus,

I have a response to a letter you printed in your October issue. The guy asked if there was anyone that gave a darn about Monster Trucks, well he found one, and the one that is the proud owner of the Monster Truck that got second place in the World Championship Concours! And also one that does not like to be told that she has the IQ of a ground squirrel. I think this guy could take a few lessons from them, they are very intelligent, just like all the Monster Truck owners I know. As far as your magazine goes, all your articles are not only very informative, but also very interesting, and if this guy has all the intelligence he claims to, he would know how to turn the page. So please keep on writing all you can about Monster Trucks and Pullers, there are quite a few of us and we're getting bigger every day. And as you said we deserve as much recognition as the R/C car owners do. I would like to thank the NR/CTPA for all the hard work they did to put on the World Championships. They did a wonderful job. And we appreciate them very much. So thanks again NR/CTPA! And thank you Competition Plus for your support of us TRUCKERS!

SUZIE AUGUSTYN

Dear Editor:

I'm writing to you in response to a letter by Mr. Ryan about Monster Trucks, and how these "things" are for people who have the IQ of a ground squirrel.

It's obvious that the only real exposure to trucks he has had is

through magazines that really cater to young children. They are full of hype and have flashy pictures, but not much in the way of good technical advice. I'm sure that if a magazine like Competition Plus covered an event, it would be treated as a serious sport.

I love your column from the NR/CTPA, I'm not a member yet, but plan to be soon. Thank you for your response to this letter defending trucks. As this sector of R/C grows, I'm sure your magazine will feature more coverage on our sport. Until then, keep up the good work.

Greg Fuller
Shreveport, LA

Dear Peter:

I would like to respond to Vincent Ryan's letter in the October issue.

Yes, Vincent, there are a lot of people out there who give a "darn" about Monster Trucks! If you don't believe me, ask any of the major hobby distributors. They'll tell you that 50% of their total R/C car sales are actually trucks! Maybe the tracks Vincent attends don't have many trucks show up. That doesn't mean that the same is true at all the other R/C tracks around the country.

As far as large events for trucks, the NR/CTPA just held the First Annual R/C World Championship Truck Pull and Monster Competition which was the largest event of its kind ever held. Entries came from 23 states in the U.S. and from Canada and New Zealand to compete for trophies and prizes in this truly unique event.

Vincent, wake up and smell the roses! Look around you! The American public is obsessed with trucks. Every other driveway has a pickup parked next to

the family sedan. The Sports Car Club of America (SCCA) has road racing truck classes and recently added a Pro-Rally truck class. The Mickey Thompson stadium truck class has been popular for years. Baja races attract as many trucks as they do buggies, and there are over 200 full-size monster trucks running in the U.S. today not to mention thousands of pulling trucks.

Now, before you get the idea that I don't like cars, let me give you my background. I started racing 1/12 on-road CARS 15 years ago. I loved it! I also flew a R/C helicopter for awhile. I enjoy R/C racing. I also like variety and I believe in personal choice. If you prefer only cars, fine! But don't tell the next guy what he should run.

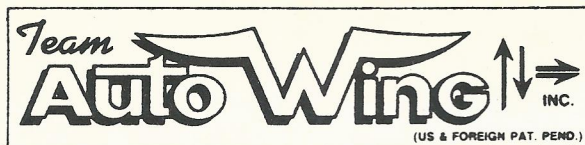
Also, I take extreme exception to the statement that alluded to the idea that people who own R/C trucks have an IQ lower than a ground squirrel. If you attended one major R/C truck pull you would see the innovation and high-quality construction that goes into some of these vehicles. In all the years I have been involved in R/C I have NEVER seen the high level of building skill that I see in the R/C truck sport, aside from airplanes and boats.

As far as magazine coverage is concerned, I think that responsible journalism dictates that the magazines respond to current trends in the hobby. I think Competition Plus is doing a good job reporting on what's happening out there. It certainly hasn't turned into a "truck" magazine and I don't think it should. But, the fact is trucks are becoming increasingly more popular and therefore deserve some attention.

Competition Plus - Keep up the good work! We need magazines with the guts to provide coverage of all aspects of R/C vehicle competition even if that competition might be in a minority.

David J. Sproul
President NR/CTPA

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Finish the Lap You're On . . .

Speak Up America

As you know, December marks the end of our 1989 reader survey. At the time of this writing, not all the surveys have been tallied. What I had my staff do is compile some preliminary results, based on totals after the first thirty days. So, although, I will be discussing only preliminary results, the responses released are expected to be very close to the final results because of the many surveys that had been received.

Officially billed as "Speak Up America", our 1989 reader's survey is now closed. Yes, closed, but not over. The results that we have accumulated will go far in aiding us with providing the best R/C car magazine possible. While all of the questions asked were very important, as editor the category of "R/C Car Issues" was most interesting. As you remember, these were various questions regarding timely issues that face our sport.

Since we have had many calls requesting information on how the results went, I thought it would be interesting to devote this column to looking at the preliminary results of the R/C Car Issues.

The first question was on the expert or pro class for sponsored drivers. This wasn't close. About 70% of you thought there was a need for such a class. Only 26% said no, with 4% having no opinion.

Our second question had much the same results. This question was in reference to the 1700 mAh batteries, and should they have been legalized? A full 73% of you agreed with this legalization. About 18% didn't agree, and 9% had no opinion.

The third question's results were a bit of a shock to me. This had to do with the issue of prize money racing. Most of you already know I don't agree with this because I firmly believe this will result in high race entry fees to pay for the cash prizes. While my opinion is still that, of the majority of our readers, a whopping 41% wanted to race for prize money! The no votes still carried a slightly larger 47%, with a big 12% undecided.

Question four was another close one. This question asked if you would like to see off-road events extended to five minutes, instead of four. The majority of you, 53% said keep it at four minutes, but 42% liked the change. About 5% of you had no opinion.

On the subject of 1/12 racing, and cutting the races to five minutes, 40% of you did not like the proposal. About 27% of you were in favor of it, and 33% had no opinion. It should be noted here that the 33% no opinion reflects ballots returned by readers with no interest in 1/12 scale, thus having no opinion on rules of that scale.

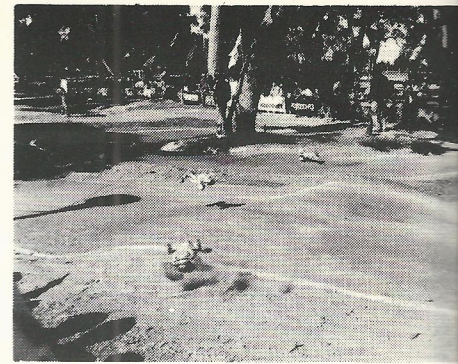
Would you like to see a 6-cell max on 1/10 off-road cars? Our readers said no! A full 52% of you did not like that idea. About 1/3 said yes to the cell limit with 15% having no opinion.

One topic that has seen a lot of discussion this year has been stock motor rules, especially in the off-road division. We asked you if you thought there was a need to alter the existing stock motor rules. More than half, or 52% felt it was time for a change. About 1/3 said no with 15% having no opinion.

The final question was about increasing the main sizes to 12 or 14 cars. Before I tell you how this came out, let me tell you that I don't know of any of the organizations that are planning this increase. The question was prompted by some letters we received addressing increased main sizes ala full scale racing. If any organization is planning this, beware! A large 85% of you vetoed this idea. About 10 thought it would be a good idea, with the rest undecided.

So there you have it, the preliminary results to our Speak Up America reader's survey. If, when the final surveys are tallied there are any major changes, we'll let you know. As we stand right now my staff is busy figuring out all the results and they should be completed by the middle of January. If anyone is interested in receiving a full chart of how everything turned out, please write to us.

Keep Having Fun!
PETER BARANA



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Competition Plus allows its columnists the fullest expression in discussing controversial subjects, so its readers will be better informed. The views expressed may not necessarily agree with those of the magazine.

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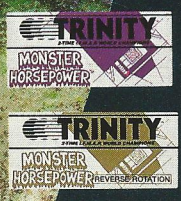
THESE MONSTERS ARE KILLERS!



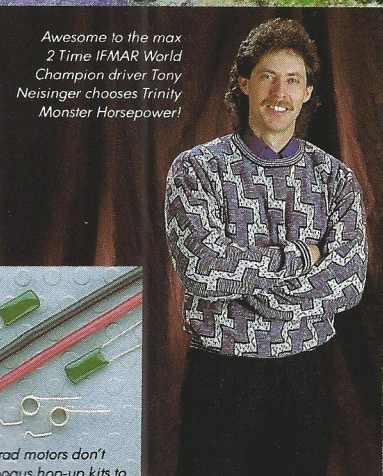
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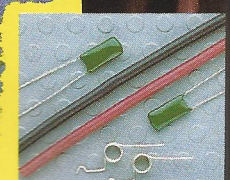
You'll be the "Killer" at the track after bolting one of these Monsters in your car.



If ROAR stock class is your bag and you strive to be totally awesome, then you need the most radical, mind-blowing motors around, and here they are: The Trinity Monster Horsepower Stock Motors. Score some in normal or reverse rotation, and you'll be totally prepped to shut down the competition and send 'em home. So, if you really want to be bad, then loose the nerd valley motors and get it on with Trinity Monster Horsepower!

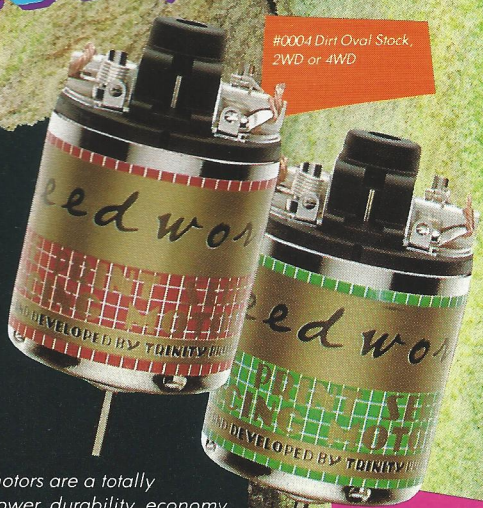


Awesome to the max 2 Time IFMAR World Champion driver Tony Neisinger chooses Trinity Monster Horsepower!



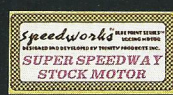
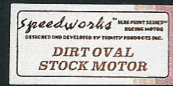
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NEW COLUMN!

Competition Plus is pleased to announce Mike Walker will now be doing articles in our publication. Walker, owner of Twister Motors, will be able to share some of his knowledge and experience with us all. His first column will appear in this issue. Check out the column titled "Unfair Advantage".

MOVING MOUNTAINS

If you've ever tried to move 175 lbs. you know its no easy task. Well, Pat Barber moved that weight with his Parma RC10 monster truck conversion machine. The truck featured Parma matched SCRs and the new Cyclone II motor. This was done at the NRCTPA World Championships which were held in Champiagn. IL.

HELLO MR. CLEAN

At the recent Chicago Hobby Show we got a chance to take an up close look at Boca Bearing's Ultra Seal Bearings. The unique feature on these is the fact that they are totally sealed. This seal protects the bearing from dirt and dust. For my money the best thing about these bearings are the fact that they are maintenance free. No cleaning is necessary and the bearings are lubricated for life from the factory.

We have found that for the best performance a short break in period is required. These bearings are competitively priced, with complete sets for the RC10 and JRX2 about \$100. For further information contact: Boca Bearing, 7040 W. Palmetto Park Rd., # 2304, Boca Raton, FL 33433, (800) 332-3256.

OVAL REEDY RACE

The First Annual Oval Reedy Race of Champions will be held on March 2, 3 and 4, 1990 at Lake Whippoorwill International Raceway in Orlando, FL.

The Invitational Class will be limited to: Lake Whippoorwill Race finalists from May and October's race, ROAR Nationals and both

velodrome races. Three-time World Champion, Masami Hirosaka will attend. In the open class there will be Stock and Modified Classes.

TWINN-K'S EXPANDING

Twin-K's ever increasing commitment to the racing sector of the R/C car industry has been confirmed by the launch of a new product line aimed at the 1/10 and 1/12 scale on-road racer. The products include the new Tire-Tru, the first 12 volt portable tire truing machine to be offered. This highly accurate truing machine comes complete with adaptors to fit most 1/10 and 1/12 on-road wheels. Also available is the new Corally wheel adaptor.

Among other products are a complete line of tires and wheels for the 1/10 and 1/12 on-road racer featuring many rubber compounds including the long wearing UFRA "Black" dot.

For improved handling and steering response, the Pro-Centerpoint steering offers the advantage of faster steering response and full adjustability.

STICKY SITUATION

VRP is pleased to announce the introduction of LAZER Adhesive Products for the model industry. The LAZER line consists of three CA adhesives: LAZERCA, LAZERCA+, and LAZERCA- which are distinguished by their viscosity and curing time. The line also includes LAZER Activator and LAZER Debonder. The attractive florescent packaging is sure to attract alot of attention. The most exciting aspect of the LAZER line of quality CAs is the remarkable value. The suggested retail prices of LAZER CA adhesives are approximately 30% lower than comparable glues. LAZER Adhesives are available from VRP's distributors. VRP, Inc., 4555 #15 Groves Rd., Columbus, OH 43232, (614) 861-4555.

NORRCA MAKES DIRECTOR CHANGE

Due to unforeseen circumstances,

Bill Williams, NORRCA's Director for Iowa, Kansas, Oklahoma, and Nebraska is no longer associated with NORRCA. NORRCA's President, J.R. Sitman, is presently considering new directors for these areas.

DU-MOR HAS ONE MORE

Several people have been calling us asking about the new Corally Speed Control. As of press time, this is what we have found. Officially called the Corally Digital Motor Management System; the units will be imported by Du-Mor R/C. This is a newly updated model which has received some internal improvements. The most notable change is the addition of an aluminum heat sink to the bottom of the speed control. This will obviously improve heat dissipation, but will also enable the unit to be mounted on any surface.

For those who own the previous model, Corally and Du-Mor will offer this heat sink separately to update your old model. This new speed control should be available by this writing. For further information contact Du-Mor R/C, 1002 Union Landing Rd., Cinnaminson, NJ 08077, (609) 829-1338.

RICK HOHWART PEAK PERFORMANCE STRIKE ANOTHER VICTORY!

At the recent 9th Annual Western Off-Road Championships, presented at Radio Controlled Hobbies Raceway in Costa Mesa, CA, and attended by top racers such as Cliff Lett, Jay Halsey and Jack Johnson, qualifying was dominated by Rick Hohwart. Rick was the only driver to turn 15 laps in 2WD Modified. His choice of car was an Associated RC10 with Peak Performance 17 turn "Sprint" motor and Peak Performance Matched Sanyo SCEs. Rick also TQed five seconds ahead of the second qualifier in 4WD Modified and came in first in the 4WD A Main with his Kyosho Lazer, powered by a Peak Performance 13 turn "Rick's Pick" Motor and Peak Performance Matched Sanyo SCEs.

HARD CHARGING

By John Thawley

A few months back Peter Barana wrote an editorial regarding a new system of heat seeding called "Hot Laps". This system was developed by Mr. Don Holub of ProScore in Cleveland, Ohio. For those of you who don't know Don, he is the man responsible for developing (although I doubt if he will ever consider the job done) some of the most advanced computer scoring methods in R/C racing today. Although there are a lot of other people doing some pretty spectacular things in this area, Don has had the benefit of developing his system under fire at some of the toughest and largest R/C events know to man!

I recall having a conversation with Don about the ugly job of having to seed the qualifying heats for major events. I related to him my experience in quarter scale racing and how they use single lap qualifying to set the heat board. BANG! Holub was immediately in my face shouting "we can do that, we can do that." I love this guy!

Next thing I know we've got "Hot Laps". Holub on the horn "let's try it!" The folks from the NORCAR Club agreed and set up a plan to use the system at the Annual U.S. Indoor Championships.

Before we go any further I want to tell you these people, especially Don Holub, deserve nothing but respect from anyone and everyone who claims to love this sport.

Usually racers don't respond positively to the idea of trying something new. But these people were willing to take the heat and try something that might, just might, make racing better for us all. For that and that alone they deserve your applause and respect!

The next step was to try the system at a race a little more down scaled than the Indoor Champs. The most practical opportunity presented itself at ALCAR International's Annual Halloween Classic. So the 100 plus drivers attending that event got the opportunity to become part of history.

Being there to witness this first hand (actually I drove in it, but that is not a pretty story) I am here to tell you it was really neat. The tension in the air could have been cut with a knife. Different approaches were tried by different drivers with extremely different results. Unfortunately, I don't have the actual comparisons of how the seeding compared to the final standings but in all fairness I think it would take more than one event to really see how that aspect of the program would evolve.

"Hot Laps" definitely had its bright spots. Would you believe eight turn motors. Woah baby! A four cell carpet car in a four wheel drift "dirt tracking" through the sweeper is an awesome sight. But after the dust had settled from all of the over powered exotica Peak Performance

driver Joe Lawrence seemed to have taken the best approach by using his normal (?) race set-up and a seriously cooked pack of Sanyo SCRs. Joe turned the quickest "Hot Lap" time of 10.70 seconds. That time turned out to be about a half second faster than actual race times.

By now most of you are probably aware "Hot Laps" was not used at the '89 Indoor Champs. The end simply did not justify the means. It was just too large of an undertaking for the purpose of seeding the heats. To apply this method at a major event over an extremely large field would not be prudent.

Regardless of the outcome be sure to give due credit to those who were brave enough to have tried. My hat is off to Don Holub and the NORCAR club for having had the courage and the desire to move forward!

I also would like to add I don't think we have seen nor heard the last of "Hot Laps". It is a process that's time will come. When ROAR announces its new licensing programs for 1990 I think "Hot Laps" could make a great show. Think about what it would be like to watch 20-30 of the countries top drivers competing in the new "Masters Class" in a "Hot Laps" showdown for seeding position in the qualifiers.

Anybody seen my 7 turn single?



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PIT TALK

By Rick Houle

Happy Holidays racers! Rules, rules, rules! This is the dominating topic of this month's Pit Talk. Rules were created to regulate standard procedures and establish a method or way of doing anything. As in the world of full size auto racing, rules are an integral part of R/C racing. Rules not only govern the physical dynamics of a race car but also (in many cases) the conduct of the racers themselves. These rules are intended to make it fair for everyone involved; not just make things difficult, as some may think. In the eternal quest for speed and the checkered flag, people are constantly looking for ways to make the rules (or even the lack of them) work in their favor. Many times a car builder or racer discovers a loophole in the existing rules and, if it gives them a definite edge on the rest of the competition, you can bet your best matched set of SCRs that they will use it to the max until the loophole is plugged or everyone else uses it, at which time it is no longer an advantage and becomes a mute point.

In the early days of R/C racing things were much simpler. There simply wasn't as large a variety of cars available as there are today and in many cases performance parts were non-existent therefore volumes of rules weren't necessary. The picture is much different today with an overwhelming number of cars and performance parts to choose from. In addition, many more people are getting involved all the time. No one

likes having to deal with a cumbersome set of rules and early authors tasked with drafting the original rules for a sanctioning organization undoubtedly attempting to keep the rules to a minimum. Unfortunately in this ever increasingly complex world we live in rules and standards have to be constantly updated to keep things somewhat equitable for all involved.

Being the fiercely progressive organization that it is, NORRCA will no doubt suffer growing pains throughout its existence. Recently, the NORRCA directors, responding to racer's needs, have incorporated some rule changes for the 1990 racing season. The following is a list of these changes:

1. Change race time for all 1/10 On-Road classes to 4 minutes.
2. Change maximum cells allowed for 1/10 On-Road to six cells.
3. Change race time for 1/12 to 8 minutes.
4. Restrict 1/10 On-Road gear classes to full suspension cars such as the JRX-2, RC10, etc. Cars that are manufactured as direct drive on-road pan cars will not be allowed in this class.
5. Allow Monster Trucks in Oval.
6. Oval Trucks will use the same rules listed in off-road with the following exceptions:
 - A) A single side dam will be allowed on the left side of the truck. No height or length limit.
 - B) Minimum tire size will be 3 1/2 inches.
 - C) Maximum length of rear spoiler, 2 1/2 inches off the

lowest portion on the rear deck of the truck.

7. (All Scales) If during a qualifier a car becomes damaged and is removed from the track for repair or any reason, under no circumstances can the car be returned to the track during the qualifier in which it was damaged.

With input generated at a meeting of manufacturers and racers during the 1989 Dirt Oval Nationals, as well as input gained through mailings to all of the NORRCA sanctioned tracks throughout the country, NORRCA will be the first organization to separate experts and beginners. NORRCA recognizes the problem of amateur racers who don't have factory sponsorships and are consequently dropping out of competition after a few races when they discover that they can't even begin to catch the factory drivers who consistently blow their doors off every race.

Also on the fire, is the possibility of creating a Super Stock class in the buggy classes. This new class will fit in between Stock and Open (such as is already existent in the Monster Truck classes) and will require the use of either a Stock motor with 7 cells or an Open motor with 6 cells.

So as you can see NORRCA is constantly striving to keep abreast of current trends and is always addressing the needs of the racers.



Straight Line Fever

By Bob Boucher

PROCOMP DRAG RECORD

We have received news of a new PROCOMP drag racing record. Jimmy Riega set a new Procomp record ET of 2.17 seconds. Jimmy set the record at the Sunshine Hobby Track in West Palm Beach, Florida. He used a Fine Design car and a Black Magic motor. Congratulations Jimmy!

IEDA WINTER NATIONALS

The First Annual International Drag Racing Association (IEDA) Winter Nationals will be held at Bob and Jim's Raceway in Colton, CA on January 19, 20, and 21. Friday, January 19 will be for practice. Qualifying on Saturday, January 20, and mains on Sunday, January 21. Seven classes of racing will be run. For details consult your IEDA rule book (printed in the October issue of Competition Plus.) Additional rule books are available from the sponsors Team Astro, Fine Design, and Bob and Jim's Hobby. The racing classes are: 1. Top Fuel Rail up to 20 cells. 2. Top Alcohol Rail up to 10 cells. 3. Top Fuel Funny Car up to 14 cells. 4. Top Alcohol Funny Car up to 10 cells. 5. ProComp up to 14 cells, Pro Stock up to 8 cells, and open Brackett racing.

This will be IEDA's First Nationals and we expect a very large turnout. There will also be an East-West Shootout. We expect the best drivers from New York, Florida and Puerto Rico to challenge our California drivers. You can expect to see a lot of new world records set here.

For additional information call Team Astro (213) 821-6242, Fine Design (914) 342-5102, or Bob and Jim's (714) 684-6314.

THE RCHTA SHOW IN CHICAGO

I attended the RCHTA show in Chicago and can report that drag racing is getting HOT. I was busy in my Astro booth most of the time and did not get a chance to get around much. But my booth was swarming with drag racers wanting to get more information on our new Top Fuel Motor. The most asked questions have to do with gear ratios, motor timing, and brush shaping. I can't tell you exactly what combination each world record driver was using because exact numbers are Top Secret. I can, however, give you some good averages, which will give you a place to start.

First, remember that the gear ratios and tire size are directly related. Let me say that most fast dragsters are running tires of between 2.25 and 2.50 inches outside diameter, so 2.375 is a happy medium. With a 2.375 tire I have seen winning cars with ratios as low as 4.04 (a 23 tooth pinion and a 93 tooth spur) and as high as 5.0 (a 20 tooth pinion and a 100 tooth spur). I know these ratios seem a bit long, but the Team Astro Top Fuel Motor develops its power at a lower RPM than a Black Magic or Twister motor.

Please believe me that you will be happier running a 4.5 to one ratio than a 7 to one ratio.

The Top Fuel Motor has adjustable timing so the brush advance can be set from zero to 20 degrees. When we started we all set the brush advance to the maximum 20 degrees since this produces the highest RPM on the dyno, but it doesn't win races. Lowest ET wins races and we find that a brush advance of 10 - 15 degrees seems to work best. I recommend starting at 12 degrees and working from there.

Since the Top Fuel motor has

such a large timing range there is no need to time the brush. However, the brush can be narrowed a bit for slightly higher top end. I recommend beveling both long edges of the brush face about 30 degrees for about 0.030 inches. This will reduce the contact area on the commutator surface from 0.1875 X 0.250 inches to 0.125 X 0.250 inches. You will notice a higher wear rate, but one set of brushes should still last a dozen races before needing to be redressed. Chris Fine reports that one of his cars has 60 races on the original brush set, and he is reporting times in the low 2 second bracket on carpet.

FINE DESIGN HAS A NEW POD

Fine Design showed a new pod for their Firefox rail. The new pod is about 1/8 inch wider and cut differently than the older version. The new Astro Top Fuel motor is much easier to mount in this new pod. I believe the new pod is available now.

TWISTER HAS A NEW COM LATHE

Mike Walker of Twister has come up with a real winner. There was such a crowd around his booth, people could not get through the aisle. Mike has a neat commutator lathe that fits in a cigar box and is powered by any 4 to 6 cell nicad pack. I think the retail price was about 200 dollars. This is an item all serious drag racers really need. Mike gave me a demonstration and I can tell you that the lathe is very easy to use and it produces a perfect cut every time. Congratulations Mike!

See you at the Winter Nats.

Northeast Report

By Bobby McGee

This is the first of our monthly reports so we'll start off telling you something about R/CAR Weekly News. We are a weekly news magazine dedicated to promoting the R/C auto racing sport here in the Northeast. We have a weekly listing from the tracks as well as their track records. We also try to cover as many of the major races in the Northeast as possible. We are now entering a new phase where we are also working in conjunction with Competition. Plus to spread the word that R/C auto racing is alive and well in the Northeast.

Over the summer there have been a number of Championship races in the Northeast, starting in the dirt with NORRCA's 1989 New England Off-Road Championships held at R/C Performance Center in West Bridgewater, MA. In the 2WD Stock Class Edward Childs and Brian Kelliher tied for TQ and took first and second while Tim Sears TQed 2WD Open and Brian Branon took the win. In 4WD Open Lester Dickerman took TQ and the win while Dave Smith did the same in Open Trucks. Todd Hud took all the honors in the Novice Factory Stock Class.

July started with the 1/10 & 1/12 East Coast Championship at R/C Raceways in Manchester, CT. Here Steve Prucell's RC10 took the win and TQ in Transmission Stock, Paul Senyk's RC10L did the same in Stock Pan cars. Steve Payne's RC10L took TQ in Modified Pan while it was Dan Cantalini who took the win with his scratch built car. In 1/12 scale

Paul Senyk again TQed but this time Haeffner won the class.

The month ended with the biggest R/C race of the summer, over 500 drivers and spectators showed up for the New England 1/10 Summer Indoor Oval Champs held at K & N R/C Speedway in Stafford Springs, CT. B & R motors were handed out for the Stock Class where Hoyte Stacey took TQ honors with his RC10L but it was local driver Chris Senyk's RC10L who crossed the finish line first. In the Modified class Ken Tuttle's Lazer Lite was unstoppable as he TQed and then walked away from the field. So many people showed up that Nick Kaul (the N in K & N) sent his wife Karen to

the trophy dealer to pick up additional trophies, so ALL of the classes had a chance at the gold.

August was HOT, STICKY and QUIET for R/C racing. The guys at GEARS R/C Club put on the Road Course '89 Race in the commuter parking lot in Manchester, CT with the help from R/C Raceway's crew. Ken Tuttle's Lazer Lite was again the car to beat, only no one could. Ken took TQ and the win, only this time in the Stock Class. Tim Stapleton's RC10 took the Transmission Stock win and Paul Senyk took his RC12L to another victory in 1/12 scale.

The summer ended with cries of back to school and September's racing. The month

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started with the Indy Shootout at Hebron Motor Raceway next to Little's Hobbies in Hebron, CT. As with most of the Pan cars races this summer the RC10L was the dominate force in 1/10 scale with Steve Payne putting his on the pole with TQ and Paul Senyk taking the win in the Stock class. In Modified Duke Brannon took it all with his 10L while Lou Abraham took his 12L to victory in 1/12. This is one of the smoothest paved tracks around as it was built to state highway specifications.

Next it was back to K & N R/C Speedway in Stafford Springs for their Fall Indoor Oval Championships for transmission cars. Scott Sauro's JRX-2 rules the 190' banked carpet oval track taking TQ in both Stock and Modified classes as well as the win in Stock. He had his CAM handout motor flying around the track. Wally David took his MIP to the win in Modified with an Agitator chassis. Joe Allevo TQed both

Stock and Modified fields in the Unlimited classes, while Scott took the win in Stock, Joe went on to win the Modified.

The last race of the month was to be the Region I 1/10 Scale Fall Classic to be held at Hebron Motor Raceway next to Little's Hobbies in Hebron, but heavy rains Saturday and high winds on Sunday left over from Hurricane Hugo postponed the race until October 1st.

For a complete listing of the Championship races, as well as the regular weekly race results here in the Northeast follow R/CAR Weekly News every week. Competition Plus brings you the world, we'll bring you the Northeast, together we'll keep you informed of what's happening in the R/C Auto Racing sport.

Our thanks to Peter Barana of Competition Plus for this chance to show the world that R/C Auto Racing is alive and going strong in the Northeast.

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Unfair Advantage

By Mike Walker

COMPETITION TRICKS

UNDERSTANDING WEIGHT TRANSFER

The key to understanding weight handling is to understand weight transfer. Any time a vehicle experiences acceleration, either fore or aft in a straight line, or laterally while turning a corner (or any combination of the two), weight transfer will occur. Only four factors affect the total amount of weight transfer.

1. The amount of acceleration (braking or forward acceleration, or the speed while cornering).
2. The height of the center of

gravity above the ground.

3. The track width (for cornering) or the wheelbase (for straight line acceleration or braking).
4. The weight of the vehicle.

To reduce weight transfer, one must reduce acceleration (which is NOT the point), lower the center of gravity height, widen the track width, lengthen the wheelbase or reduce the weight of the vehicle. Nothing else will effect the AMOUNT of weight transfer.

Two other factors concerning weight transfer are important to

consider. The first is where the weight is transferred; the second is THE factor determining the handling characteristics of the car, i.e. understeer or oversteer (or the elusive neutral handling). The roll couple distribution is the controlling parameter. Roll couple distribution is the amount of front roll resistance vs. the amount of rear roll resistance. Roll resistance is the combined rate of the springs and anti-roll bars acting at the tire contact patch.

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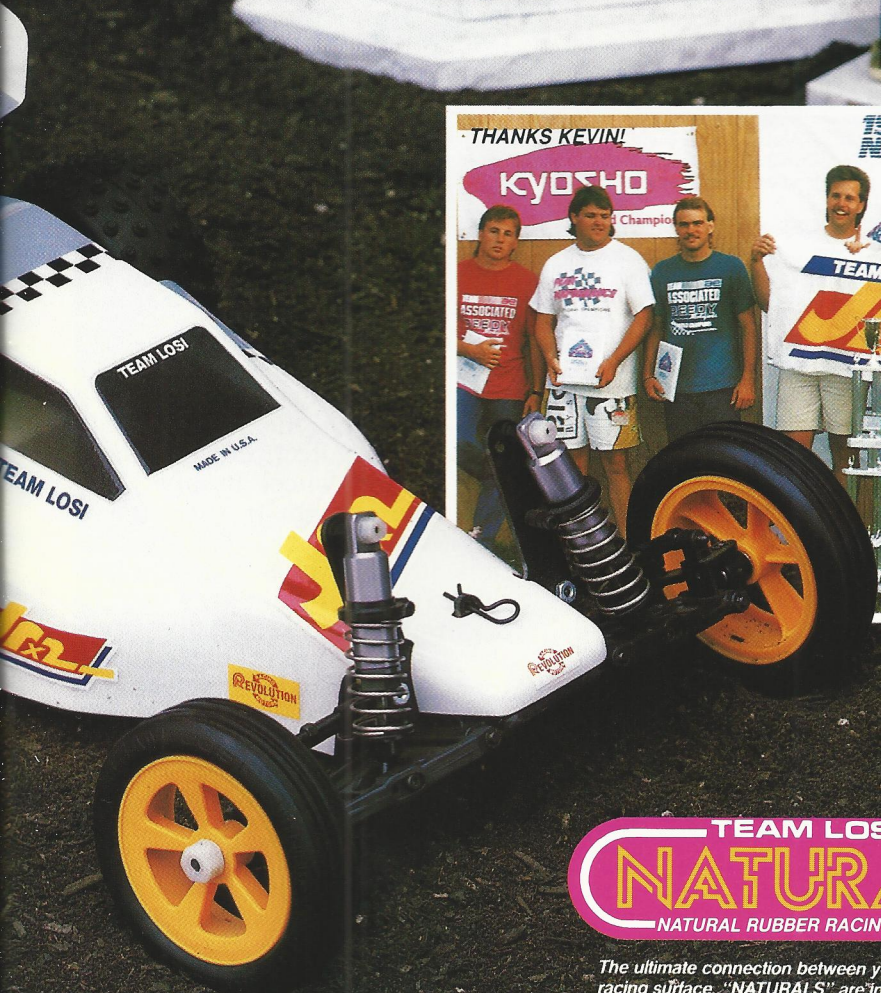
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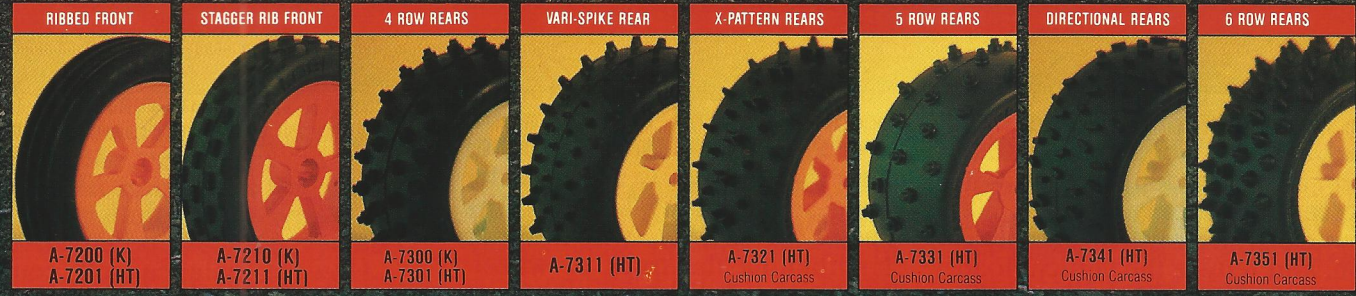
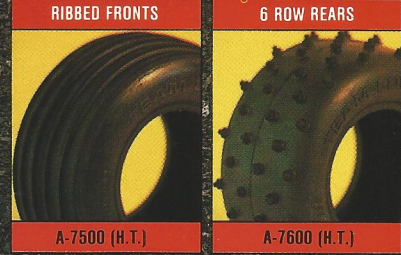


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ferred determines the responsiveness of the car to brake, accelerate and steering inputs. The shock absorbers dictate how quickly weight is transferred. Stiffer shocks cause weight to be transferred more quickly, which makes the car more responsive, sometimes too responsive, to the driver inputs.

HOW VERTICAL LOAD AFFECTS A TIRE'S TRACTION

As vertical load increases on a tire, so does the traction on a tire. This fact explains why aerodynamic downforce increases cornering force. Conversely, reducing the vertical load on a tire will reduce traction. So far so good! But here is the catch. The relationship is not linear. In other words, as load increases on a tire, traction increases, but more slowly than a tire will lose traction as the load decreases on that tire. Example: if a tire with a vertical load of 500 pounds can generate 400 pounds of traction (cornering force), what happens if we change the vertical load on the tire? Let's double the vertical load to 1,000 pounds. The traction will not double, but will increase by only about 300 pounds. If we reverse the situation, and reduce the vertical load one half to only 250 pounds, the traction will reduce by more than half to about 175 pounds of cornering force. This trend is not

particularly a problem, until weight transfer occurs.

Using a turn as an example, we have lateral weight transfer from the inside to the outside of the car. If you could measure the corner weights while the car was cornering, you would see that the inside wheel weights would be less, while the outside would be more. The total weight would remain the same. The vertical load on the outside tires will increase, while the vertical load on the inside tires will decrease. As we have just seen, the outside tires will gain traction and the inside tires will lose traction. If the relationship between the load on a tire and its traction were linear, the total traction would remain the same. But the relationship is NOT linear. The inside tires lose traction more quickly than the outside tires gain traction. The total traction available for cornering is less. How much less is relative to the amount of weight transfer. More weight transfer equals less traction. Any time weight transfer occurs, the total traction available is reduced. The only way to alter the effect of weight transfer is to reduce it by lowering the center of gravity, widening or lengthening the track or wheelbase, or reducing the weight of the car. Or you could slow down around corners!

HOW ROLL RESISTANCE

AFFECTS WEIGHT TRANSFER

Roll resistance is the force provided by the springs and the anti-roll bars that resists body roll during cornering. The relative amount of roll resistance at the front vs. the rear (called roll couple percentage) is what determines the handling balance of the car. The reason that the roll couple percentage controls the handling balance is simply that the roll couple percentage determines WHERE weight is transferred while cornering. Increase front roll couple by stiffening the springs at the front means more weight transfer occurs at the front. The inside front tire loses more traction than the outside front gains, resulting in a net traction loss at the front. More understeer is the result. If the front roll couple is increased by increasing the front anti-roll bar rate, the situation is more complex. An anti-roll bar connects both sides of the car (at one end) thus reducing the independent suspension effect during body roll or one wheel bumps. Not only does weight transfer laterally from the inside front to the outside front while cornering, but due to the anti-roll bar, weight is also transferred diagonally from the inside front to the outside rear. This will reduce the vertical load on the inside front and increase the vertical load on the outside front and the outside rear. At the front, we have a net loss in traction as before. At the rear, the increase in load on the outside rear increases traction at the rear. Again, the net result is more understeer for less oversteer. The exact opposite occurs in both cases when the chances are made to the rear spring or anti-roll bars.

In essence, if you increase the front roll resistance, understeer increases (or oversteer decreases). If you increase the rear roll resistance, oversteer increases (or understeer decreases). There are exceptions, like limiting body roll so that more tire contact patch area is being used.

How to balance roll couple percentage, the affect of the shocks and the purpose of the springs are topics to be explored in future articles.

Racing The Kyosho

BIG BRUTE

By F. Dale Cauthen



Use of your favorite colors in epoxy paint to create a show truck appearance will make your Brute really stand out from the crowd.

Back in June of '88 Bob Crane introduced this fun vehicle to you, our readers and at the same time sparked my interest in trying Kyosho's car crusher on the off-road dirt track.

My first reaction on scanning

the instructions was, "This can't be all there is to it." Before even seeing one of the trucks in unassembled kit form I'd begun formulating some ideas for modifying the Brute for racing. Before beginning construction I had

more pages of notes on planned modifications than the nine simple pages of instructions required for the stock assembly.

With the introduction of these very simple vehicles to the R/C market, monster trucks could

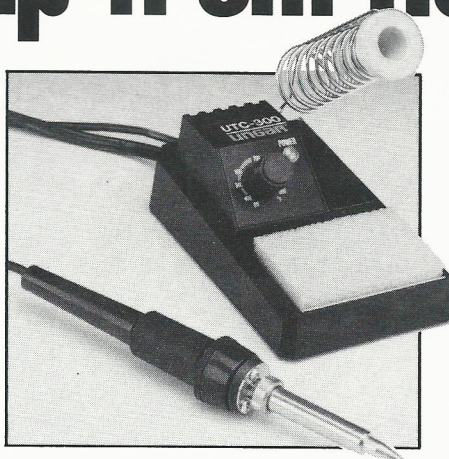


The Hot Tip from Hot Racers

When a solder joint can make the difference between TQ and DNF, you find America's top racers using only the best soldering equipment: Ungar's Super Race Station. Its incredible power not only makes soldering easier and faster, but makes joints flow better for greater reliability and lower resistance. And the quick transfer of heat will protect your sensitive race-ready batteries.

Secrets revealed

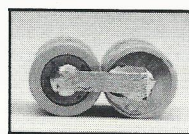
The key to the *Super Race Station's* incredible performance lies in its sophisticated electronics. Unlike conventional irons that have a fixed output rated in watts, the Ungar unit has an automatic variable output that keeps the iron tip at any temperature you select, all the way from a mild 400 degrees for precision work to a blistering 800 degrees.



The handy stand keeps the iron safely out of the way of car components in your pit area. Sponge helps keep a clean tip for the extra strong solder joints.



Unlike any other solder station, the Race Station comes equipped with a high mass thermal thrust tip that's perfect for R/C use.



Incredible output allows solder to flow all the way across this battery braid in seconds.

In fact, the *Race Station* has so much power that most racers adjust their temperature controls to about the 750 degree point.

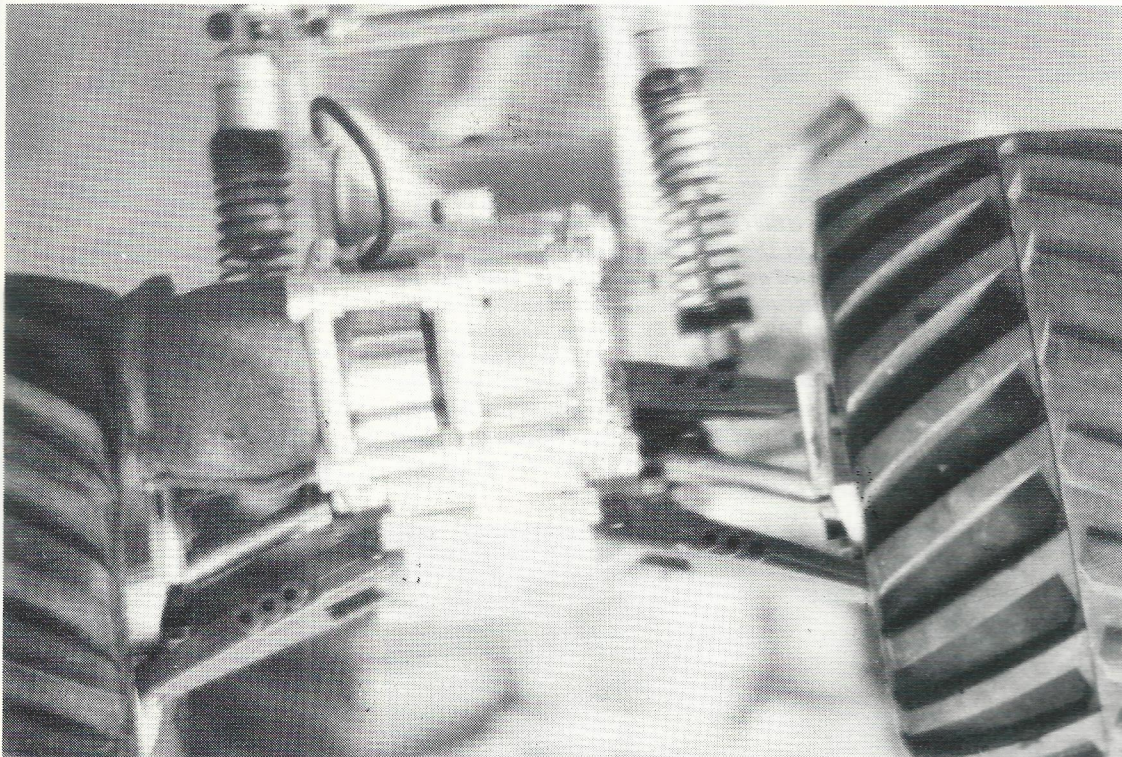
You can buy the same unit

The pros you see use a stock *Race Station*, just like the one you can buy at your local hobby store or race track. Retailing at just \$119.95 for the *Super Race Station*, or \$109.95 for the smaller handled *Race Station*, they're an investment that will pay off handsomely... in better solder joints, and more TQ runs.

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Without travel limitations, the full length Platinums will allow too much travel in the rear suspension causing premature dogbone failure.

replace "entry level" cars as the most popular kits for new R/Cers first kits. For you parents looking for that little R/Cers first car, consider the Big Brute instead. The assembly is so simple that the average ten year old should be able to assemble it with virtually no assistance.

ROAR is rumored to have rules in the works for the truck class. There are certainly more trucks showing up at races this season. We can already see two distinct classes forming. The conversion truck competition truck from your RC10, Ultima, or Losi JRX2 while the popular kit trucks like the Brute will compete in the "stock" class. For the moment, most tracks are running all the trucks in a class together. But as more and more truck racers show up each week, separation into

the two distinct classes will become a necessity soon.

While most tracks will be allowing little if any modification to the kit trucks, I've come up with some rather simple and relatively inexpensive improvements to make the Brute handle better and get around the track a bit faster. You will want to check with your local club or track operator before spending the bucks for aftermarket parts.

Our first modification and one that will certainly be legal most everywhere is the substitution of ball bearings in place of the plastic bushings. Kyosho bearing set H-004 consists of 4-4mm x 8mm, 8-5mm x 10mm and 2-8mm x 12mm ball bearings. If you've already been running your truck quite a lot your bushings may already be due for replacement anyway. While substituting the ball bearings will cost a
(Continued on Page 27)

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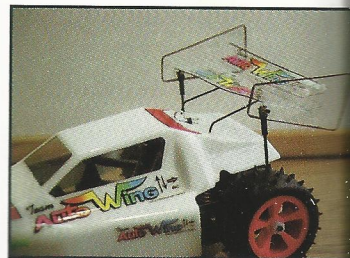
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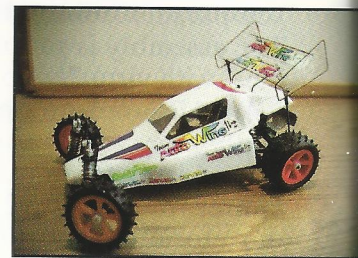
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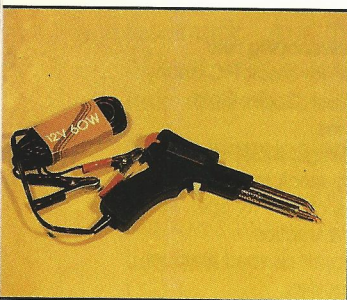
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The Auto Wing provides the serious racer with a distinct advantage that the other cars with the standard fixed wings in use now cannot provide. This wing could be your ticket to the winner's circle! It provides you with a unique aerodynamic wing that has the novel ability to constantly and automatically change and adjust its wing angle while racing down the track. And it does this through its unique action in direct response to the instantaneous second by second needs of your car and its suspension. It does all this automatically without any servos or any other controls that might distract you from your driving and winning.

All the other stationary wings only allow you to set an initial wing angle, thus you are stuck with that particular wing angle during the race, regardless of your speed or the terrain you're racing on, not to mention the corners and the special adverse effects they have on your car's suspension.

This means that you have a compromised aerodynamic shape and that static wing only offers the correct wing angle a fraction of the time you are racing.

The Auto Wing has a unique action and ability to adjust its own wing angle in response to

the demands from your car's suspension and provides your car with an optimum wing angle based on the speed, terrain and loads imposed on the suspension in high speed cornering, unlike all the other wings used now.

The Auto Wing will provide your car with the optimum wing angle at all times and this new technology can be yours for only \$49.95. It installs in only 20 minutes on the JRX-2, Top Cat, Ultima, RC10, CAT XLS 4WD, Pro Radiant, Yokomo YZ10, Maxxum and many other on/off-road cars and trucks. The wing comes with a limited 90 day warranty against defective parts.

This novel idea was developed in Hawaii by Mr. William Simpson. In addition to his interest in R/C cars, Mr. Simpson, is a licensed commercial pilot in both airplanes and helicopters, and holds a college degree in flight technology. This wing's concept was developed through Mr. Simpson's insight in both the theoretical and practical applications of aerodynamics in the fields of auto racing both scale model and full size race cars. The Auto Wing can improve lap times and handling by its automatic variable wing angle. An example of its effective action is that of the car that becomes airborne off a jump or bump. This airborne car will begin to slow down due to the normal air drag of the car and as soon as the power driven wheels leave the ground the car also begins to,

slow. The secret to faster lap times is to keep the power wheels in contact with the track. In the case of the airborne car with an Auto Wing installed, the wing angle will increase just as quickly as the tires leave the ground and in fact just as quickly as the load on the rear tires lightens, the wing will immediately increase its wing angle thus pushing down on the car and the rear tires, keeping them in contact with the track more of the time than with a standard fixed static wing.

The Auto Wing can even deal with adverse uneven weight transfer during cornering through the wing's amazing ability to correct lateral suspension loading during high speed cornering by its ability to induce a variable angle across the wing in a lateral direction, thus producing a downward force on the tires on the inside of the curve and simultaneously applying an upward force on the tires on the outside curve side of the car, thus evening out the load imposed on the suspension and tires by the cornering action.

The Auto Wing is now available to the public through your nearest authorized Auto Wing dealer, distributor or your local hobby shop.

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(Continued From Page 23)

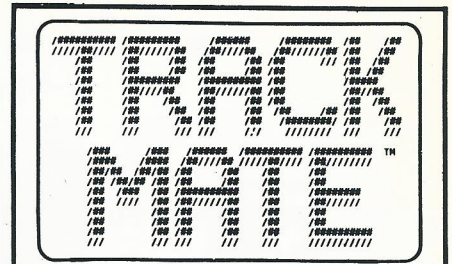
bit more, listing out at \$49.95, the bearings will last virtually forever with reasonable care and will improve performance immediately.

Next we want to improve reliability and simplify adjustments of the steering gear and suspension control arms. Let's talk a little about suspension adjustments first. Most entry level kits suffer from some degree of bumpsteer and the Brute is no exception. This is not intended as a swipe at Kyosho's engineers. It's just a fact of construction within the constraints of cost and strength required for entry level vehicles. Bumpsteer can occur for a number of reasons. The most common is loss of parallel alignment of the suspension rods. Because of the size of the Brute's tires, additional suspension rods are fitted at each wheel to reinforce the upper and lower arms and allow the use of very free moving pivot balls to mount the knuckle arms. Those clairvoyants among you who have read some of my previous articles can probably guess what we're going to replace the kit arms and pivot balls with. That's right sport fans. It's time to truck down to the hobby shop and pickup a couple of packs of Pylon brand 4-40 all thread rod, four sets of Rocket City ballends (with hardware), and a large Kimbrough servo saver.

If you are satisfied with the functioning of your stock "slider" steering gear, you can put off the trouble of replacing it with the Kimbrough servo saver and new rods. In fact, to let you know what you are letting yourself in for, changing over to the new steering setup is a tradeoff that is going to gain you some reliability and consistency of function at the expense of some of our old friend bumpsteer. Once you've decided that replacing the kit steering gear is worth your while (and expense), first replace the kit servo saver with the Kimbrough unit. Attach a new

ballend to each side of the servo saver in the lowest outside positions. If cost is a concern, use 4-40 threaded rod. The more expensive, but more durable, option is to purchase a set of Thorpe turnbuckles for a Fox. Use a short rod on the left side and the long rod on the right. Using the rodend hardware pieces on both ends of each rod will maintain the steering linkage in nearly perfect parallel alignment throughout the steering's travel and through the arc of the front suspension arms. This is the secret to avoiding the dreaded bumpsteer phenomenon. If, during turning, over bumps, or especially while turning during the suspension arm's up and down travel over a bump, any of the suspension arms should move out of parallel alignment with any of the other suspension arms on that wheel in any plane, bumpsteer will occur due to misalignment of the hub carrying that wheel. Simple? No, it isn't. It seems simple once you hear it the first time. So does relativity.

The problem in eliminating bumpsteer, once we understand what causes it, is not in finding the cause but in correcting the problem. This is the single most important key to getting this vehicle (and most any other) to go where you point it. Replace each of the adjustable linkage arms on the rear suspension with a new rod made from 4-40 rod and the Rocket City ballends, running a screw through the ball to secure the rod end in place of the old 5.8mm pivot balls that could let your suspension rods pop off whenever you hit something. Nothing is indestructible but if you hit something hard enough to bend one of these rods, odds are you'll still be able to finish your run. If one of the stock ones pops off, you're done. Remembering what I've told you about the relationship between suspension rods, mount these stabilizing rods so that they remain parallel with the main



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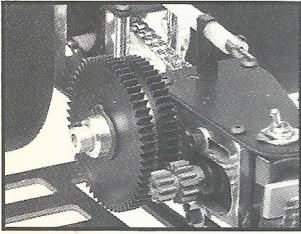
arms during up and down travel of the suspension.

Now that the truck rolls free and tracks straight, throw away that mechanical speed control and put the extra servo in your toolbox for a spare. Pick up a Tekin Pro Model 300 from your local hobby shop. Tekin has dropped prices recently and at the same time given us great improvements in quality and reliability. The PX-300 uses Tempfet technology to avoid overheating and shorting worries while providing total turnability with precise throttle and brake response. The 300 will run you about \$115 at list price, but is sufficiently durable to more than justify the cost. Moreover, Tekin stands behind their products. I recently had a Tekin Pro speed control short out from getting wet during a race on an over-watered track. The repair facility at Tekin appraised the damage as a total

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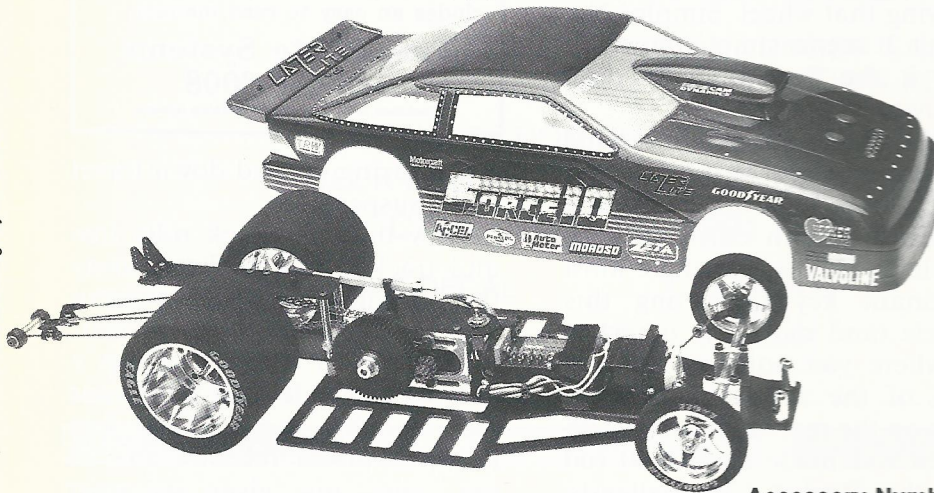
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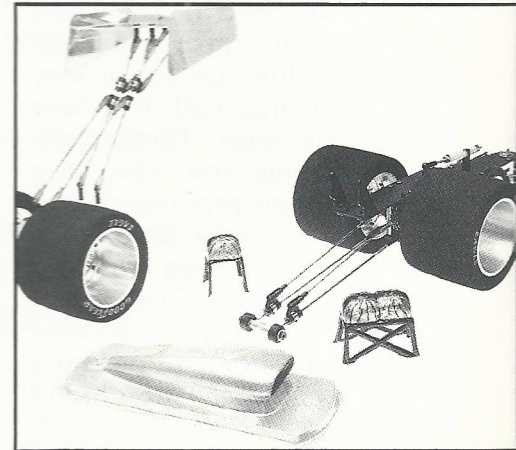
Funny Car-13" Wheel Base



Pro Stock-10 1/2" Wheel Base

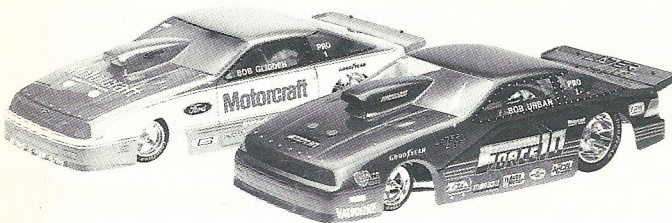


Other Accessories



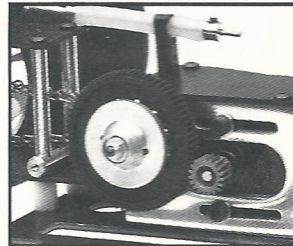
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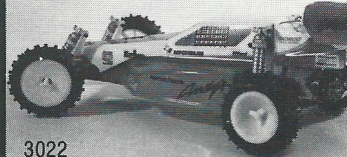
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3025
ELAN "OFF ROAD" - MID OPTIMA



3240
1/10th SCALE "OFF ROAD" WING



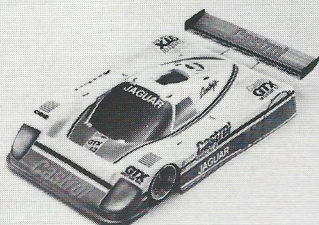
3022
HEATHEN "OFF ROAD"



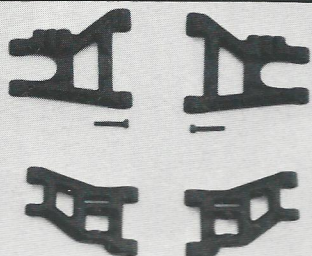
3145
NISSAN GTP



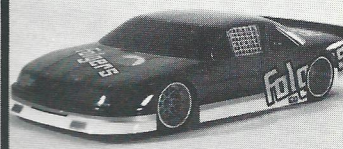
3418
RC-10 REAR BODY MOUNT



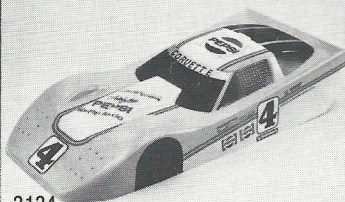
3141 - 4141*
89' JAGUAR GTP



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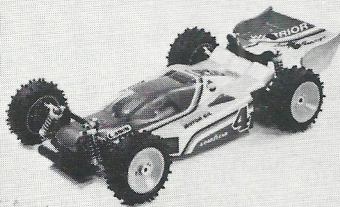
3420
MONSTER TRUCK FRONT BODY MT.



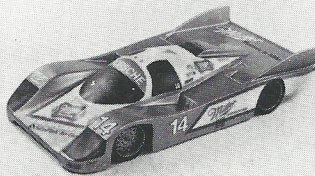
3412 RC-10 - 3512 ULTIMA
FRONT BUMPER MOUNT "OVAL"



3030
JEEP COMANCHE TRUCK BODY



3026
APACHE WARRIOR - YOKOMO



3140
PORSCHE 962 GTP



3023
HALF-BREED "OFF ROAD"



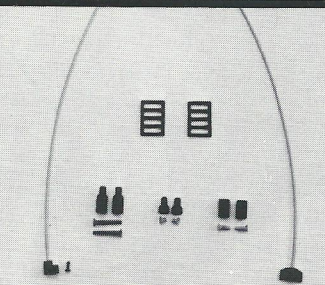
3414 - 3416
RC-10 "OFF ROAD" FRONT BUMPERS



3020 - 3021 - 3024
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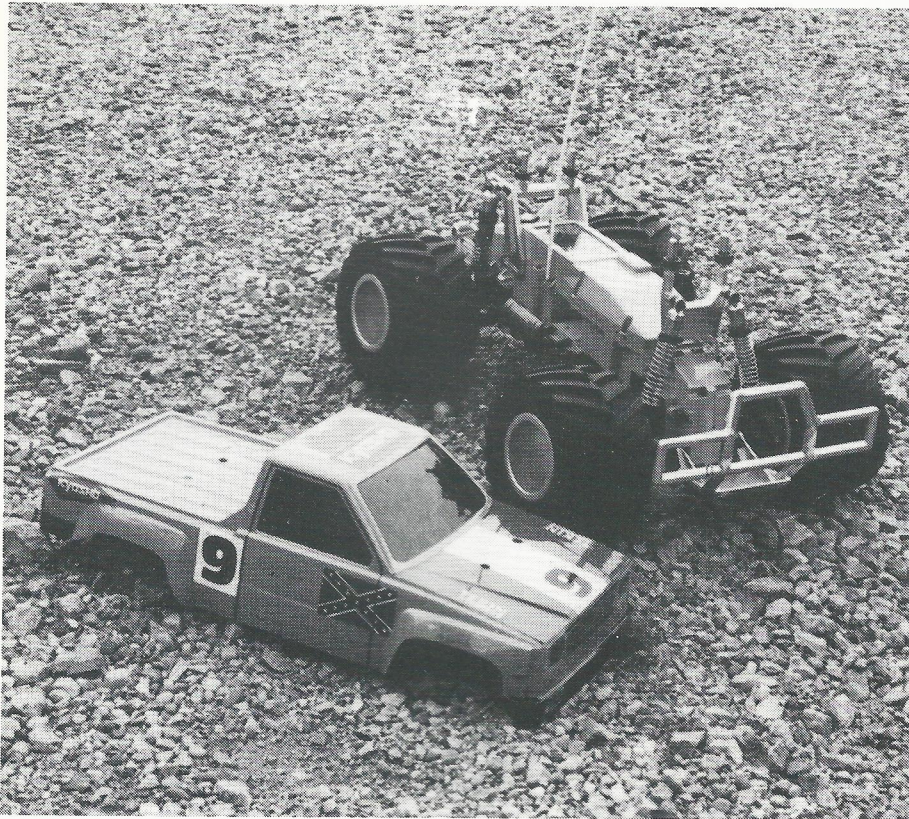
3160 - 4160*
89' PONTIAC GRAND PRIX - NASCAR



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3142 - 4142*
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Use rubber grommets between the lower set of body pins and the body itself to protect your custom paint job.

loss but replaced the unit for less than one-third the cost of a new

unit. It's this kind of service and concern for customer satisfaction that prompts me to recommend the Tekin equipment as the best buy for the dollar on today's marketplace.

Before purchasing a motor for your new pride and joy, check with your local race director. If he says you have to run a stock motor to compete in the 'kit' class, ask him if Trinity Speedworks counts as stock. The Speedworks #0004 hauls the truck around the track fairly well. If modified motors are allowed, your next question should be whether that means ROAR legal modified or any motor. The hottest ROAR legal motor comes again from Trinity and is my old favorite the Sprint wind. This is a 15 turn single wind that produces torque by the fistful and will bring a grin to your chops the first time you punch it. Should you not have to stick to ROAR legal motors, try a LeMans 360PT. This is a "550" size motor

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WITHIN ONE YEAR: Every manufacturer of competitive 10" scale off road cars will introduce transmissions with slipper clutches. They will try to copy different designs and components incorporated in our race proven T.P.S. Chain Drive Transmission with Slipper Clutch. However, these transmissions still won't compete because they will be gear or belt driven with higher rotating mass and more friction (both static and under load).

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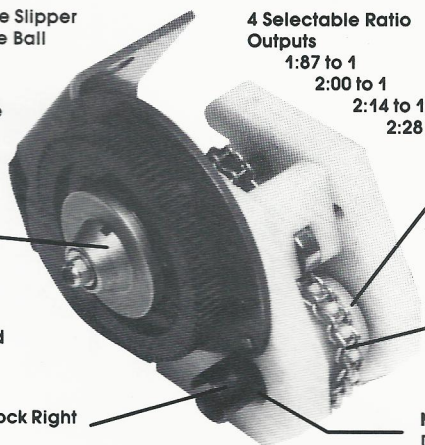
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WARNING: The Surgeon General has determined that this transmission can be hazardous to your competition's health.

as opposed to the "540" that ROAR requires and is the horsepower bargain of this year or any other. Before you go out and plunk down hard cash for a hot modified motor though, know one thing. When you put a modified motor into this or any other R/C vehicle, you have only begun to spend money. All that horsepower is going to find the weakest link in the chain that is your drive train. When you've fixed that and strengthened the component so it doesn't fail so easily again, it's going to break the next weakest link. My Brute has about forty runs on it so far and the weak link in the chain proved to be the dogbones. As with so many other R/C cars the dogbones failed at the ends after repeated abuse from hot modified motors running on seven cells. The good news is that no other components have failed. One DZ block parts (#500) replacement at \$8.00 and the Brute was good as new and ready for more abuse.

Upon examination of the damage, I discovered that the dogbone had failed for two reasons. First, use of the full length Kyosho "Platinum" rear shocks on the back of the truck had allowed the suspension to overtravel its intended limits and accelerate wear on the dogbone ends. Second, I had been running either the 360PT on seven cells or the Trinity "Sprint" on six cells. Either of these motors will propel the truck, stick with a 15 tooth pinion, smallest that will fit. If you are really into racing, an \$8.00 set of dogbones every few race days is a small price to pay for this level of performance. We haven't gotten enough trucks racing yet to split up into two classes so the Brutes have been running against conversion trucks. While this definitely constitutes racing out of its class, the Brute can stay on the same lap with the more expensive conversions with the modifications described here.

The best combination of shocks I've been found for the Brute are Kyosho "Golds" on the front and Kyosho "Platinum" on the rear. Yes, I know what you've read about the Platinum shocks and frankly it made me madder

than a sober Irishman (I can say that, I'm Irish). Correctly assembled Platins DO NOT leak, are adjustable from the outside, and do a superb job when setup for the vehicle on which they are being used. To minimize wear on the dogbones, you can shorten the shocks a bit by simply cutting lengths of airplane fuel line the same length as the difference between the length of your oil filled shocks and that of the kit shock. Disassemble each shock and slide a piece of fuel line onto the shock rod so it rides between the shock piston and the bottom of the shock. This modification will bring the truck back down to its original height, lowering the center of gravity and making the Brute less inclined to tip over in turns.

Replacing the suspension rods is a simple matter of cutting a piece of 4-40 rod to the same length as the old metal piece it replaces and threading on a DuBro or Rocket City ballend then adjusting the length of the rod to the same length as the rod you are replacing. Now each rod can be adjusted to change the toe on all four wheels. For stock class, set the toe straight on, on all four wheels. With modified motors or seven cells, use about three degrees of toe-in on the rear wheels to improve stability. If the truck seems to wander a bit on the straights, add just a very slight amount of toe-in in the front. Work toward making the steering so stable that you can literally take your hand off the steering wheel once the vehicle is headed straight down the track. Don't go overboard with this. Too much toe-in will make any vehicle handle erratically and all such effects are amplified with tires the size of the Brute's. Use the rear most mounting hole for the steering rods, as shown on the kit's plans.

I've stayed away from lightening the Brute extensively for a number of reasons. First, we don't yet know what ROAR's weight minimum will be, so why start shooting in the dark. Second, the truck is extremely reliable and since this is primarily a fun racer, I like it solid as a rock. Third, by switching

around from a stock motor, to a Speedworks "Blue Print" stock, to the 360PT, to the Monstrously Powerful Trinity Sprint, any desired performance level can be achieved without the hassles of modifying the vehicle's structure.

A couple of simple tips: If you want to paint your chassis for a custom show truck appearance, use one of the epoxy paints. Black Baron goes on easily and wears well without damaging the plastic. Don't mount your receiver on top of the steering servo as shown in the instructions. Keeping your components separated slightly and routing all wires away from others will reduce radio glitching. Rather than mount the lexan window under the top cover as shown in the instructions, put a couple of drops of white basin tub and tile sealer in each hole and then mount the cover from the top. This will allow you to remove only this cover when a frequency change or other adjustment is needed rather than removing the entire radio cover. Replace the plastic wheel nuts with metal lock nuts from Kyosho's Car Aids spare screw and nut set. To lower the center of gravity slightly and save wear and tear on the body, leave off all the plastic bumper and rollbar parts. Some clear vinyl taps over the headlight openings and a little simple artwork and you have a one of a kind truck that won't strew parts all over the track when the nut behind the wheel makes a mistake. To further increase the life of the body, pick up a pack of rubber grommets from Radio Shack and use them under the body to protect it from scratches as your paint job will be resting on bare body clips otherwise.

All in all, this is a very simple R/C racer to build and work on. It goes together quickly and easily and is rugged as anything I've seen to date.

Special thanks to Mr. Kevin Kelsey of Great Planes for providing me with this opportunity to extensively wring out the Kyosho Big Brute.

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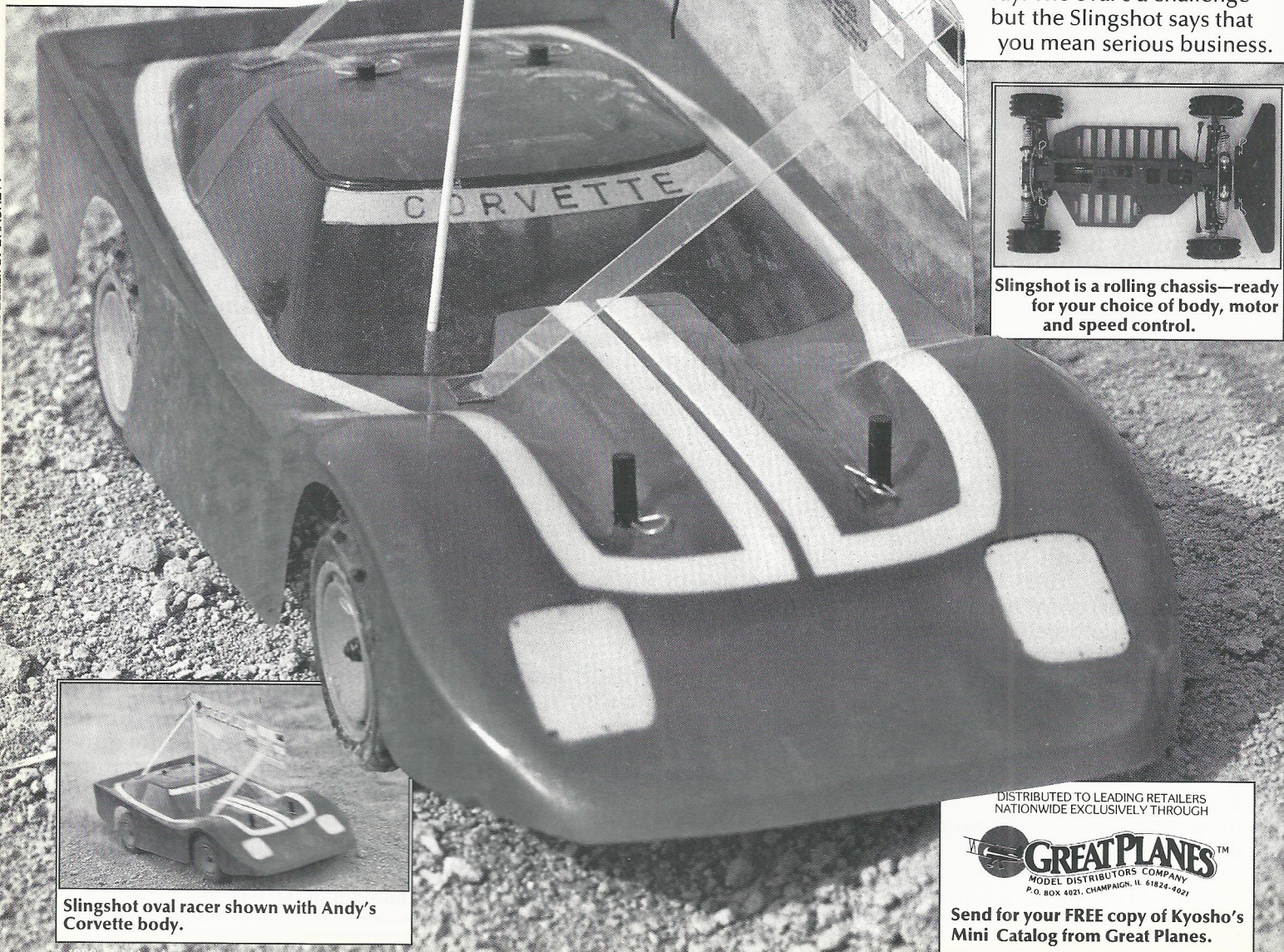
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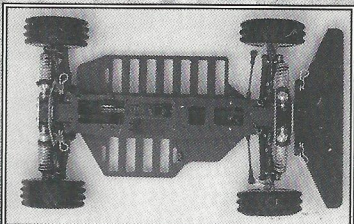
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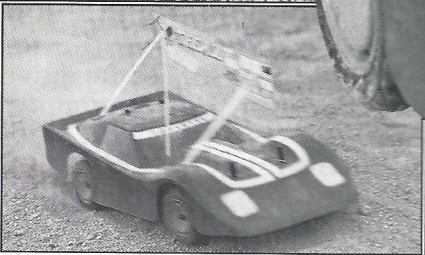
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Well we're here, our final issue of the decade, and what a decade it has been! From a few guys racing in a parking lot, to massive indoor tracks, to an off-road ROAR Nationals with over 650 entries. Yes, our sport has changed quite a bit in the last ten years. What will follow is a brief look at some of the decade's best. We'll take a look back to the early days of Competition Plus, cars of the decade, to races and racers.

So much has changed and it seems only fitting to take a look back at the

1980s

Personally Speaking . . .

Although Competition Plus is the oldest R/C car magazine in the United States, it wasn't the first. Back in the 1970s a few magazines had started up and all of them folded shortly after. When our first issue hit the stands most felt that the same old story would repeat itself. Sure it looks great, but I bet they won't last six months.

Well we've been around, and now we stand alone. Today, Competition Plus is the most quoted authority on R/C cars. With sales in all 50 states and 29 foreign countries.

Over the past seven plus years we've made several changes in our publication. Our first issue was 28 pages, all black and white with a full color cover. Our first logo was drawn by a fellow racer. The cover price was \$1.50 and subscriptions were \$15.00 per year.

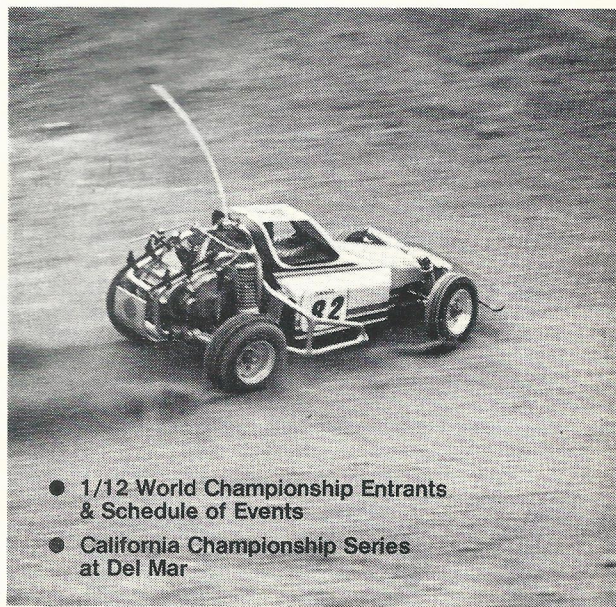
By November of 1982 we had a new logo design. In June of 1983 we were the first United States R/C car magazine to introduce color photography.

Yes, we've made several changes, but our basic philosophy of treating R/C cars as a sport, and not as toys, has never changed.

September, 1982

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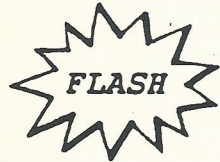
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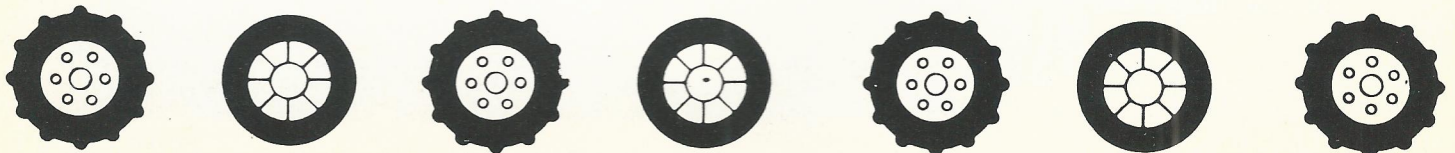
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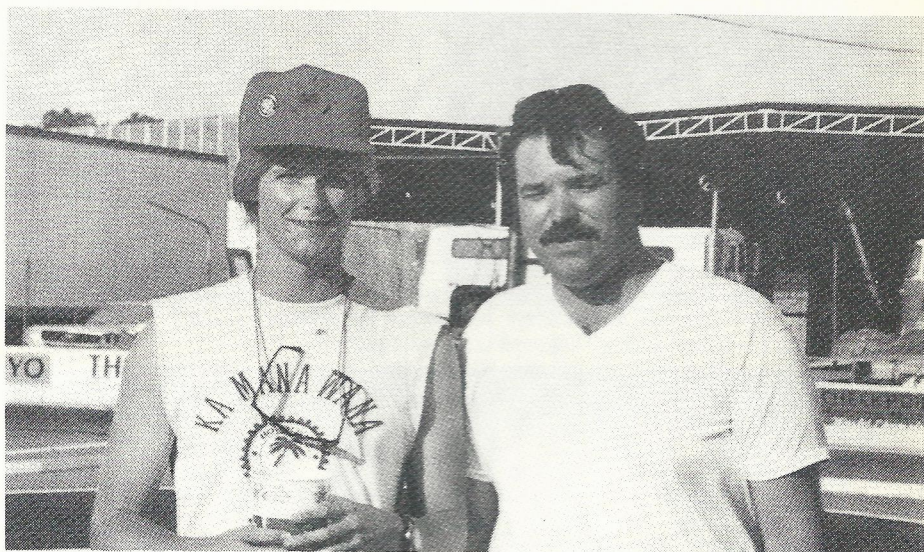
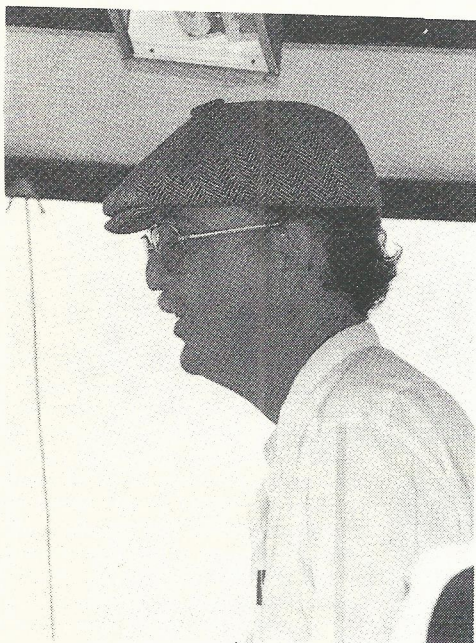
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Faces in the Crowd. . .

A nostalgic look back at the people that pioneered our sport. Many you will recognize, others you may not. Rest assured, however, that each one of the people pictured were involved in our sport from the early days and have all made an impact on the way we race today.

A Look at the Early Days of 1/12 Scale . . .



UPPER LEFT: Later in this piece we'll talk all about the motor builder, Mike Reedy. Now its important to understand the man. In the early days of our sport nobody was as involved as Mike Reedy. From race directing and club organizer, to ROAR Regional Director, to ROAR President, Mike has done everything to promote our sport. Today he continues to remain not only one of the top motor builders, but one of the top ROAR volunteers. This picture was taken while Mike was race directing the 1983 1/8 Nationals. RIGHT: In 1983 you had just a few companies making cars. Even fewer were in the motor business. When Ernie Provetti (R) started out he knew that winning races was going to be the key to having a successful business. Pictured here is Ernie with his ace Joel Johnson. After this duo destroyed the competition at the 1983 1/12 ROAR Nationals there was no doubt that the Trinity/Johnson combination was going to be a tough act to follow. These two dominated 1/12 scale racing throughout the mid 1980s. LOWER LEFT: Who is this guy? Yeh, it's a young Rick Hohwart. In the early days of 1/12 scale, around 1982, this guy was tearing up the stock class at many of the local Southern California tracks. It didn't take long for potential sponsors to take notice of this young talent. Rick drove for several teams including Checkpoint, Associated, Reedy and BoLink. A few years later Rick combined his driving talent and business prowess to form his own company Peak Performance. Both Rick and his company, Peak, have accounted for their share of National titles.



I can't remember a time when Tony Neisinger wasn't competitive. Tony has always been one of the top racers not only in 1/12 scale, but in other scales as well. Early in his racing career Tony was a very accomplished 1/8 scale racer. Had he continued to race that scale as frequently as he did 1/12, he could have easily achieved equal world championship success. Nonetheless Tony remains one of the world's premiere 1/12 scale racers.



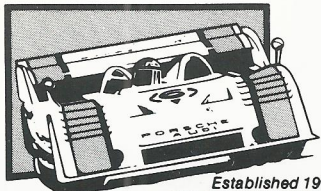
Mike Toland was a very popular driver not only for his pleasant manner, but for some of racing's best announcing. Toland was able to combine humor and excitement for an excellent race call.



UPPER LEFT: One driver that took the early days of 1/12 scale racing by storm was Re-Pete Fusco. This young New York driver was the Top Qualifier at the first 1/12 Worlds in the Stock Class. Fusco later achieved even greater success in 1/8 scale becoming the IFMAR World Champion in 1987. LOWER LEFT: In the mid 1980s Rott was one of just a few drivers to beat Joel Johnson and the Trinity squad. In both 1984 and 1985 Terry and Joel split the two classes, Stock and Modified at the Indoor Champs in Cleveland.



It was a rare sight to see all of the major motor manufacturers of the time in one spot. This shot was taken in June of 1983 at the Sierra Classic. Ironically this event really wasn't that big a race. Featured in this photo is (l. to R.) Neal McCurdy, Rev-Tech; Mike Reedy, Reedy Modifieds; Ernie Provetti, Trinity; Jim Greenmeyer, Checkpoint; and Steve Hickman, BRM. Okay, so they're not still all in business.



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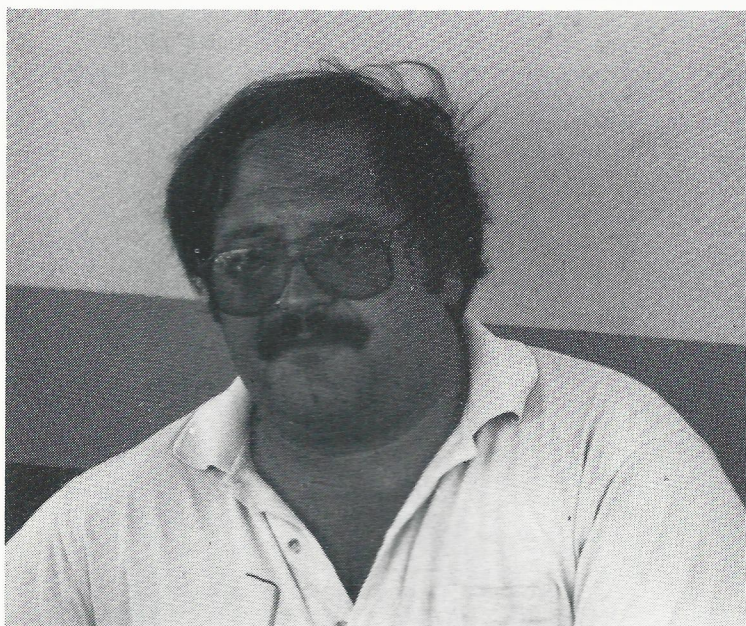
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Faces in the Crowd. . .

A Look at the Early Days of 1/8 Scale . . .



LEFT: Another driver that has had great success throughout the 1980s is Ralph Burch, Jr. Just one of the interesting things about Burch was that early on in this decade he was not only a great 1/8 driver, but one of the best 1/12 drivers as well. From about the mid 80s to the present day, Ralph has been the best 1/8 driver in this country. About the only title that has eluded Ralph has been the World Championship. Even though he has not won that title yet, he has been the top qualifier at a few of these meetings. **RIGHT:** You already know all about Gil Losi, Jr.'s success in the dirt cars. What you may not know is how great he was in the 1/8 scale class as well. From about 1983 to 1987 Gil was one of the country's best. He had competed in World Championship events as well as all the major national races and was always a finalist. Although today he doesn't see the same amount of action in 1/8 as he does in 1/10, we're sure Gil could pick up a 1/8 car today and pick up where he left off.



LEFT: In the very early days of serious 1/8 racing Bill Jianas was one of the first big names. Although he did do some electric car racing in 1/12 (in fact he competed in the '82 1/12 Worlds) his racing career is synonymous to 1/18 racing. From the early to mid 1980s Bill was one of the fastest, and many still remember some of the great races he won. **RIGHT:** We already told you about Re-Pete in 1/12. In 1987 at the World Championships in Pomona, Re-Pete Fusco surprised a lot of people by taking the World Title. His successes go back earlier than that, however, as Re-Pete has been one of the great drivers in 1/8 for the 1980s.

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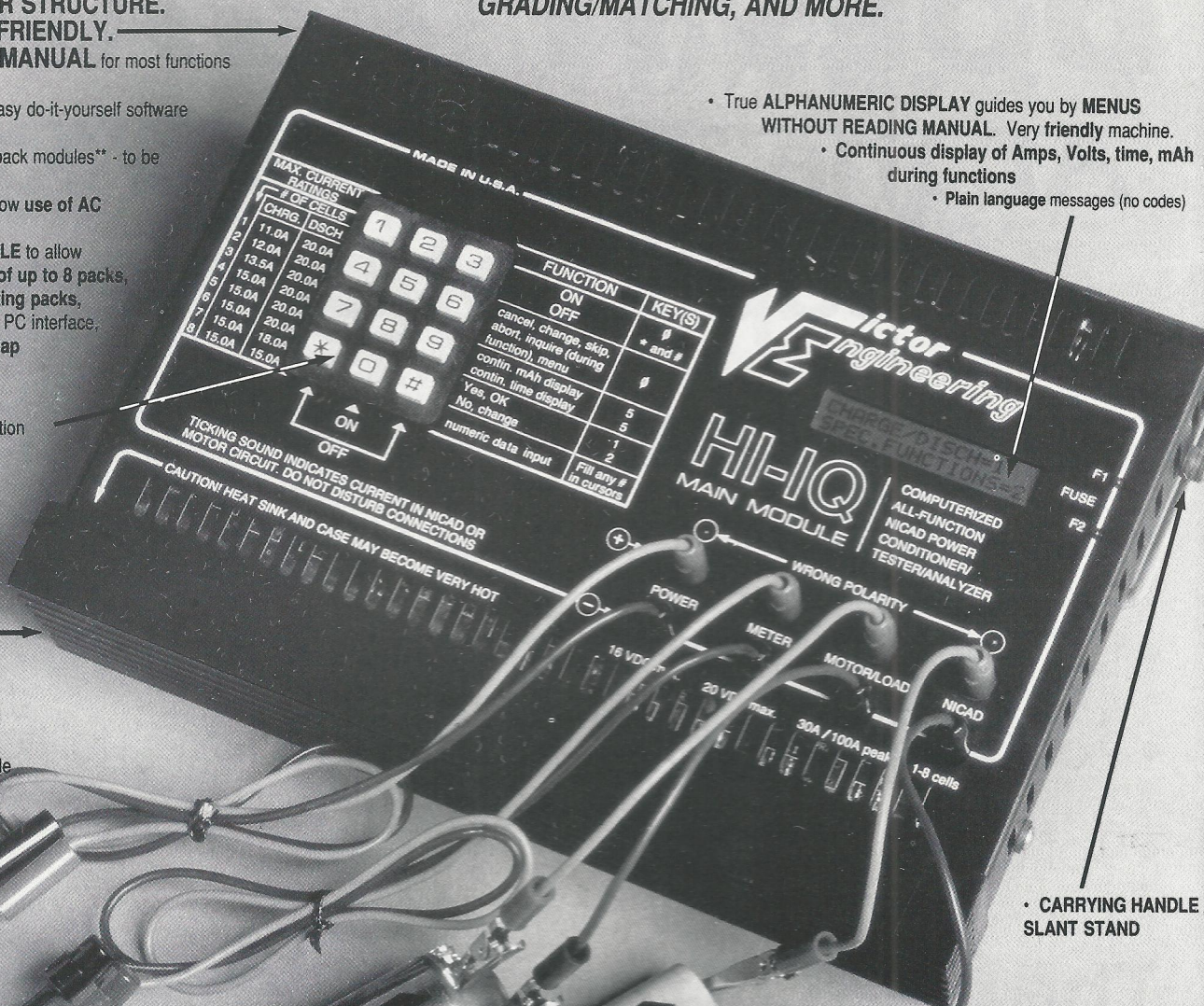
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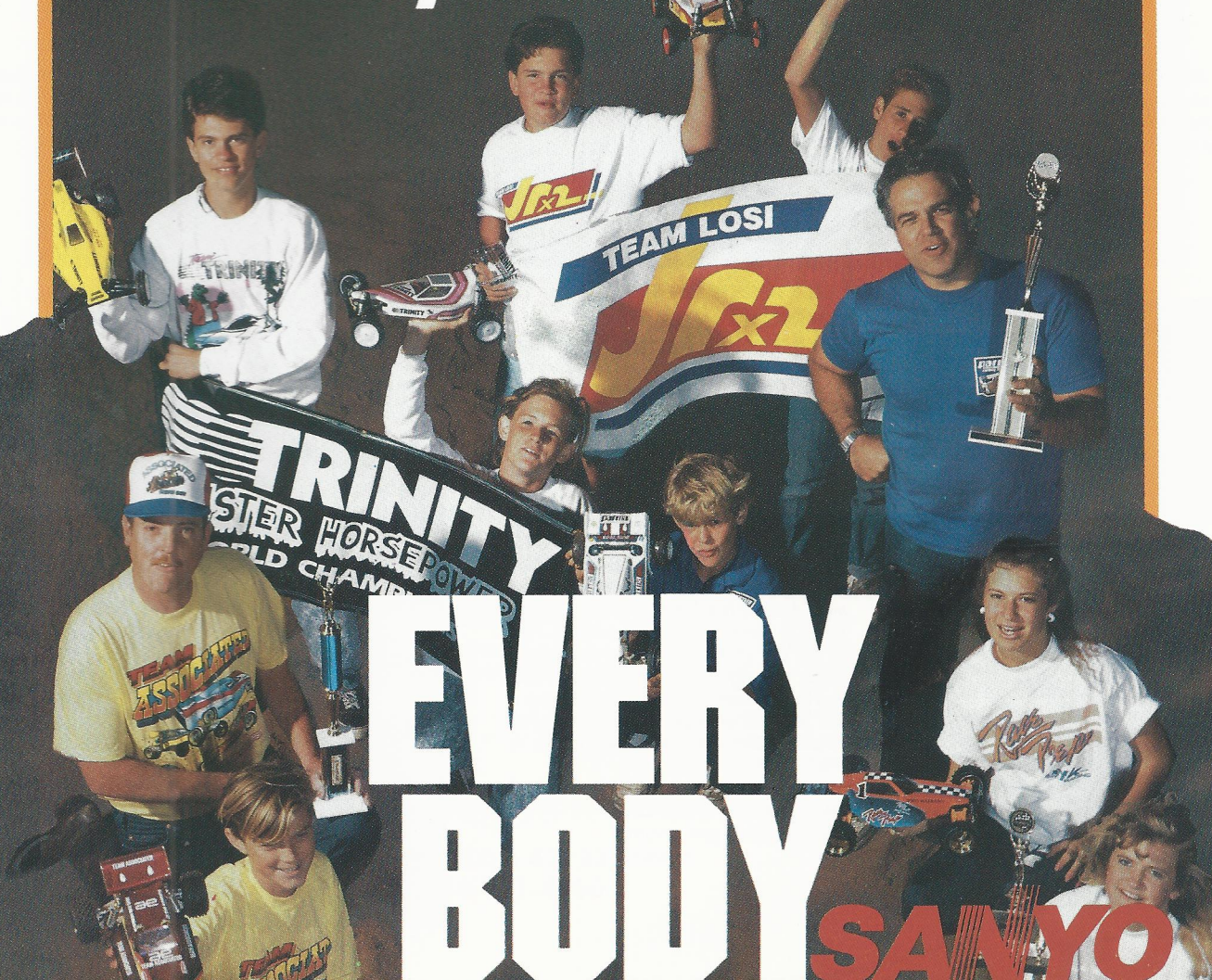
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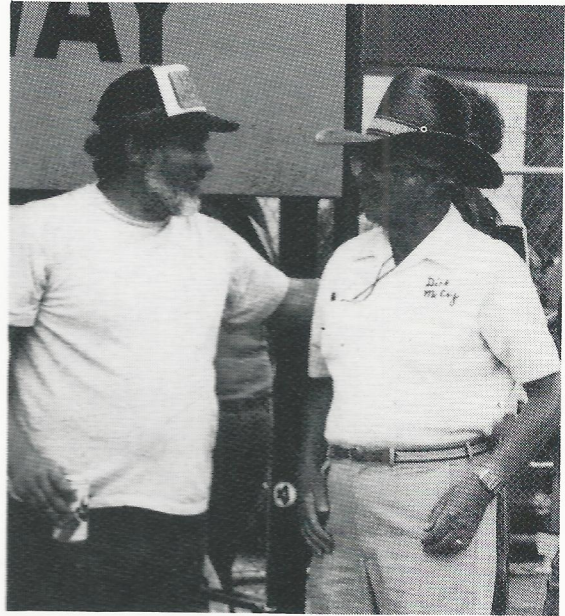
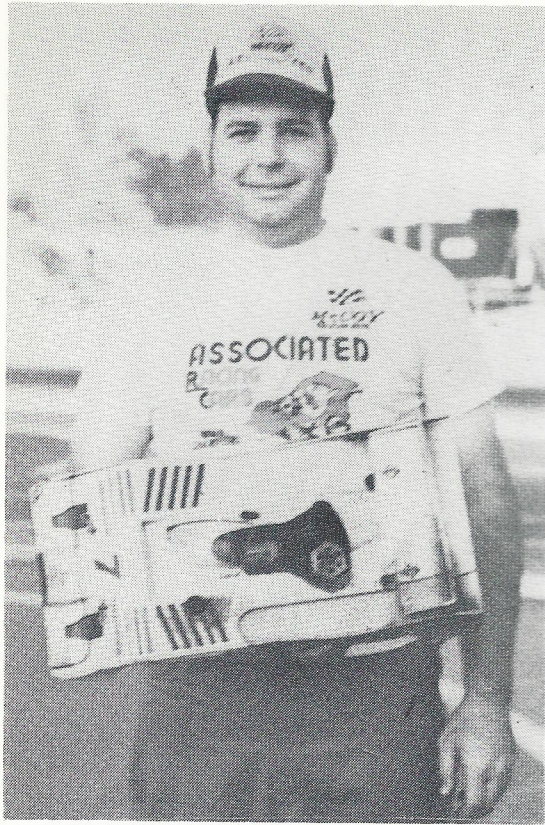
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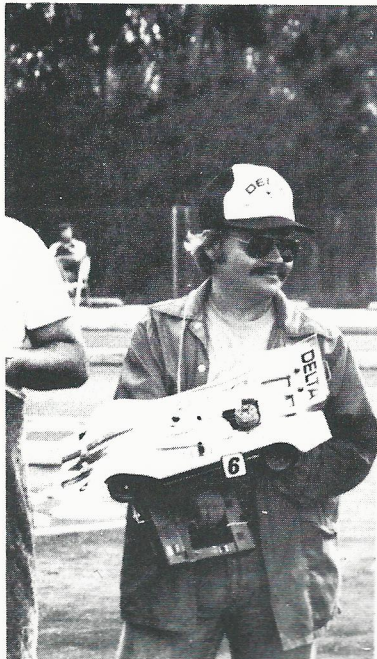
EVERY BODY

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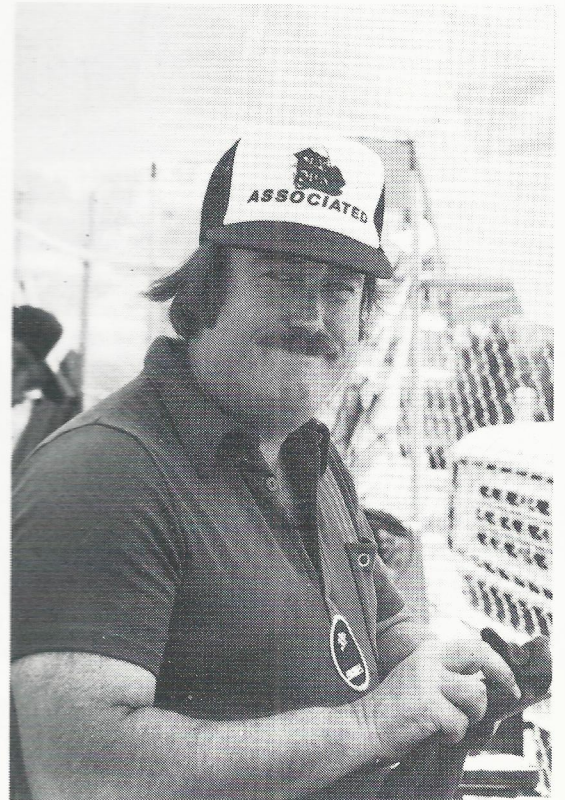
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LEFT: One of the fastest drivers to ever pick up a 1/8 car is Dana Smeltzer. This McCoy Champion has also competed at the international level. Back in 1983 Dana did very well at the World Championships finishing in fourth spot overall. **RIGHT:** With the possible exception of the World Championships, the grandest race in 1/8 is the McCoy. Here Dick McCoy, namesake of the race, poses with Gil Losi, Sr. of the Ranch Pit Shop. No matter what the future holds for 1/8, the memories of the Ranch Pit Shop, and the McCoy race will last forever.



LEFT: Our first World Champion of the 1980s was Art Carbonell. Like many other 1/8 racers of his time, Carbonell was also equally adept at 1/12 scale. In 1982 he became the Modified 1/12 World Champion. Later he also became National Champion. Indeed he has probably had the greatest success of those 1/8 drivers that also ran 1/12. He could easily have been placed in our look at 1/12 drivers, but it is the consensus of most that Art is a 1/8 driver first. **RIGHT:** Rich Lee's impact on 1/8 was two-fold. First he was one of the great drivers in the early 1980s. Secondly his understanding and workings of 1/8 motors were matched by only a few. Rich was an important part of Re-Pete Fusco's World Championship triumph in 1987.





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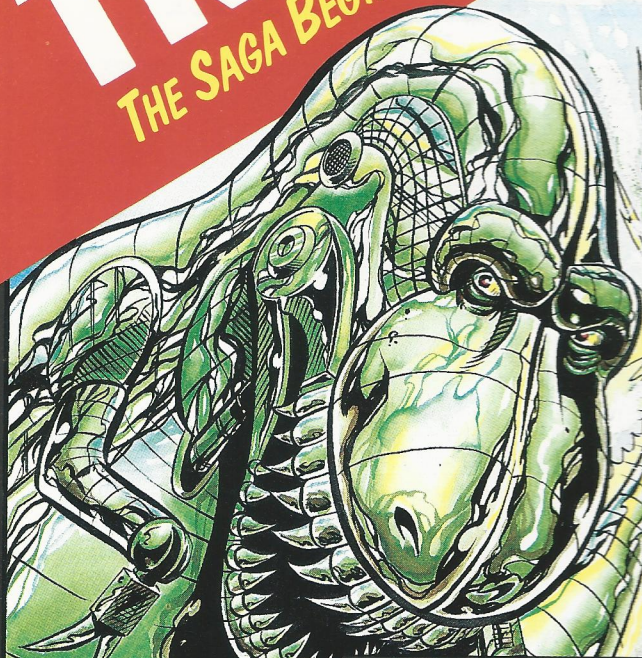
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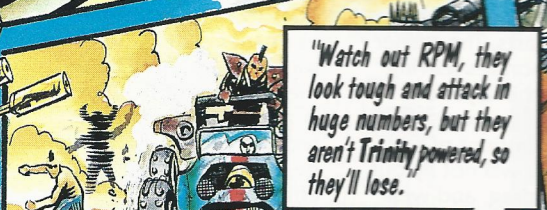
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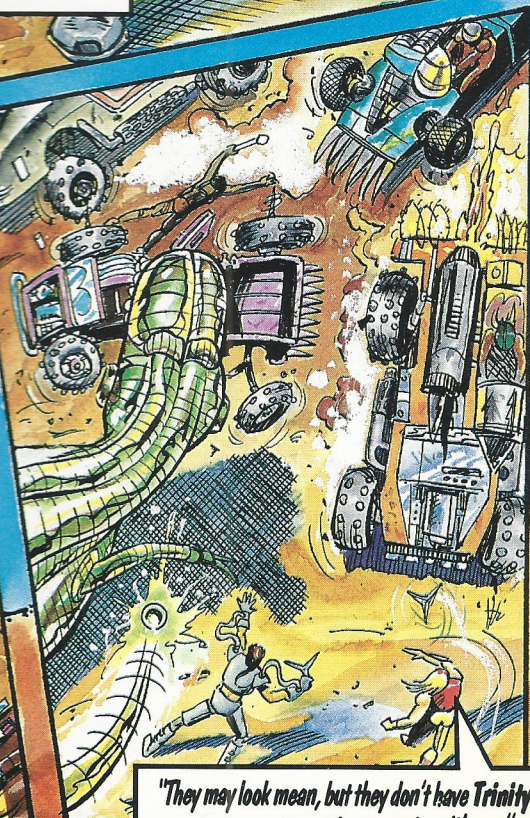
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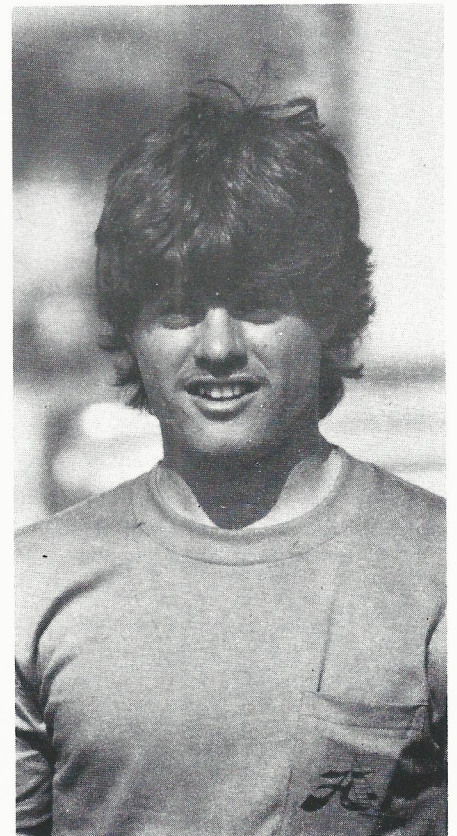
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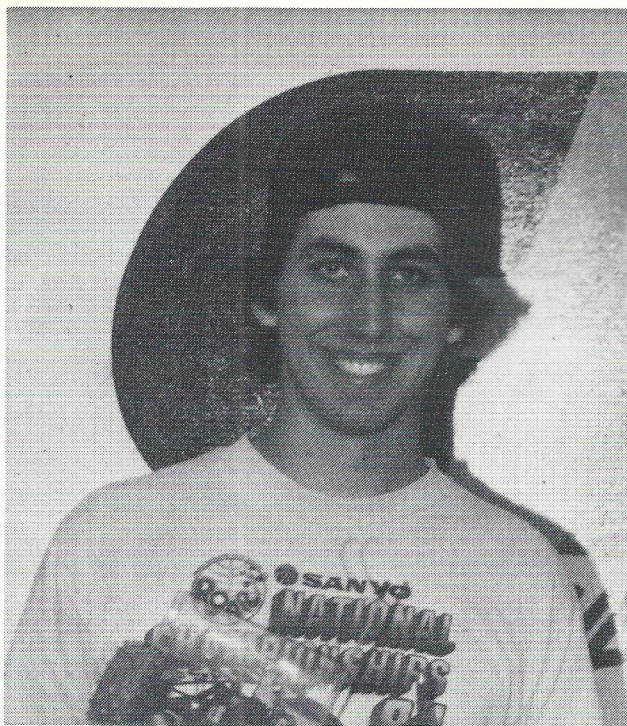
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Faces in the Crowd. . .

*A Look at the Early Days of
1/10 Scale Off-Road . . .*



UPPER LEFT: One of the first drivers to really dominate 1/10 off-road was Willie Melancon. In the early days of this sport he won all the big ones there were to win. Unfortunately for Willie, ROAR's national program didn't come about until after his prime. If ROAR's first Nationals would have been in 1982 or 1983, there's little doubt in my mind that he would have himself a National title or two. **RIGHT:** Another one of the early kingpins was Ron Dyer. In 1985 Ron capped off his successful career with a National title. **LOWER LEFT:** Chris Allec will always be remembered both as a very successful driver, and ingenious car builder. Allec has had many big race wins to his credit, winning the Reedy Invitational Race the first year it was run is just one of the many titles. If awards were given for car building, Allec would have won several of those as well. His unique chassis' were the envy of many of the best drivers around. Chris eventually went on to start his own aftermarket company.



UPPER LEFT: Gil Losi, Jr. became one of the first superstars in 1/10 off-road. He has accomplished many firsts in his racing career, not the least of which was becoming the first Modified World Champion. Gil was, and still is a driver's driver, having the amazing ability to compete in the three traditional scales, 1/8, 1/12 and 1/10, at the world class level. Losi, Jr., also was responsible for several prototype and production products that have made racing better in both performance and reliability. **RIGHT:** Another one of our first off-road superstars was Jay Halsey. His hard driving aggressive style made him an instant-crowd favorite. Style doesn't win races, however, talent does, and Jay has plenty of that. In 1984 he became our first Off-Road National Champion. A year later he backed up that performance with the Stock World Title. Today Jay continues to be a threat to win any race he enters. **LOWER LEFT:** Yeah, alot of you know Gil Losi, Sr. as the man behind Team Losi and the Ranch Pit Shop. Losi, Sr. has been responsible for many of the advances in the world of off-road, including the importation of the first successful and competitive 4WD car. In 1984 he introduced the Yokomo Dogfighter to America. The car was a big success and dominated this class for several years. In addition, his race facility, the Ranch Pit Shop was, and continues to be one of the best tracks. It has been host to both National and World events. Okay, so maybe you knew that. Did you know about Gil Losi, Sr. the racer? Although at the world level he may not have achieved the success of his son, at the National level Gil Losi, Sr. has made several A Mains. One race that stands out clearly in my mind was the 1984 Off-Road Nationals. In the Modified class a freak accident that jammed the front dogbone on his Yokomo cost him an almost certain National title. Losi, Sr. was also an accomplished road racer as well, making finals at the McCoy races.

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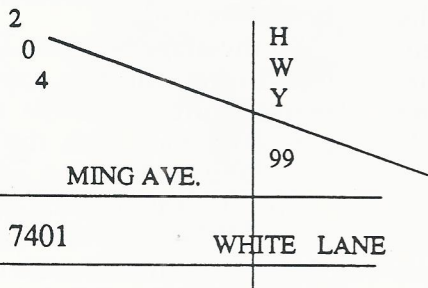
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RACES

We can all recall a race that has left a lasting impression on us. Maybe it was a last corner battle for the finish that impressed you, possibly a surprise driver stole the show. Whatever the reason, the 1980s have been host to our most important races.

We'll take a close look at some of the biggies and give you some insight as to their significance and place in history.

MOST CONTROVERSIAL RACE OF THE 1980s

This race goes back a ways to 1983. The event was the 1/8 Gas On-Road World Championships. This was the Fourth World Championships for this division. The race was held in Europe, at Carnoux, France. The circuit was owned by Rene Rossi. He had done a spectacular job with the sight. Many said it was the best facility they had ever been to. The race compound had several TV monitors set up to view the computer timing and heat information, even a mill and lathe for all competitors to use. The track was beautifully laid out and featured banked curves.

The event opened with alot of hype. A French Army band performed along with a group of baton twirlers. A helicopter flew in delivering the gigantic winner's trophy. All the countries represented marched onto to the track. Indeed the ceremonies were quite impressive.

Qualifying went very smooth and soon the time came for the main events. The main was comprised of drivers from the US, England, Italy and France. With that kind of national diversity you knew emotions were going to run high.

As the main proceeded it became a shoot-out between two drivers, Tadiello of Italy and LeCat of France. With the spectator crowd being predominately French and Italian the cheering was fierce. The one hour main

came down to the last lap. On this lap Tadiello was in front, but LeCat was close behind. As they came to the finish the two cars charged the line, with Tadiello just nosing out LeCat at the finish. Tadiello and his sponsors, the mighty Italian company SG went crazy. They were throwing their pitmen in the air and the crowd was furiously waving the Italian flag.

As is customary before the official announcement, IFMAR officials were to verify the computer tape to check for scoring errors.

At what was to be the awards banquet it was announced that some questions had been raised as to the two top positions. It was decided by IFMAR officials that the final results were not going to be announced until the next morning.

Enter track owner, Rene Rossi, as the story goes, he denied the IFMAR President access to the scoring documents. In addition, it was reported that he ejected not only the IFMAR President, Ted Longshaw, but French and Italian Team Officials as well. Surprisingly a lot of tempers got quite hot. It should also be noted that several copies of the results were subsequently destroyed. Anyway, Rene Rossi told all participants to gather around as he was going to hold the awards ceremonies. When it came time to announce the winners LeCat was given second, and Tadiello was crowned world champion. End of story, right? WRONG! The results were still being analyzed by IFMAR and a con-

clusion was reached. It showed on lap 81 Tadiello was given an extra lap. This officially made LeCat the winner. Therefore, IFMAR in 1983 recognized LeCat as the official world champion.

As just a side note SG never let the decision die. In fact, they continued to dispute the decision and in all advertising material declared themselves '83 world champions. So ended the most controversial race of the 1980s.

BEST PERFORMANCE UNDER PRESSURE

It was the summer of 1985. The world had come together in Del Mar, California to see who was the best 1/10 off-road racer. It was the First World Championships for this class.

Yes, the world came together to compete, but deep down all knew it was a two-man race. The two players were Jay Halsey and Gil Losi, Jr. In all the races leading up to the worlds, these two drivers were always on top of the pile. Jay Halsey was running for Associated/Reedy and Gil Losi, Jr. for the Ranch Pit Shop. In an attempt to gain an advantage Losi, Jr. swapped from Check-point to Trinity power, shortly before the worlds.

So the stage was set. The two top drivers, the two top motor manufacturers, and the two top car companies, with the Ranch importing the Yokomo.

Losi, Jr. was running an RC10 in the 2WD Stock division and a Yokomo in the Modified class. Halsey ran the RC10 in Stock, but in Modified ran an RC10 4WD prototype car. If any

drivers had been synonymous with a car it would have to be Halsey and the RC10 and Losi, Jr. and the Yokomo.

Well as it came out in the end Halsey won the Stock Class with the RC10 and Losi, Jr. won the Modified with the Yokomo. These were truly clutch performances because everybody expected the results to end as they did. Anything else would have been a major upset.

MOST ANTICIPATED EVENT

This was an easy one to pick. The Second 1/12 World Championships were in 1984. This was to be, as all world championships are, an interesting event. Yet most of the drama occurred before any of the drivers even arrived. If you remember correctly the 1983-84 year saw one 1/12 driver win everything he entered. This was Joel "Magic" Johnson. Going into the event Joel was the heavy favorite to win the worlds. Just prior to the event it was decided by Joel and sponsor Ernie Proveti of Trinity, that they would not attend the worlds. Instead, the two went to Japan to compete in a major race in that country.

In 1984 the modified world title was won by Tony Neisinger. The showdown between Tony and Joel had to wait until 1986.

The 1986 Worlds was held in Las Vegas, Nevada. Finally the two greatest 1/12 scale drivers of the time met. As you know the race was a classic with Tony just finishing in front of Joel for the world title. It was a race that was much anticipated, and then it finally came off, nobody was disappointed.



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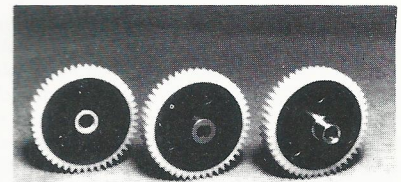
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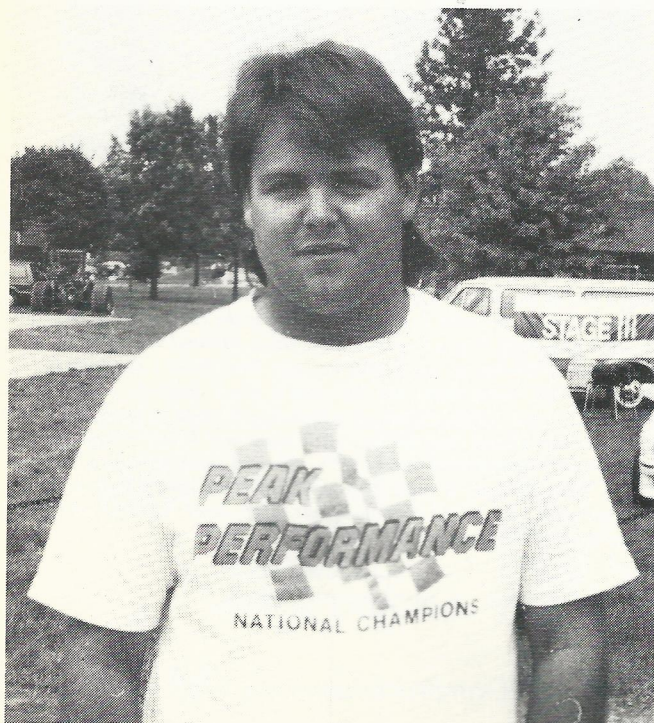
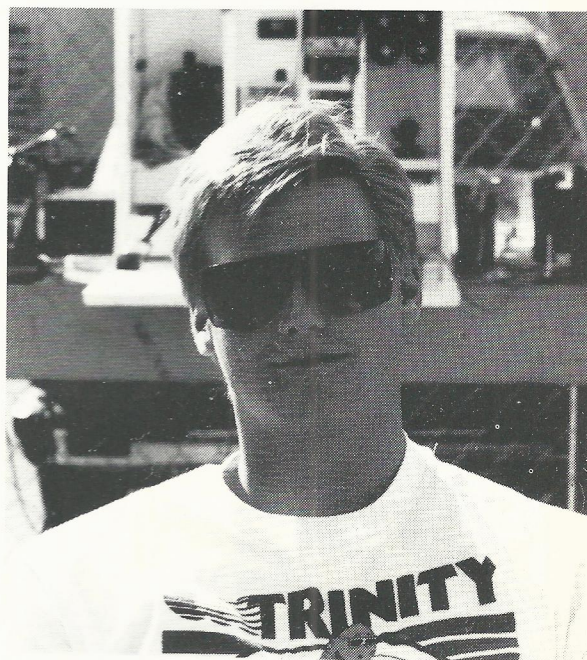
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Today's Hot Ones!



ABOVE: The three winningest drivers in off-road are pictured here. Left to Right: Masami Hirosaka has done it all. He is the current 2WD and 4WD World Champion. To go along with those titles, Masami is the current 1/12 Scale World Champion. Jay Halsey was our First World Champion in Off-Road in 1985. Since then, Jay has been a fierce competitor and always remains a threat. Cliff Lett put up a remarkable string of victories back in 1988. He won almost every National title there was! It was no surprise that these drivers finished 1-2-3 at the 1989 worlds in Australia for the 2WD class. LEFT: When it comes to road racing few drivers can match Tony Neisinger. The two-time 1/12 World Champion has many more National and World Titles to come. We'll see in 1990.



UPPER LEFT: Although Jack Johnson is no newcomer to off-road, 1989 was the year he really began to shine. He captured the 1989 2WD ROAR National Championship, as well as a few NORRCA National titles. The future will no doubt hold even greater success for Jack. UPPER RIGHT: Joel Johnson is another one of those drivers who keeps right on winning. In his early days he dominated 1/12 scale racing. Later he went on to win an Off-Road World title. Today Joel splits his time between the two scales. Let's see what the 90s will hold for him. LOWER LEFT: The name Rick Hohwart used to be mentioned only when road racing was discussed. Today Rick's name also jumps up at the top when off-road racing is the subject. In either type of racing, Rick is always in the finals. Rick will probably go down as one of our most versatile drivers.

NewsLine

LIVING UP TO THEIR NAME



By now I'm sure you've seen the ads for Racer's Choice Products. They are the makers of several performance products designed to improve everything from traction to lowering amp draw. Initial reports from racers we talked to gave Racer's Choice high marks. One interesting product was their TQ8+ tire traction. These products are made with a fruit oil base which emits a pleasant, non-harmful fragrance. This is a big plus especially for any racer who has competed in an indoor circuit.

Another product which is becoming extremely popular is their all-natural bearing cleaner. This product also removes rubber tire dust that can build up in bearings.

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MRC/TAMIYA RUN-FOR-FUN NATIONALS

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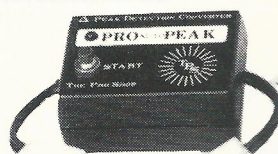
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From Maine to Oregon, from Missouri to Florida, and including Illinois, South Dakota, Iowa and many other states, came the Regional winners in the Run-For-Fun Nationals.

When the dust cleared, and all the heats and A Mains completed the winners were announced and a year of high anxiety was over.

In all, thousands of competitors, age 9 to 59, competed in local and regional meets in order to earn their way to the Nationals.

The rules of the MRC/Tamiya Run-For-Fun Nationals were unique in many ways. First, only stock MRC/Tamiya kits could race. No modifications, no hop-ups, no special assembly. To compete you must follow the kit directions and build only with what comes in the kit. This gives everyone an equal opportunity to compete. It means races were won on skill - not on an ability to spend for parts, or mechanical skills that could take years to develop.

Experience was no object. In fact, there was even a random winner drawn from the competitors at every local and regional race. And one drawn at the nationals, as well.



The result: Pictured Above: The National winner of the 2WD competition was Gary Wilson, Evansville, IN with 33 laps in 3.001. He's now driving a 1989 Pontiac Firebird, compliments of MRC. Finishing second with 31 laps in 3.010 was Steve Rocca, also of Evansville, who won a \$7,000 MRC/Tamiya hobby shop shopping spree. And in third place, the only female competitor at the Nationals, Mindy Dawlyey, winner of a \$3,000 shopping spree.

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1st PLACE A-MAIN 4WD MOD

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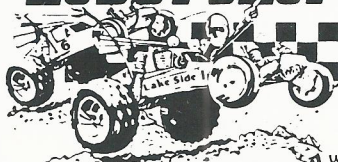
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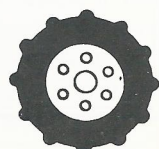


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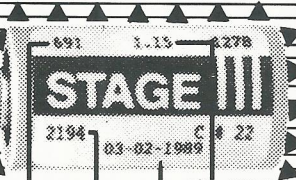
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quite that far. David Chouinard of Shrewsbury, NJ, took the Pontiac Firebird with 34 laps in 3.049. While Daryl Kilian of Point Pleasant, NJ, took second and a \$7,000 shopping spree. Finally, Chuck Gregory of New Bedford, MA, will sprint through a 3-minute \$3,000 hobby shopping spree in a specially stocked hobby shop loaded with MRC/Tamiya products.

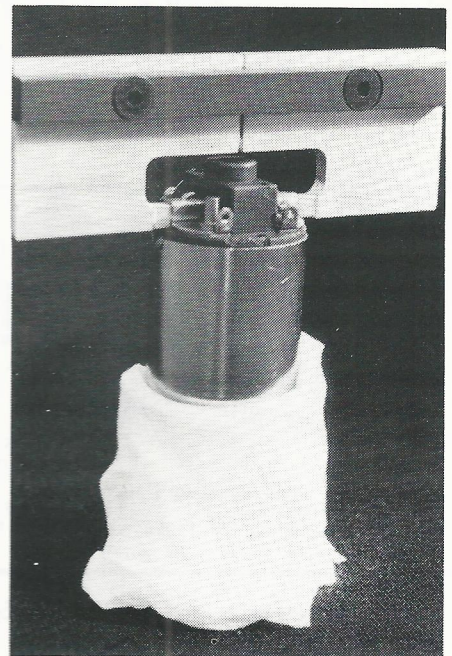
The Monster Truck shootout saw a \$15,000 first place finish by Dan Coast, Duke Center, PA doing 26 laps, with an unboiled egg attached to his Monster Beetle. Rick Nelson, Lake City, FL, took

second with his Blackfoot and an unbroken egg for a \$7,000 shopping spree and Tonay Porras, Salem, OR, raced his Blackfoot for third and a \$3,000 shopping spree.

F.A.S.T. RACING'S BRUSH HOOD ALIGNMENT TOOL

A couple of issues ago we told you a little about F.A.S.T. Racing, and one of their new products. A short time ago we received our sample of the product and had a first hand opportunity to see how

it worked.



This brush hood alignment tool is a quality made product which is used to increase your electric motor efficiency by setting the brushes at exactly 180° apart. This should both increase your motor's RPMs and torque.

F.A.S.T. Racing's tool is simple and easy to use, packaged with a step by step instruction sheet. First you remove the brush springs, brushes and brush hood

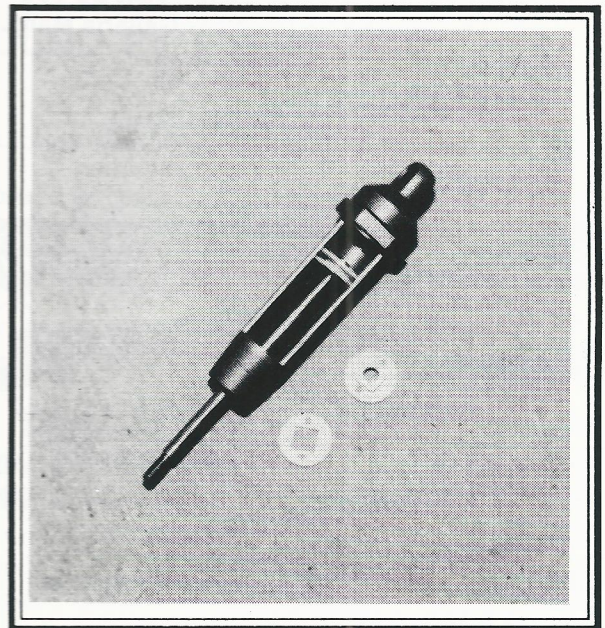
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retaining screws. Then you will install the brush hood alignment tool by separating the tool via the two socket head screws. The two apendages at the low end of the tool insert in the brush hood.

From there you replace the brush hood retaining screws (without brush shunt/eyelet) and tighten in place. The process puts the brush hoods at exactly 180° apart. It is recommended that you solder the screws in place. While you've got your gun out solder the brush shunt/eyelet to a convenient spot on the brush hood. Then solder on your caps.

Future brush changes do not require re-alignment. All in all, this is a very useful tool that is well built so it will last a lifetime. The product sells for \$39.95, part no. F201. The tool is being sold at many retail locations around the country. If you have any trouble finding it give F.A.S.T. Racing a call at (804) 732-1210 or write to: F.A.S.T. Racing Products, 4320 Puddelock Rd., Prince George, VA 23875.

1ST ANNUAL SCAT RACING 1/10 DIRT OVAL CHAMPS

By Jack Hanson

The First Annual Scat Racing Products 1/10 Dirt Oval Championships were run at Antioch R/C Raceway in Antioch, CA on Oct. 21st and 22nd. Some of the fastest 1/10 dirt oval racers from California and Nevada were there to dice it out on the fast, high banked oval. Saturday morning, 10 a.m. the 160 entries were ready. The track was fast, and foam tires seemed to work the best so most of the drivers were using them. "Go at the tone" and the first heat was up. I was in the scoring booth at that time and for a moment I forgot about the low, dark clouds that hung over Antioch Raceway. Heat five was at the half way point when the clouds let go. As the last sprint car slid across the finish line, we all knew that was it for Saturday's racing. The race was to continue Sunday at 9:30 a.m. We would then run two qualifiers and the mains.

Sunday morning looked good and by 10 a.m. the track was ready and maybe even faster than it was Saturday. The rolling hills around Antioch Raceway met the blue sky and the stage was set for

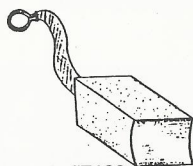
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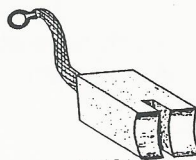
BRUSH

High quality, uniquely compounded material for the ultimate in performance. Sized to fit brush holder more precisely which in turn reduces vibration! Heavy gauge copper shunt wire with eyelet will carry the current that today's motors demand!



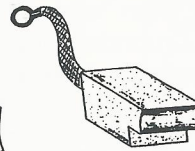
#7160
Standard

Full size for use where max. current carrying is a must. Short tracks and such where you need that GRUNT! Also, you may cut as you like. \$4.00



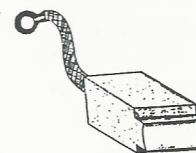
#7161
Air Cool Slot

Unique slot allows more cooling of the important contact tip. This brush will produce more R.P.M. with slightly less amp. draw and torque. \$4.50



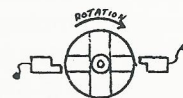
#7162
Timed

Installed in this direction will increase R.P.M. \$4.50

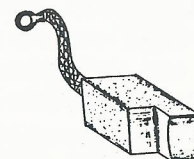


#7163
Horizontal Cut

Increased R.P.M. with slightly less amp. draw and torque. \$4.50



Installed like this will increase torque for 1/10 cars or tight tracks.



#7164

Vertical Cut

Increases R.P.M. with same torque and slightly lower amp. draw. \$4.50




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two fast and furious rounds of qualifying. We ran the two rounds and as the last car came across the line, the mains were set. We took a short break and went right into the mains, those dark clouds were back again.

The mains were run without a problem. The track was the fastest it has ever been. Up until the Scat race, there had never been a 37 lap run on it, but in qualifying, George Vardzik, of San Jose, a Custom Works team driver, pushed his



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WORLD'S FASTEST 10TH SCALE ELECTRIC MOTOR!

FROM 0 TO 76.98 MPH IN 132 FT!

West Palm Beach, FL — Drag racer Ron Ratoff used a **TWISTER #2001** motor to become the World's Fastest 10th scale electric driver with an incredible 76.98 mph run in a recent Top Fuel event. Ron was officially clocked on professional NHRA-style Chrondek clocks which have also timed him with a mind-boggling 1.91 ET in practice runs! Congratulations Ron!

KRIS MOORE DEVASTATES HAWAIIAN OPEN

Honolulu, HI — TEAM TWISTER blew through our 50th state like a hurricane. And when the devastation was over, Kris Moore had used two powerful combinations to take both the 2WD and 4WD classes. In 2WD Kris made the most of his hot **TWISTER #1002** motor, while in 4WD it was a **TWISTER #501** that powered him to a runaway victory. Naturally, Kris used **TWISTER #105 SCE Matched Batteries** to ensure he had plenty of power to finish what he started.

TWISTER SWEEPS THROUGH NORRCA OVAL NATL'S

Bakersfield, CA — New TEAM TWISTER member Brian Landgraff got off to a great start as he, his **TWISTER #2003** Motor and #105 SCE Matched Batteries blew away the 4WD competition at the 1989 NORRCA Oval Nationals. In 2WD, Eddie Knoles Jr. used his **TWISTER #702** Motor and #105 SCE Matched Batteries to dominate over the country's 2WD oval specialists.

MAGRUDER REIGNS OVER MIDWESTERN OVAL CHAMPS

Oklahoma City, OK — Privateer Nathan Magruder needed an "Unfair Advantage" to beat the factory drivers at the Midwestern Oval Champs. And he got it! Using a store-bought **TWISTER #2003** Motor and #105 SCE Matched Batteries he went out and put the big guns away in 4WD with an incredible display of power and driving talent. **TWISTER** welcomes Nathan to "The Unfair Advantage"!

TWISTER RIPS THROUGH WINE COUNTRY

Sonoma, CA — The peace and splendor of California's magnificent wine country were shattered by Team Twister. At the Region 6 Oval Championships, Brian Landgraff TQ'd, set a new track record, and won the 4WD class going away. In 2WD, it was vintage Eddie Knoles Jr. as he and his **TWISTER #702** blew the competition back into the vineyards. And in the Spring Car class, Jimmy Gouge took a solid TQ, powered by his **TWISTER #2004**. The Region may never be the same.

DREYFUSS DOMINATES MONSTER TRUCKS

Las Vegas, NV — Brandy Dreyfuss used a hot **TWISTER #202** to run away from a hungry Monster Truck field in the 1st Annual Las Vegas Race.

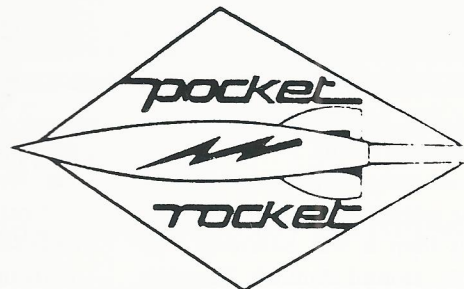
TWISTER'S NEW "POCKET ROCKETS"

TWISTER'S "POCKET ROCKETS" are a hot new line of sportsman motors designed to help keep costs down and performance up. On the street or track, POCKET ROCKETS will keep you ahead of the competition! Pocket Rockets are ROAR and NORRCA legal for Modified Class.

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- #3002 — 20T-Bushing 2WD Offroad — \$28
- #3003 — 15T-Bearing 4WD Offroad — \$45
- #3004 — 19T-Bearing 2WD Offroad — \$45

FREE TWISTER "R/C MOTOR TUNING GUIDE"

TWISTER'S new "R/C MOTOR TUNING GUIDE" is available FREE. It details the care and tuning of the electric R/C car motors with tips to help you get maximum performance and long life from ANY R/C motor. To get your copy, or just for tuning assistance, call the TWISTER MOTOR HOTLINE NUMBER: 818-914-6177, write us, or stop by our shop at 657 E. Arrow Highway, Suite H, Glendora, CA 91740.



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MID-WINTER OVAL

ICE BREAKER

January 12, 13 & 14, 1990

Classes: (Check one class per entry form)

- 1/10 Scale 2WD Gearbox Stock (ASA Body Only)
- 1/10 Scale 2WD Gearbox Modified (ASA Body Only)
- 1/10 Scale Stock (NASCAR Body Only)
- 1/10 Scale Modified (INDY Body Only)
- 1/12 Scale Stock (NASCAR Body Only)
- 1/12 Scale Modified (NASCAR Body Only)
- Sprint Car (7-Cell Modified)

ENTRY FEE: MODIFIED \$30.00 STOCK \$40.00

Stock entry includes hand-out motor.

1st Additional Motor \$15.00 - 2nd Additional Motor \$20.00 - Limit 3 per driver.

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Freq. 1st _____ 2nd _____ 3rd _____

Payment must accompany entry form.

Fee Enclosed \$40.00 Stock (Motor Provided) \$30.00 Modified Amount Enclosed \$ _____

(Note: Participants may enter more than one class. For additional entries deduct \$5.00 per entry.

No refunds after registration accepted.)

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Dominator to a 37, 4:00 for TQ in 4WD Super Modified. There were also two more 37 lap runs in 4WD Super Modified by Flying Brian Curran, Antioch and Scat driver, running a Superior SRP-1, his time 37, 4:03. Jerry (Firehawk) Winkelbauer, Custom Works, RevTech, Scat and Antioch driver, drove his Dominator at a 37, 4:04. John Guiliani, of Stockton, was the only driver to walk away with two of the eight huge TQ trophies that Scat Racing provided. John's TQ came in Modified Sprint and a new class here at Antioch, "The Classics" 1959 and older bodies, ROAR Modified motors and 6 cells, no wings or side dams. Greg Davis (Thunder Roads) until this time was king of the oval in Classics, but he just could not get enough H.P. out of his '49 Mercury to catch John.

Even with rain Saturday, this was one of the best 1/10 dirt oval races ever run at Antioch. The races went off like clock work and everyone had a good time. Thanks to Scat Racing, Dahms Racing and McAllister for all the prizes. The RC10 given away by Antioch Raceway was won by James Parcill, Sr., of Oakland.

Antioch Raceway is now in process of remodeling the dirt oval track by adding permanent walls inside and out. The off-road track in the middle of the oval will be moved to the middle of the 1/8 gas asphalt track. The asphalt track will become an asphalt oval with a 160 foot straightaway, 14 feet wide, for 1/8 and 1/10 on-road cars. We hope to have this done by the first of the year.

Antioch R/C Racway is located 45 miles from San Francisco. We race four times a week, open seven days a week. Come by and race with us.

A MAIN NOVICE

- 1st - Richard Smith/TQ
- 2nd - Kevin Goforth
- 3rd - Richard Confetti

A MAIN FULL BODY STOCK

- 1st - Sean Sinclair
- 2nd - Rick Noack/TQ
- 3rd - Rich Albright

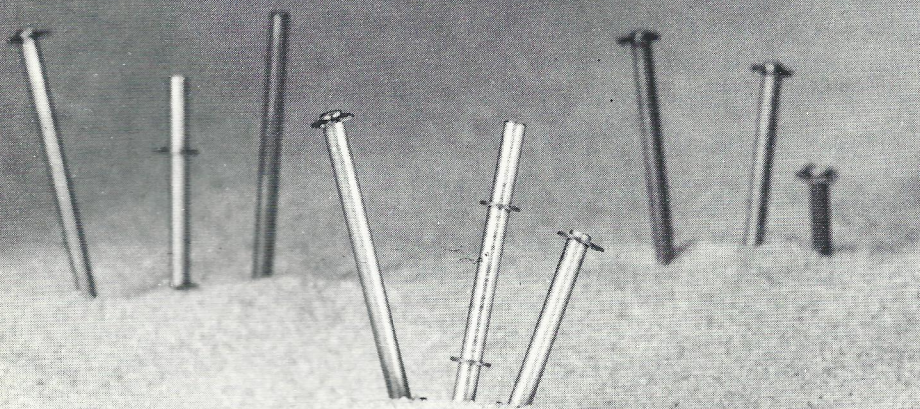
A MAIN FULL BODY MOD.

- 1st Ted Holt/TQ
- 2nd - George Vardzik
- 3rd - Gene Azevedo

A MAIN SPRINT STOCK

- 1st - Steve Alexander/TQ
- 2nd - John Guiliani
- 3rd - Kance Chan

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Race director has options to select number of cars per race for all classes, and sequence of racing class events.

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We are tooling up to have RCC5.V5 on the market very soon.

Suggest you purchase the RCC5.V4 system now so that you will be computer-wise when the remaining hardware will be available.

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A MAIN SPRINT MODIFIED

- 1st - John Guiliani/TQ
- 2nd - J. D. Beckwith
- 3rd - Robert Ladonne, Jr.

A MAIN CLASSICS

- 1st - John Guiliani/TQ
- 2nd - Greg Davis
- 3rd - Chuck Begley

A MAIN 4WD MODIFIED

- 1st - Dave Underwood
- 2nd - Scott Goforth/TQ
- 3rd - Flyin Kevin

A MAIN 4WD SUPER STOCK

- 1st - Dave May/TQ
- 2nd - Jerry Winkelbauer
- 3rd - Brian Landgraff

A MAIN 4WD SUPER MOD.

- 1st - Brian Landgraff
- 2nd - Jerry Winkelbauer
- 3rd - George Vardzik/TQ

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B MAIN NOVICE

- 1st - Wayne Hansen
- 2nd - A. Miller
- 3rd - Dougie Dog

B MAIN FULL BODY STOCK

- 1st - Mike Burnett
- 2nd - Marvin Irishman
- 3rd - Erich Neola

B MAIN FULL BODY MOD.

- 1st - Mike Kagley
- 2nd - Erich Neola
- 3rd - David Blanc

B MAIN SPRINT STOCK

- 1st - Robert Ladonne, Jr.
- 2nd - John Sutherland
- 3rd - Zip-N-Zak

B MAIN CLASSICS

- 1st - Steve Chan
- 2nd - Lance Chan
- 3rd - Dave Underwood

B MAIN 4WD SUPER STOCK

- 1st - Matt Splivalo
- 2nd - Terry Raras
- 3rd - John Lind

B MAIN 4WD SUPER MOD.

- 1st - Casey Roy
- 2nd - Dave May
- 3rd - Bob Harris

C MAIN FULL BODY STOCK

- 1st - Gene Azevedo

2nd - Kirt Organ

3rd - Rich Anderson

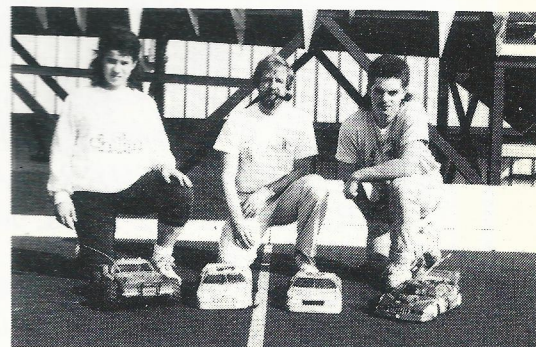
C MAIN SPRINT STOCK

1st - Scott Tomasello

2nd - John Reyes

3rd - Rich Doppie

A NEW REGIONAL PUBLICATION FOR THE NORTHEAST



Left to Right: Jenny McGee, Bob McGee, Josh McGee are those responsible for the publication R/C Auto Racing Weekly News.

For those racers in the Northeast area there is a new publication that caters to your local news. The new publication is

FLORIDA STATE ELECTRIC AUTO RACING ASSOCIATION



PRESENTS:

THE AutoGraphics FLORIDA STATE SERIES - G.T.P. CHALLENGE

"The Premier Road Racing Series"

1990 SCHEDULED EVENTS

NOVEMBER	4 & 5	1989	NAPLES, FL
FEBRUARY	3 & 4	1990	MIAMI, FL
MARCH	24 & 25	1990	JACKSONVILLE, FL
APRIL	28 & 29	1990	FT. LAUDERDALE FL
SEPTEMBER	15 & 16	1990	ORLANDO, FL
OCTOBER	13 & 14	1990	PINELLAS, FL
NOVEMBER	10 & 11	1990	NAPLES, FL

THE FLORIDA STATE RACING ASSOCIATION PROUDLY ANNOUNCES OUR G.T.P. CHALLENGE, SPONSORED BY AUTOGRAPHICS OF CALIFORNIA. THERE ARE THREE CLASSES OF COMPETITION; 1/10th SPORTSMAN, 1/10th MODIFIED & 1/12th MODIFIED. OUR RACING FORMAT CONSISTS OF 4 QUALIFIERS: 2-SATURDAY & 2-SUNDAY FOLLOWED BY THE MAINS. WE ALSO HAVE THE BEST PAINT & CONCOURS COMPETITION AS WELL AS PRIZE DRAWINGS ON SUNDAY. THIS IS INDEED "THE PREMIER ROAD RACING SERIES", SO COME ON OUT AND BE A PART OF THE FLORIDA STATE SERIES.

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COCOA, FLORIDA 32922

OR CALL STEVE WHITNEY AT (407) 631-8761

Radio Control Auto Racing Weekly News and is published by McGee Racing. Each issue is filled with race reports from the Northeast area. The cover price is \$1.00. It is also available by subscription. A three month subscription (12 issues) is only \$11.00 There is also a six month subscription plan (26 issues) for \$23.00. For further information, or to subscribe the address is McGee Racing, 6 Prospect Pl., Cromwell, CT 06416.

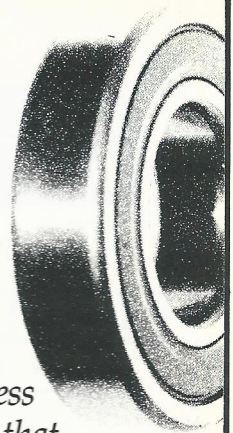
Each issue of Competition Plus will now include a column by Bobby McGee. Mr. McGee will be a great source for our readers who would like to get the low-down on what's happening in the Northeast.

SPEEDWORKS SPORTSMAN CUP RACE

Trinity Products is proud to announce that we are expanding the "Speedworks Sportsman Cup Race" to a three race series. There will be a race on the East Coast, West Coast and one in the Midwest.

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R/C is Red Hot!
WALL ART FOR R/C ENTHUSIASTS!

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RCWA1

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Finally, the first in a series of HIGH QUALITY posters promoting radio control vehicles. Suitable for framing, posters are 32" wide and in full color with special gloss varnish.



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Check box if you'd like information on "R/C is Red Hot®" Shirts & Caps. Make check or Money order payable to "The Control Room". Send to: 1334-D N. Benson Ave. Upland CA 91786 Allow 15 days for personal checks to clear. Outside U.S. send money order only.

	Qty	Amount
RCWA1 (VETTE-GTP)		\$7.50
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Add 6% sales tax for CA res.		
Shipping & Handling		\$3.50
TOTAL		\$3.50

For C.O.D., VISA or MasterCard orders call 714-946-0664 (9-5pm M-F)
To avoid rush charges, Christmas orders should be phoned in no later than Dec. 15th

CA

K/N ↓ RC SPEEDWAY

PRESENTS

"NEW ENGLAND'S WINTER BLAST INDOOR OVAL CHAMPIONSHIPS"

JANUARY 20th & 21st

LOCATED AT THE STAFFORD MOTOR SPEEDWAY, STAFFORD SPRINGS, CT. 06076
NEW ENGLAND'S LARGEST INDOOR FULLY BANKED CARPET OVAL
100ft. BY 34ft. WITH 4ft. HIGH BANKED TURNS !!

CLASSES= SATURDAY, DIRECT DRIVE & TRANSMISSION STOCK
SUNDAY, DIRECT DRIVE 6 CELL MODIFIED, TRANSMISSION 6 CELL MOD.
BODY= GRAND NATIONAL ONLY, FULL FENDER, NO CUT DOWNS, CLEAR WINDOWS, CLEAR
WINGS ALLOWED.

RACES= 3 QUALIFIERS AND 1 MAIN, EACH 4 MINUTES.

TIME= DOORS OPEN AT 8am., RACING STARTS AT 10am.

PRIZES= A MAIN - TROPHIES & T-SHIRTS ALL PLACES ROAR RULES APPLY !!

B THRU J - TROPHIES TOP 3

TQ EACH CLASS - TROPHY

CONCOURS - TROPHIES TOP 3, MUST RACE SAME BODY. SATURDAY 9:30am.

JUDGED ON BEST LOOK A LIKE, BRING PICTURE

RACE FEE= STOCK - \$30.00, INCLUDES MOTOR, MODIFIED - \$20.00 . PRE-REG.

DAY OF RACE, STOCK \$35.00, MODIFIED - \$25.00

MORE INFORMATION CALL : K/N RC SPEEDWAY AT 203-684-9896

"NEW ENGLAND'S WINTER BLAST INDOOR OVAL CHAMPIONSHIP ENTRY FORM"

NAME: _____ PHONE: (____) _____

ADDRESS: _____

CITY/STATE/ZIP: _____

FREQUENCY: 1 _____ 2 _____ 3 _____ SKILL LEVEL: _____

DIRECT DRIVE STOCK: _____ DIRECT DRIVE MODIFIED: _____

TRANSMISSION STOCK: _____ TRANSMISSION MODIFIED: _____

SEND CHECK TO K/N RC SPEEDWAY, BOX 36, STAFFORD SPRINGS, CT. 06076

ROAR RULES APPLY !!

WESTCOAST R/C CLUB

Tampa, Florida
Proudly Presents

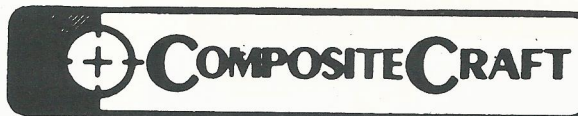


1/10 Off Road

4th Annual

FLORIDA WINTER CHAMPIONSHIP

FEB. 23 - 24 - 25 1990



HANS' HOBBY SHOP

1202 W. Waters Ave. Tampa, FL 33604
813-935-7782

CLASSES:

Stock \$45⁰⁰ includes 1 Hand Out Motor
Modified \$35⁰⁰ each class
Limit 2 Classes per entry
Additional Stock Motors \$15⁰⁰ each Limit 2
Best Appearing Judging - Sponsored By Autographics

ROAR:

ROAR Rules Apply
ROAR Membership Required/May Join at Race

Enter early as registration will be limited to 350 entries.
You will receive additional information upon receipt of entry
AMB Lap Counting system will be used.

ENTRY REFUND DEADLINE JANUARY 15th. 1990

Entry not transferable.

For further information CALL Bob Serra 813-935-7782 Hans Hobby
or 813-239-9630 Home

Official Entry Form
Deadline January 15, 1990

Name _____ Phone _____ Roar# _____
Address _____ City _____ State _____ Zip _____

Classes	Frequencies			
2 WD STOCK _____	1st _____	2nd _____	3rd _____	
2 WD MOD. _____	1st _____	2nd _____	3rd _____	
4 WD MOD. _____	1st _____	2nd _____	3rd _____	

T-SHIRT SIZE - ADULT S _____ M _____ L _____ XL _____ XXL _____

Car _____ Motor _____

Sponsors _____

Total Amount Enclosed \$ _____

West Coast R/C Club
3906 Bay Villa Ave. • Tampa FL 33611

Make Checks Payable To:

RACING TO BRING YOU THE BEST TIRES IN THE WORLD.

Race Engineered Design Tires are the newest development of the PRO-LINE® Racing Team. RED Tires combine high-tech rubber compounds and competition tread design geared for the most specific track conditions. RED Tires deliver unmatched performance to RC Racers who want only the best.

RED

Race Engineered Design
P R O - L I N E



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

The Speedworks races are designed for the amateur racer with the best part being technical seminars put on by the best racers in the country.

As a hobby shop owner or race promoter you can have your track as one of the sites for this famous event. Send pictures of your track and shop to Trinity Products, Inc. along with a resume which shows your qualifications to put on this type of event. The track can be either on or off-road, indoors or out.

We want this year's event to be even better than last year, and want to run at the best facilities in the country! So send in all your information and you might be one of the lucky winners. We will decide on the sites by January 10, 1990. Trinity Products, 1901 E. Linden Ave., No. 8, Linden, NJ 07036

Don't Make A Move Without Us!

Subscriber: Please notify us of your new mailing address four weeks prior to moving.

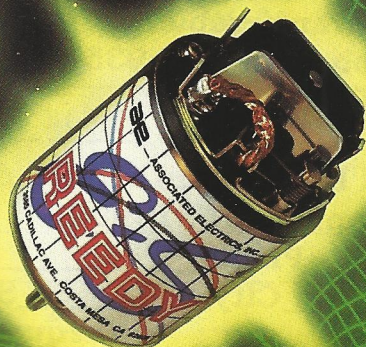
Name _____

Address _____

City _____

ESPRIT SERIES

Power Within Your Reach.



Introducing the **Esprit Series** motors. Based upon Yokomo's Esprit motor—which set **THE** world-wide standard for R/C car racing! Affordable power for everyone, the economical Esprit Series motors deliver reliable performance racers have come to expect from the name **Reedy Modifieds**.

Mike Reedy developed the individual winds. All motors were built to demanding specifications established through extensive testing in the same Reedy motor lab that bred 5 IFMAR World Champions.

The Sport models incorporate bushing-type bearings. The Ultimate models use ball bearings for extra life.

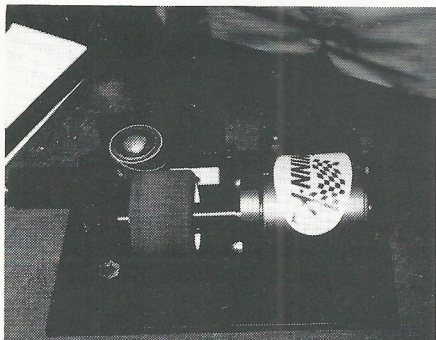
REEDY
Modifieds

TEAM ASSOCIATED

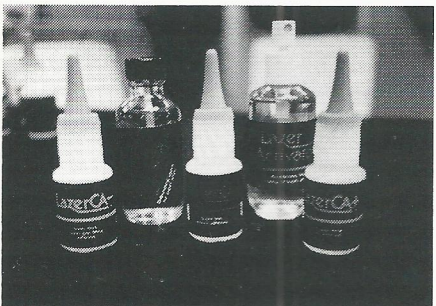
ASSOCIATED ELECTRICS, INC.
3585 CADILLAC AVE.
COSTA MESA, CA 92626
(714) 850-9342 TLX 756887
FAX 714-850-1744

New Products . . .

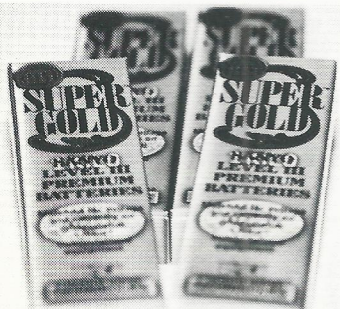
From The RCHTA Show



Twinn-K's new Tire Tru is the perfect truing machine. It is a 12 volt DC truer which enables you to take it along with you anywhere. A must for serious racers. Replacement parts are also available. Twinn-K, P. O. Box 31228, Indianapolis, IN 46231, (317) 839-6579.

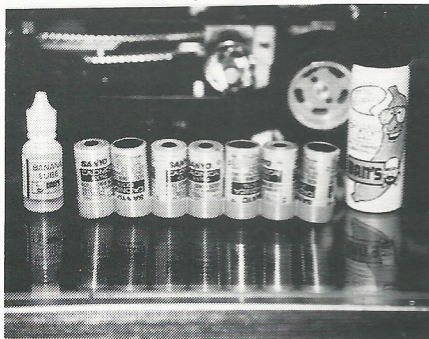


VRP introduced their new line of lazer adhesives. This super adhesive comes in thin, thick and super thick and is complimented by the lazer debonder and lazer activator. What makes this adhesive even better is the low price. VRP, 4555 Groves Rd., #15, Columbus, OH 43232, (614) 861-4555.

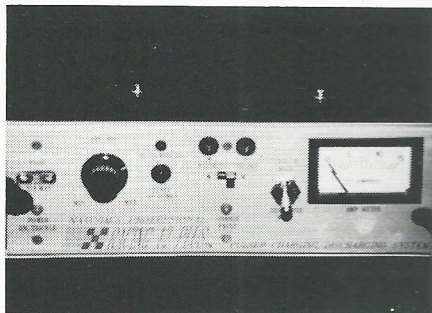


Progressive Technologies, Inc. has come to the racer's rescue. Because of the great demand for top grade cells. PTI has acquired one of the

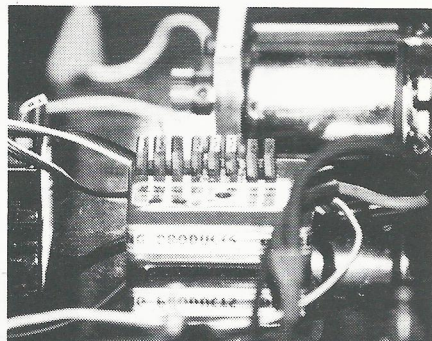
most sophisticated LAVCO computerized matching systems and began supplying the racers with SCE and SCR Super and Super Gold matched batteries. PTI, P. O. Box 16284, Winston-Salem, NC 27115-6284, (919) 761-1375.



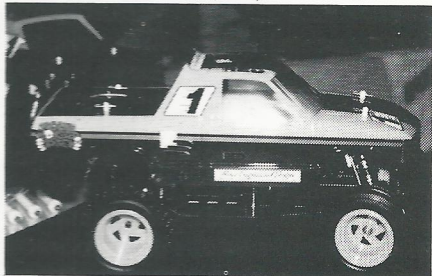
Dan's R/C Stuff featured their "Battery Pack Pals". These molded plastic battery holders keep the cells in perfect position for soldering. The other side presses on and is taped in place. No need for gluing your packs together. Also Dan's Banana Lube, now comes in a spray making it even more convenient to lube your bearings or anything else. Dan's R/C Stuff, 9525-C Cozycroft Ave., Chatsworth, CA 91311, (818) 700-6912.



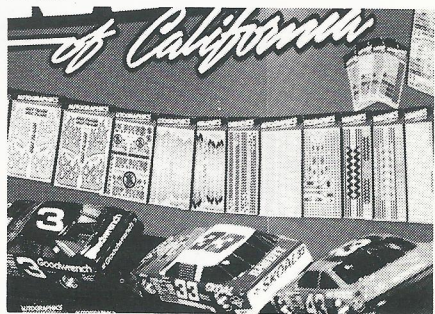
New from Navcom is their Racing 12 Plus. It's a pulsed power peak detecting charger/discharger. It features a built-in ampmeter, 3.5 to 15.5 amps adjustable charge or discharge current and probe jacks for monitoring charge voltage and current with a digital volt meter. Navcom, Inc., 350 N. Main St., Huron, OH 44839, (419) 433-7626.



Diales Racing Products has just released its Pro Series of electronic speed controls. These units are equipped with reverse voltage protection which means they are blow out protected! They can be used with 4-10 cells. Diales Racing Products, 1900 Lafayette St., #106, Santa Clara, CA 95050, (408) 727-0165.



ProLine proudly introduced their Kyosho/Ultime Monster Truck Conversion kit. It includes extended front axles, competition tires, clear lexan Ford truck body, direct fit front and rear racing wheels and sturdy body brackets. This kit is sure to be a winner! ProLine also makes monster truck conversion kits for the RC10 and JRX2. ProLine, P. O. Box 456, Beaumont, CA 92223, (714) 849-9781.

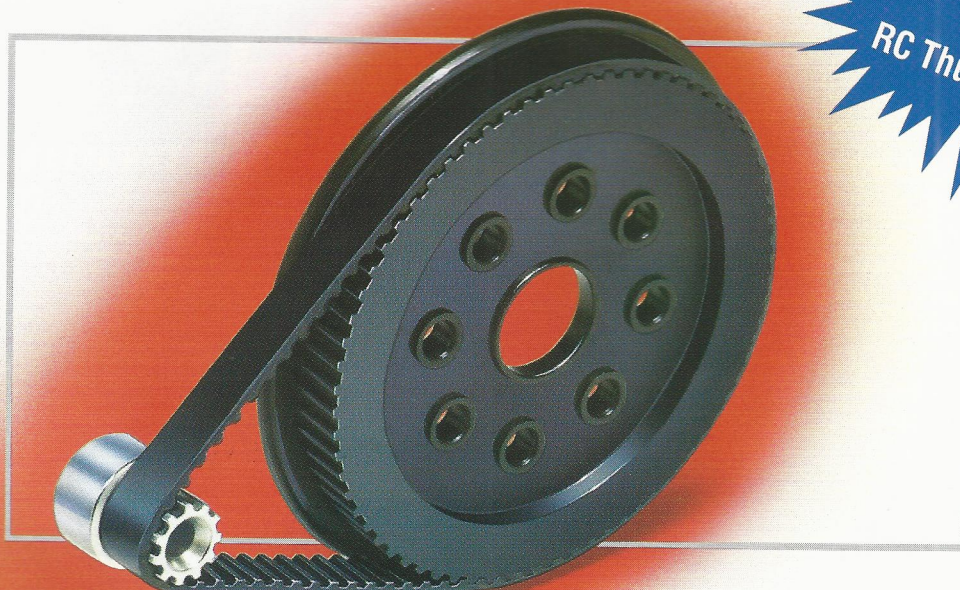


Autographics of California pre-

Be a winner! Hyperdrive makes it happen.

***Do you want the special trick equipment
factory team drivers get?
Hyperdrive delivers it!***

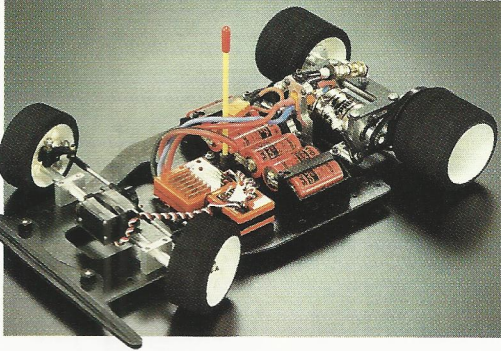
***Hyperdrive TQ's
and wins
Lake Whippoorwill
and
RC Thunderdrome!***



Hyperdrive

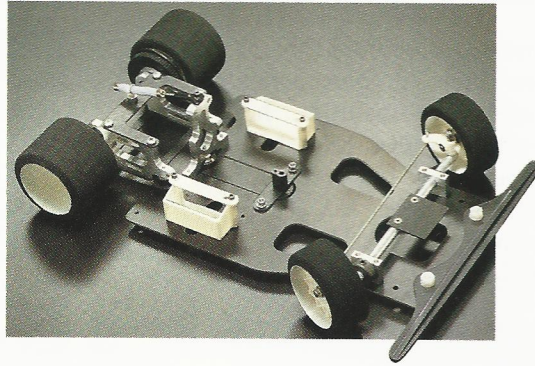
Belts break the vibration barrier! Hyperdrive delivers less friction, more horsepower with high speed belt technology. Motor pulleys are precision machined. Diff pulleys are Teflon impregnated. No diff lube is necessary. Kits are available for all applications and all parts are available individually, as well.

Hyper 10 Competition



14 time national champion Ralph Burch Jr.'s record breaking ride. The fastest 10th scale straight axle car in the world features unique ball-jointed triple shock rear suspension, Hyperdrive belt system, Hypertorque diff, Hyperballs, Hyperrings, graphite chassis and rear axle, ultra light aluminum hubs, adjustable ride height, adjustable castor, adjustable wheel base, steering stops, steering linkage, special trick steering mount, BBS wheels and Hyperbite tires. Incredible performance on high speed ovals and road courses. Complete line of parts and accessories in stock. #HY0010 Retail \$449.95

Hyper 10 Sportsman

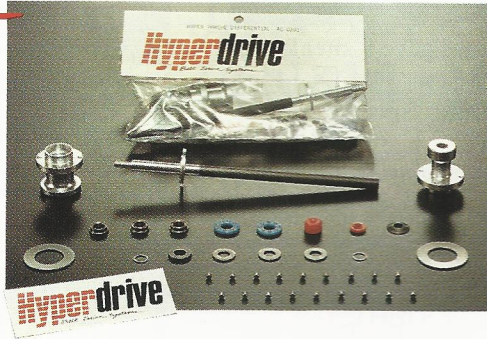


The Hyper 10 Sportsman is a semi-pro version of the Hyper 10 competition car. It can be upgraded to the competition model with three easy kits.

Features include fiberglass chassis and Hypertorque differential, ultra light aluminum hubs, adjustable ride height, adjustable castor, adjustable wheel base, steering stops, P.D.S. T-plate suspension and special trick steering servo mount. Awesome performance at a super affordable price. #HY0012 Retail \$239.95

Hypertorque diff

This killer, ultra light weight diff was designed for the Hyper 10 and directly replaces diffs for DELTA, TRC, Composite Craft, Lazerlite, Bolink, and other cars that use the pro-style diff. The system can be used with Hyperdrive or any 64, 48 or 32 pitch associated style gear. Hyperballs and Hyperrings are included, and all parts are available individually. The smoothest competition differential on the market. #AC0201 Retail \$85.00



Hyperdrive kits and accessories

Hyperdrive offers a complete line of full competition kits and accessories proven in national competition.



RC-10 Extended Motor Plate Kit
HY 1007 Retail \$39.95



RC-10 Kit HY 1006
Retail \$89.95



Rear or Mid Dust Covers
EP 0104, 05 Retail \$3.00 (each)



JRX-2 Hyperdrive Kit HY 1010
Retail \$89.95



Kyosho Mid Optima Hyperdrive
Kit HY 1009 Retail \$59.95



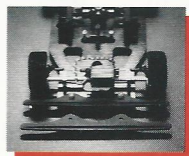
Light Weight Machined Delrin
Hubs AC 0202 Retail \$17.00



Hyperrings DR 1001
Retail \$3.95 (pair)



Hyperballs DB 0901
Retail \$3.95



Competition Bumper CH 0105
Retail \$6.00



Wing Buttons AC 0104
Retail \$4.00 (pair)

Make it happen!

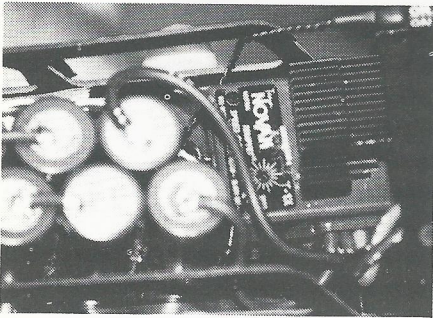
For parts, catalogs (\$1), help, call factory direct. Also available through hobby shops and popular distributors. VISA and MC accepted.

Hyperdrive

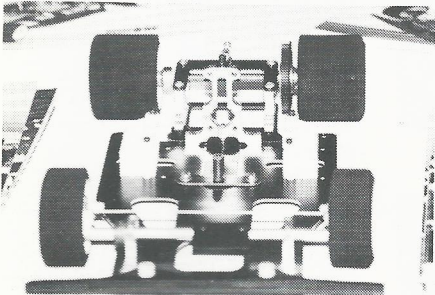
Racing Systems

New Products Continued . . .

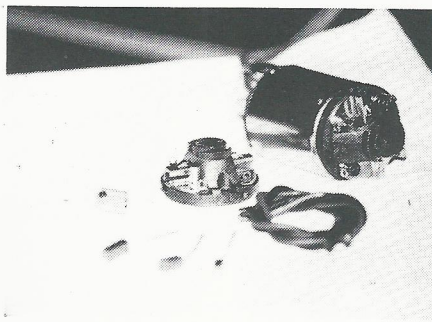
miered 15 new multi-colored theme sheets from their unique series. Included are stars, wildfire, hot flash, spin-n-lines, grid-n-lines, high voltage, zippers, low bucks racing, life's a beach and silver bullet racing. Autographics of CA, 1700 14th St., Bakersfield, CA 93301, (805) 322-3633.



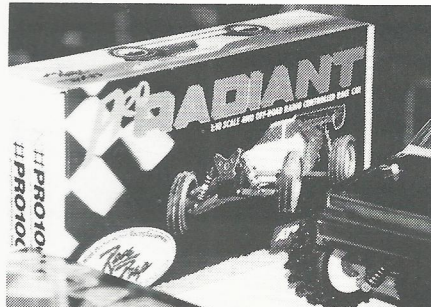
Novak Electronics gave a sneak preview of their new HV-1X, high voltage electronic speed control. This unit has been specially designed for high voltage and high current applications. Its perfect for monster trucks, drag cars and truck pulls. Look for it to hit the hobby shops in the Spring of 1990. Novak Electronics, 128-C E. Dyer Rd., Santa Ana, CA 92707.



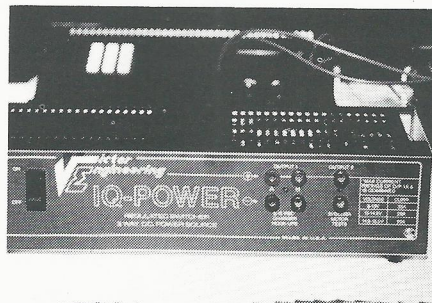
Hyperdrive featured their new Hyper 10 Sportsman model. This is a semi-pro version of the Hyper 10 Competition car. It features a fiberglass chassis, hyper torque diff, ultralight aluminum hubs, adjustable caster, adjustable wheel base, steering stops, P.D.S. T-Plate suspension and special trick steering servo mount. One more great feature is that it grows with the racer, it can be easily upgraded to the competition car with three add-on kits. Hyperdrive, 3210 Howard Nickell Rd., Fayetteville, AR 72703, (501) 444-8200.



MCS Products introduced yet another great product, the custom brush cutter. This unit allows you to cut your motor brushes precisely everytime. It's perfect for cutting brushes between races, too. MCS Products, 502 Price Drive, Lewisville, TX 75067. FAX: (214) 436-2261.

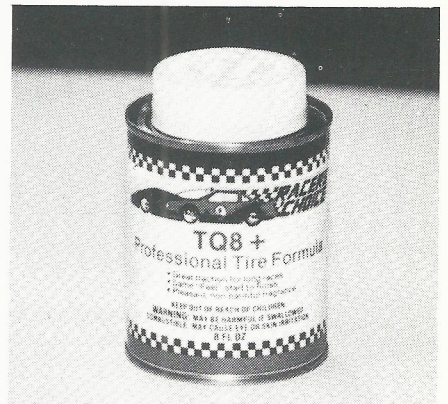


Race Prep had on display their AYK Pro Radiant. This race proven car is a 4WD machine and comes equipped with everything you'll need to become a winner. Race Prep, 20115 Nordhoff St., Chatsworth, CA 91311, (818) 709-6800.

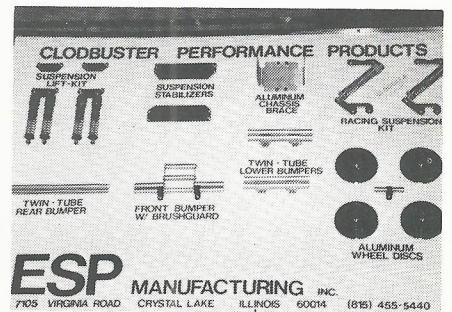


Victor Engineering proudly premiered their new IQ Power, high output regulated switching power supply. This power source was specifically designed for the R/C racer. It features high power dual charger hook-ups, 5V DC/50 A motor test output, and it is overload protected. A great unit for the novice or the pro. Victor Engineering, 380 Camino de Estrella, #170, San

Clemente, CA 92672. (714) 496-9701.



New from Racer's Choice is their TQ8+ Professional Tire Formula. This formula is ideal for all track surfaces and allows for the same traction from the start of a race to the finish. Racer's Choice, P. O. Box 405, Medinah, IL 60157, (312) 980-4863.



ESP Mfg. makes all kinds of performance products for your Clodbuster, bumpers, suspension kits, aluminum wheel discs and more. A great way to make your Clodbuster a racing machine. ESP Mfg., 7105 Virginia rd., Crystal Lake, IL 60014, (815) 455-5440.



Lazer Lite is proud to introduce their new Top Fuel Drag Car. Look for it to be released in December. Lazer Lite, 2090 S. W. 71st Terrace, Unit H9, Davie, FL 33317, (305) 473-8587.



CORCAR

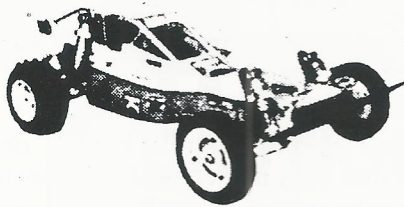


PRESENTS

THE 3RD ANNUAL WINTER MIDWEST 1/10 OFF ROAD INDOOR CHAMPIONSHIP

AT COOPER ARENA OHIO STATE FAIRGROUNDS
COLUMBUS, OHIO

2WD & 4WD STOCK SAT JAN 13, 1990
2WD & 4WD MODIFIED SUN JAN 14, 1990



PREPAID ENTRY FEE \$30 WITH HANDOUT MOTOR
PREPAID ENTRY FEE FOR MODIFIED \$25
DEADLINE FOR MAIL ENTRIES IS TUES JAN 1, 1990
ALL ENTRIES ARE PREPAID. NO ENTRIES AT TRACK
TROPHIES 1ST THRU 10TH A-MAIN 1ST THRU 3RD
ALL OTHER MAINS. CONFIRMATION AND HOTEL LIST WILL
BE MAILED UPON RECEIPT OF ENTRY FEE / WITH LARGE
SASE. THREE QUALIFIERS AND A MAIN WILL BE RUN ON
EACH DAY.
FOR MORE INFORMATION CONTACT RAY WILLIAMS
614/890-2983 OR RICHARD LOVE 614/457-8940.

NAME _____ ROAR NO _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

SKILL LEVEL: BEGINNER _____ INTERMEDIATE _____ EXPERT _____

2WD STOCK - FREQUENCIES 1. _____ 2. _____ 3. _____

4WD STOCK - FREQUENCIES 1. _____ 2. _____ 3. _____

2WD MODIFIED - FREQS 1. _____ 2. _____ 3. _____

4WD MODIFIED - FREQS 1. _____ 2. _____ 3. _____

PLEASE LIST THREE FREQUENCIES

MAIL AND MAKE CHECK PAYABLE TO:

CORCAR

1/2 RAY WILLIAMS
2145 PINE KNOLL
COLUMBUS, OHIO 43229

ENTRY FEE NON REFUNDABLE
ENTRIES LIMITED 200 STOCK
150 MODIFIED



ROAR
MEMBERSHIP
REQUIRED
(available at race)
SANC NO. 03-89-20

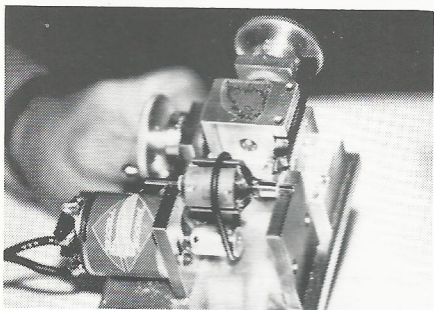
New Products Continued . . .



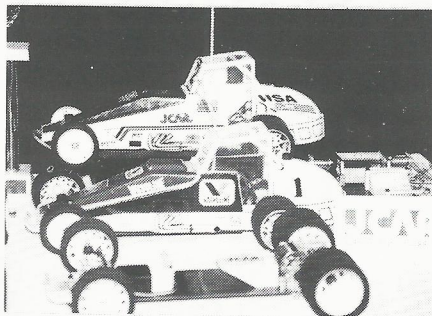
C & M Mfg. featured their new Cobra Sport 1/10 scale on-road car. This easy to assemble car is equipped with a ball diff, 4 way rear pod adjustment and a sprung front end. C & M Mfg., P. O. Box 701353, West Valley City, UT 84170, (801) 967-1914.



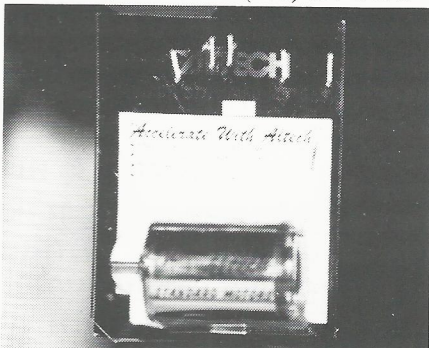
The Ungar Race Stations, available exclusively through Horizon Hobby Dist., are a great addition to any racing box. They feature selectable heat from 400° - 800° F and is equipped with special thermal thrust tips for R/C use. Horizon Hobby Dist., 3102 Clark Rd., P. O. Box 6029, Champaign, IL 61821, (217) 352-1913.



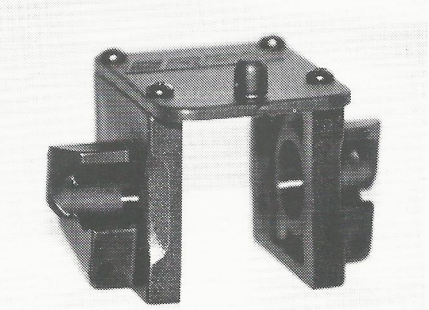
Twister introduced their pocket commutator lathe. It is completely portable and runs on a 4-cell battery pack or a 5 volt power supply. It's the world's smallest at only 4 x 5 x 3 inches, and is the most accurate you can buy. Twister Motors, 657 E. Arrow Hwy., Ste. H, Glendora, CA 91740.



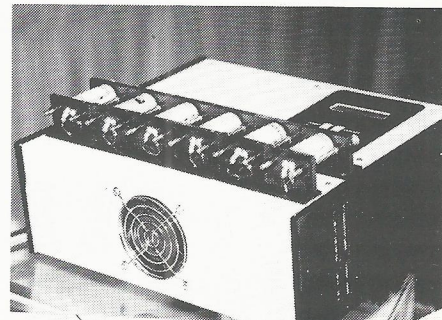
J-Car's new M-1 Lightning Midget car, is designed to be the simplest car to own and maintain. The kit comes with everything to complete the chassis, all you need to add is the tires, front wheel bearings, body and electrical. J-Car, 52 Perkins Ave., Norwich, CT 06360. (203) 887-6476.



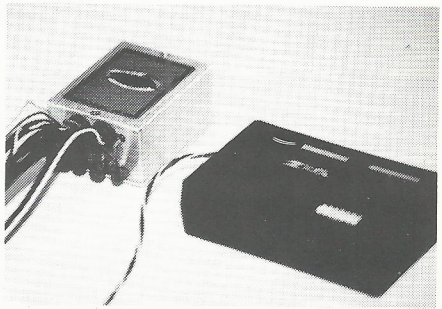
Altech Marketing featured their series of wet magnet motors. The two series, standard and racing, will cover all your motor needs. Altech Marketing, P. O. Box 391, Edison, NJ 08818, (201) 248-8738.



R.P.M. manufactures a front bulkhead for the Yokomo YZ10. This is a strong precision molded bulkhead in which the arms and shock towers have been tilted back 12°, for more caster on the front end. This allows for the car's suspension to absorb bumps better and turn faster. R.P.M., 14978 Sierra Bonita Lane, Chino, CA 91710, (714) 393-0366.



Competition Electronics introduced their Turbomatcher. It tests 6 cells at one time and the charge/repeak/discharge cycle is completed automatically. When the user supplies a printer it will print labels and graphs with all the specs of the cells. Competition Electronics, 2542 Point O'Woods, Rockford, IL 61111, (815) 877-3322.



Zeta Speed Controls have a new Turbo Zeta model ideal for monster trucks or truck pulls with twin motors. It will also handles up to 32 cells. PDI-Zeta, 16922 N. E. 124th St., Redmond, WA 98052, (206) 883-4007.



Scat Racing Products introduced three new products Power Plus Motor Spray, Maximum Traction, for paved surfaces, and Traction Plus, great for drag racing and hard packed dirt ovals. Scat Racing Products, 20029 Labrador St., Chatsworth, CA 91311, (818) 885-SCAT.

New Products Continued . . .

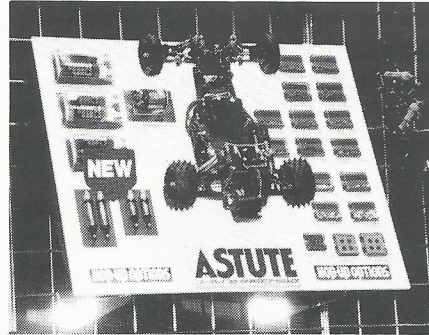


RevTech displayed their Sport Series of motors. These motors are high quality and performance without the high price. They also come in twin packs for twin motor vehicles like the Clodbuster. RevTech Industries, 7401 White Lane, #19, Bakersfield, CA 93309, (805) 836-9099.

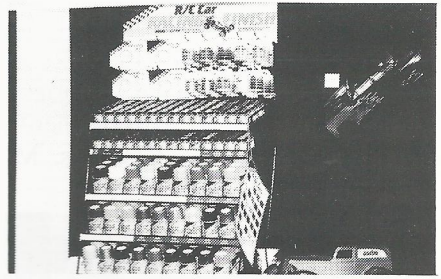


Ultra-Seals are the new standard in

bearings. These frictionless sealed bearings are completely protected from dirt and dust. Kits are available for the RC10, RC12L, RC10L, JRX2, Hyper 10 and many more. Boca Bearing, 7040 W. Palmetto Rd., #2304, Boca Raton, FL 33433, (407) 488-9606, (800) 332-3256.



MRC/Tamiya had their Astute car on display. This 1/10 off-roader is equipped with front double wish-bone suspension, rear independent suspension with toe-in adjustment and front and rear one piece wheels. MRC, 200 Carter Dr., Edison, NJ 08817.



New from Pactra are more paint colors, trim tape for stripping and detailing and masking tape to get a good clean edge on your paint jobs. Pactra, a Plastikote company, Upland, CA 91786.



T.M. Racing Components introduced their new Valve-A-Matic pistons.

CAUTION: these products are not for every racer . . . ONLY for the best!

HYSPIN out-lasts and out-performs other lubricants... won't attract dirt and grit... used in satellites, missiles and high-tech aircraft... won't gum up from motor heat, great on all bearings and bushings.

HYSPIN + is ideal for RC10, JRX2 and other gear boxes... its name says it all!



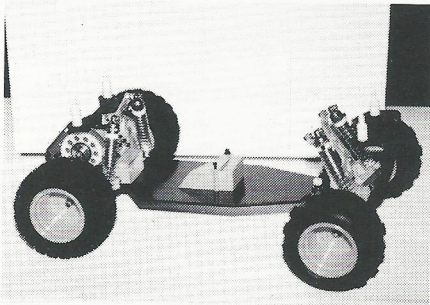
HYTECH is an all-natural formula that removes dirt, grit and old lubricants... even dissolves rubber tire dust... returns bearing to like-new condition! Save on bearing replacement costs!



RACER'S CHOICE R/C PRODUCTS, INC. • P.O. Box 405, Medinah, IL 60157 • 312-980-4863

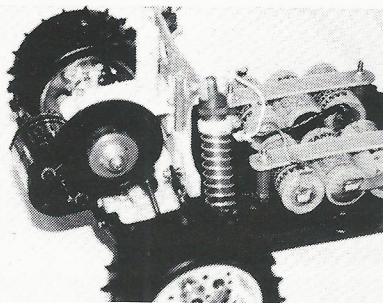
New Products Continued . . .

These will eliminate your car bouncing off bumps and make your landings smoother. They work on front and rear shocks and are available for Associated and Kyosho shocks. T. M. R/C Racing Components, 39330 Donahue, Mt. Clemens, MI 48044. (313) 949-3506.

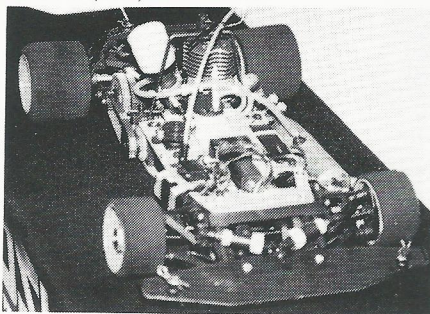


JG Manufacturing's Stadium Truck was one item on display in their booth. It comes with a stainless steel ball bearing kit, extra long truck shocks, ultralight direct bolt on nylon rims, JG's exclusive designed truck tires, custom JG exclusive interval transmission and more. JG Mfg., P. O. Box 6014, Whittier, CA

09609-6014, (213) 947-1206.

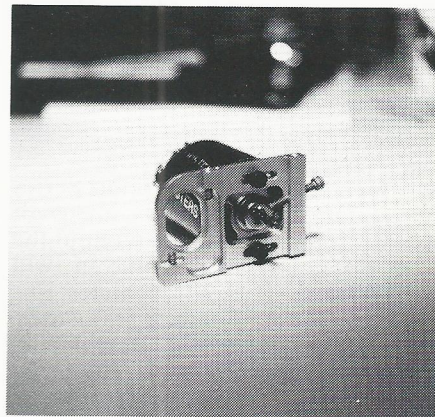


Team Pit Stop featured their slipper clutches. They are available for the JRX2, MIP, Track Master and Top Cat transmissions. Team Pit Stop, 12353 S. W. 132nd Ct., Miami, FL 33186. (305) 255-2887.



Kyosho/Great Planes had the World

Championship BMT Blitz car on display. This 1/8 scale 4WD gas car is sure to be a winner for you as well. Great Planes, P. O. Box 4021, Champaign, IL 61824-4021.



Stormer Racing introduced their new aluminum motor mount plate. This 10L/12L motor mount has a motor lock screw so you'll never lose a gear mesh again. Stormer Racing, P. O. Box 126, Glasgow, MT 59230, (406) 228-4569.

PARAGON Racing

INTRODUCES...



...THE ANSWER!

Jump Jets!

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

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

Patent Disclosure Document Submitted



1982-83 IFMAR WORLD CHAMPION/KENT CLAUSEN/RC12i/REEDY



1984-85 IFMAR WORLD CHAMPION/TONY NEISINGER/RC12i/REEDY



1986-87 IFMAR WORLD CHAMPION/TONY NEISINGER/RC12L/REEDY



1988-89 IFMAR WORLD CHAMPION/MASAMI HIROSAKA/RC12L/REEDY

CLEAN SWEEP OF THE EIGHTIES.



A WINNING TRADITION

One team, Team Associated, has won at every World Championship for 1:12 scale cars in the 80's. A clean sweep against the toughest competition anywhere.

And in 1988 the Team sweeps the top three places in the A main for the second consecutive time! In fact, Associated RC 12L's finished first, second, third and fourth in the IFMAR World Championships in Holland. You might say it was a real Baarn Burner of a race.

When the Team goes racing, we go racing to win. That's why top racers all over the world win with Associated cars. They know they have the edge with the only team to win seven IFMAR World titles.

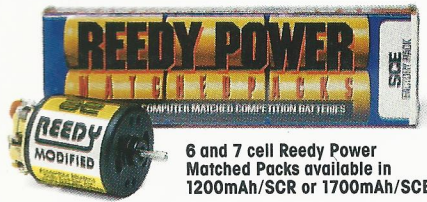
THE POWER TO WIN

World Class drivers know it takes more than a great

1988-89 IFMAR WORLD CHAMPIONSHIPS/BAARN, HOLLAND			
First	Masami Hirotsaka	Japan	RC12L/Reedy
Second	Tony Neisinger	USA	RC12L/Reedy
Third	Christian Keil	West Germany	RC12L/Reedy
Fourth	Kent Clausen	USA	RC12L/Reedy

car to win the World Championship. It takes great motors and great batteries, too. That's why Mike Reedy's motor lab is the nerve center for electric car racing at Associated. And that's why the Team depends on Reedy Matched packs and Reedy Modified motor for the extra power needed to win.

Take a tip from the pros and go racing with the Team.
Team Associated. Model Cars for Real Racers.



6 and 7 cell Reedy Power Matched Packs available in 1200mAh/SCR or 1700mAh/SCE

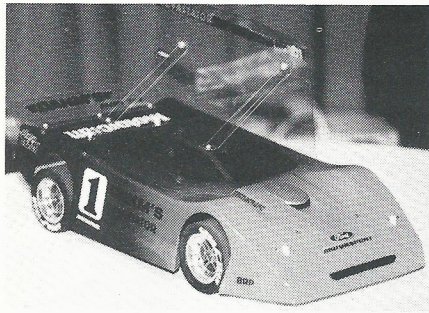


Associated Electrics
3585 Cadillac Avenue
Costa Mesa, CA 92626

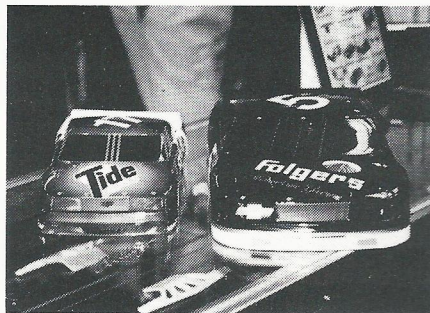


Masami Hirotsaka (center), Tony Neisinger (left) and Christian Keil (right) led a united nations sweep of the 1988-9 World Championships.

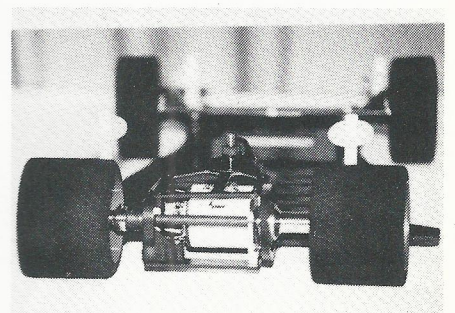
New Products Continued . . .



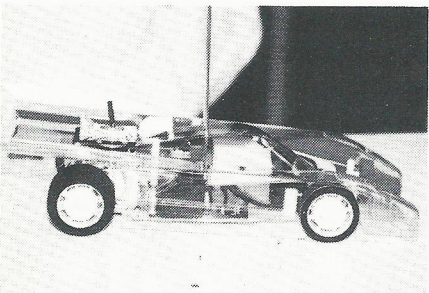
Dahm's Racing Bodies introduced their new Mustang Devastator. This 1/10 dirt oval racing body is designed to fit the Dominator, Slingshot and other 1/10 dirt oval racers. Dahm's Racing Bodies, P. O. Box 360, Cotati, CA 94931-0360, (707) 792-1316.



Andy's R/C Products showed off their new Lumina bodies. These are available for 1/10 and 1/12 scale cars. Also new from Andy's are the Nissan 300ZX 1/10 and 1/12 and the 1/10 Sauber Mercedes Benz bodies. Andy's R/C Products, 466 W. Arrow Hwy., San Dimas, CA 91733, (714) 592-4737.



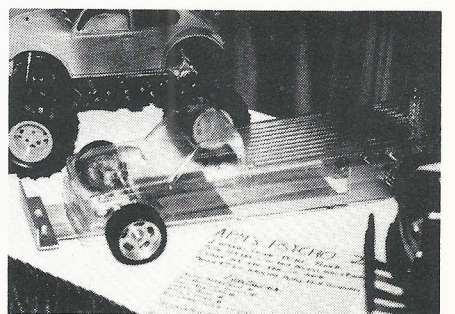
Cheetah Racing displayed their 10L narrow rear end kit. It centers the motor & protects the axle. The threaded center post is made of graphite and G-10. Cheetah Racing, 10823 Amestoy Ave., Granada Hills, CA 91344, (818) 366-2683.



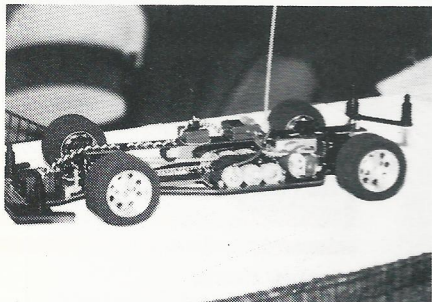
Cox Hobbies had their new GTP Nissan on display. This car is a 1/12 scale gas powered racing machine. It combines all the latest racing technologies into one car, minimal weight, fiberglass chassis, rear axle diff and independent coil front suspension. Cox Hobbies, 1525 E. Warner Ave., Santa Ana, CA 92705.



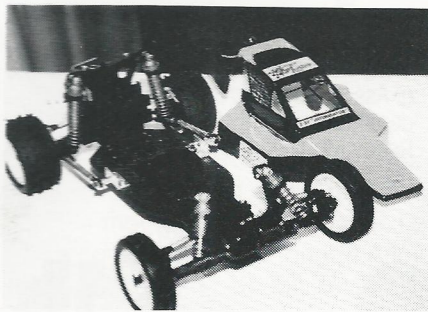
Lightening Rod Products introduced their new line of Dazzle Dyes for nylon and fiberglass. They come in 10 great colors from florescent to vibrants. Lightening Rod Racing Products, P. O. Box 363, Wadsworth, OH 44281, (216) 922-1181.



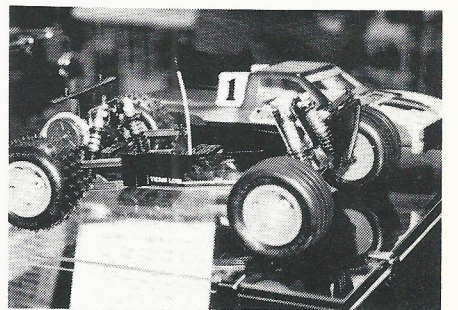
APM's Psycho II 2WD Truck Puller was featured in their booth. It will pull 185 lbs. and can run in the Open 1 class with a stock Tamiya motor and 7 cells. A. P. M. Custom Hobby, Inc., P. O. 357, Dumont, NJ 07628, (201) 387-2908.



Custom Works gave us a sneak preview of their new 4WD road racing car. The prototype has a new chassis and new suspension. Look for more information soon and maybe a release date of March, 1990. Custom Works R/C Products, 3720 Easton Dr., Suite 6, Bakersfield, CA 93309.

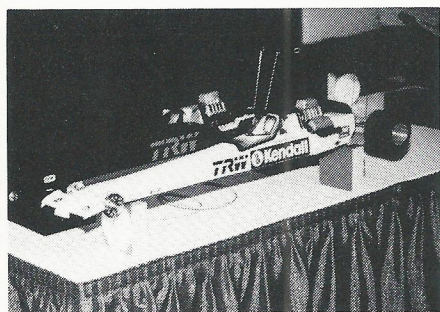


RaceMaster featured their TLS-10 car. This trailing arm car with RaceMaster T-6 aluminum rods, RaceMaster bearing house, and metal idler gears. RaceMaster, 6721-A Alder Dr., Huston, TX 77081, (800) 969-RACE.

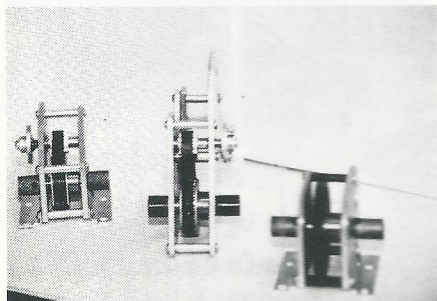


Team Losi introduced their new JRX-T Monster Truck. It features a longer chassis, dirt shields, adjustable body mounts, long front shocks, progressive rear shocks, three piece wheels and truck tires. Team Losi Performance, 1655 E. Mission Blvd., Pomona, CA 91766, (714) 620-0164.

New Products Continued . . .



Fine Design Mfg. the makers of the Firefox cars were on hand with their Streamliner Dragster. This car comes complete with a one piece graphite chassis, aluminum front wheels with o-rings, rear wheels with soft double yellow glued and trued foam, full bearings, steering linkage and more. Fine Design Mfg., 2 North St., Middletown, NY 10940, (914) 342-5102.



TrackMaster featured their three turbo glide belt drive transmissions. These state-of-the-art transmissions use a fully adjustable ball diff and replaceable diff rings. The three models are for the Blackfoot, RC10 and Ultima. Trackmaster, 1466 Pioneer way, #10, El Cajon, CA 92020.

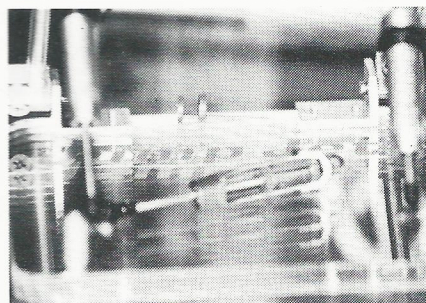


Parma International introduces their new "Cyclone II" motor series. They are available in an assortment of winds with bushings or bearings. They are equipped with a new thicker can and the strongest magnets

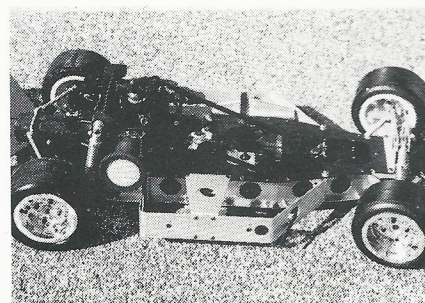
available. Parma International, Inc., 13927 Progress Parkway, North Royalton, OH 44133.



New from Futaba is there PCM 1024. This is the most potent pistol grip radio you can buy. It has one touch electronic trims that are supplemented by audible signals, LED readouts and sub-trimming for precise control. Futaba Corp, 4 Studebaker, Irvine, CA 92718, (714) 455-9888.

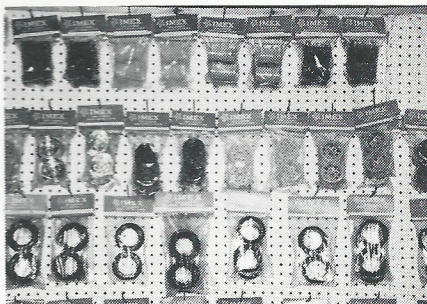


Paragon Racing featured their Jump Jets. These tapered needles fit in the hole in the shock piston. As the shock compresses, the tapered needle gradually restricts the flow of the oil through the piston. This makes the shock more stiff in high load situations. Paragon Racing Products, 690 Industrial Cir. South, Shakopee, MN 55379, (612) 496-0091.

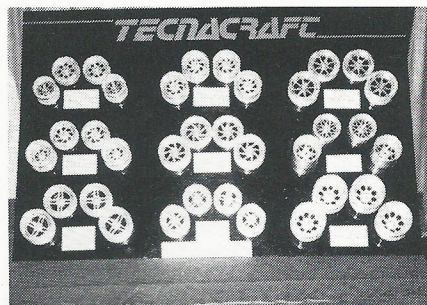


Raco displayed one of their 1/4 scale race machines. The Grand National Stock car is 4W independent sus-

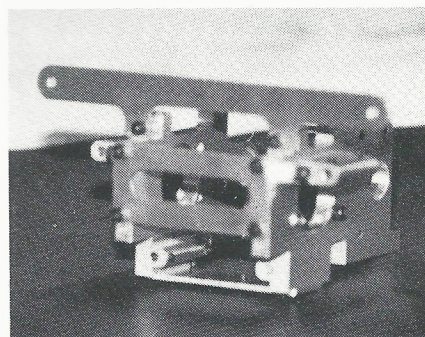
pension and is powered by a gas engine with recoil starter, centrifugal clutch and solid state ignition. Raco Modelcraft, 1400-C E. Saint Andrews Place, Santa Ana, CA 92705, (714) 546-3045.



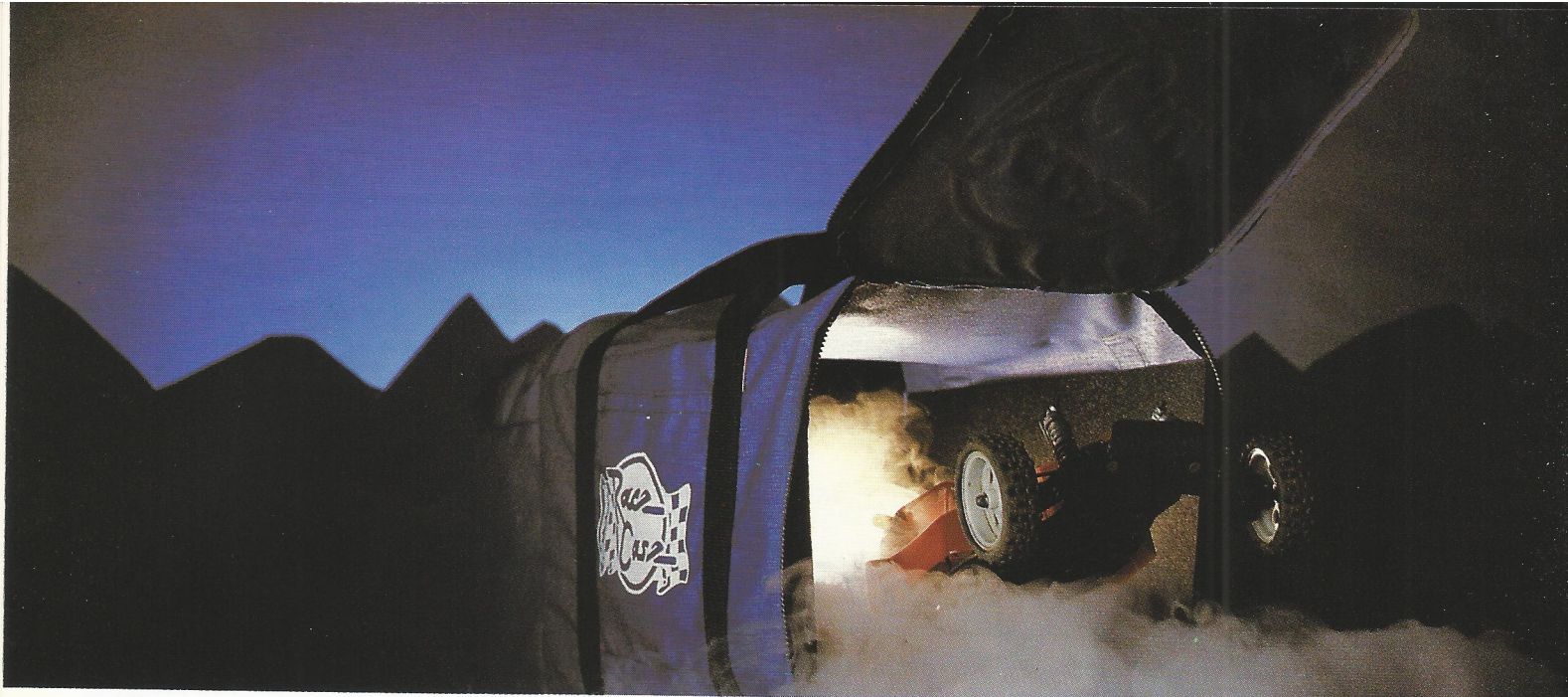
Imex displayed their 1/10 scale florescent wheels. These wheels are made to fit the RC10, Kyosho, Tamiya Lunchbox and Blackfoot. Imex Model Co., 53 Trade Zone Ct., Ronkonkoma, NY 11779, (516) 981-2804.



Tecnacraft displayed their line of aluminum wheels. They are designed to fit the RC10, Ultima, Optima, JRX2 and Blackfoot. Tecnacraft, 1335-B Dayton St., Salinas, CA 93901, (408) 422-7466.



Ja-Lea Distributing carries the line of Dart Products, new from Dart is their RC500 aluminum rear bulkhead. Ja-Lea Dist., 11999 Plano Rd., Dallas, TX 75243, (214) 238-0929.



Race Case Introduces Hot New Design and Colors.

NOW!! Relocated handles allow better balance for carrying even more gear!

Available In Florescent
Pink, Orange and Green

The Advanced Race Case, simply the best approach to racing, practicing or just having fun with your RC car. Period.

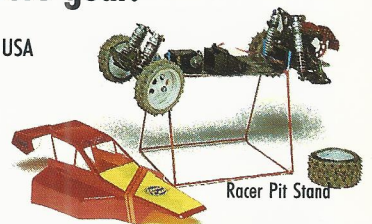
Race Case keeps all your gear organized and handy in a compartmentalized carrying case so you've always got what you need when you need it. Plus with Race Cases' sturdy ABS plastic insert, you get the protection of a hard case at half the price.

Separate compartment accommodates radio control and charger easily.

Heavy duty Cordura nylon outer construction reinforced with ABS plastic interior housing.

Accommodates two 1/10th or 1/12th size RC cars or one monster truck.

Made in USA



Racer Pit Stand



Plenty of space for spare parts and accessories.

Velcro sealed side compartment holds up to six battery packs.



Order Toll Free
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Available At Hobby Shops
Everywhere Or Direct From Us!



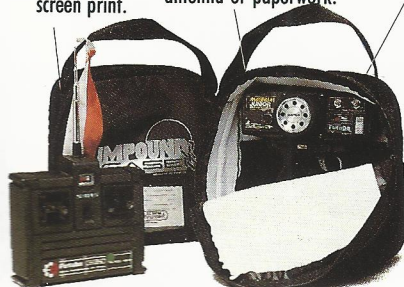
Available in Yellow, Blue, Red and Black

Available in 1/4 Scale

Attractive Heavy duty black nylon with metallic silver screen print.

Inside pocket for flags, antenna or paperwork.

Velcro sealed pocket for extra crystals.



Protect Your Radio Control Too.

The Impound case is designed to fit all wheel style radios. This padded nylon carrying case will protect your radio from all your worst fears. Like dust, bumps, scratches, moisture and lots more.



Name _____
Address _____
City _____ State _____
Zip _____ Phone _____
 VISA MasterCard Exp. Date _____
Card No. _____

Florescent Race Case @ \$44.95 ea.	
Race Case @ \$39.95 ea.	
Oval Body Race Case @ \$44.95 ea.	
1/4 Scale Race Case @ \$89.95 ea.	
Impound Case (blk. only) @ \$19.95 ea.	
T-Shirt Wht. (w/org & blu logo) @ \$8.95	
Pit Hat @ \$5.95 ea.	
Sticker Sheet @ \$1.95 ea.	
Racer Pit Stand @ \$14.95 ea.	
Totals	3.75

Check One CA Res. add 6% sales tax

Race Case Color Choice Shipping

Red Yellow Blu Blk Totals

T-Shirt Size

S M L XL

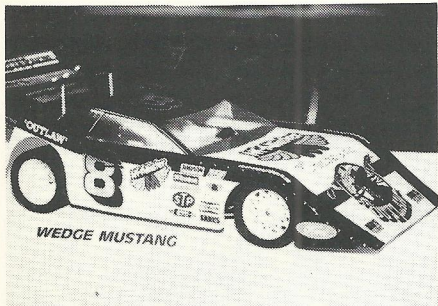
Send Coupon with check or money order to

Advanced Products:

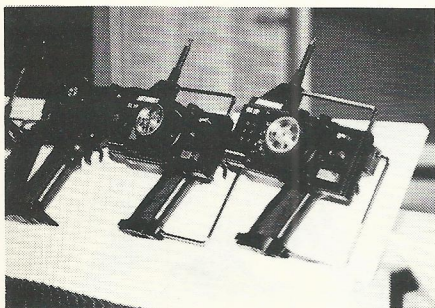
31210 La Baya Dr., Suite 218, Westlake Village, CA 91362

FREE STICKERS WITH EACH ORDER

New Products Continued . . .



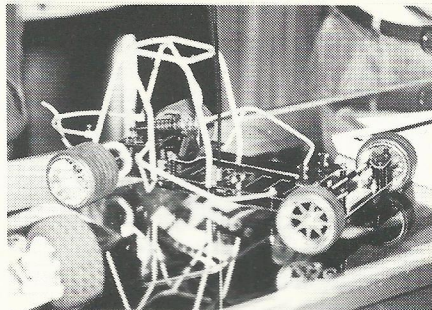
McAllister Racing introduced some new bodies to their product line. One such body is the Wedge Mustang for 1/10 scale oval racing. McAllister Racing, 2205 First St., #107, Simi Valley, CA 93065.



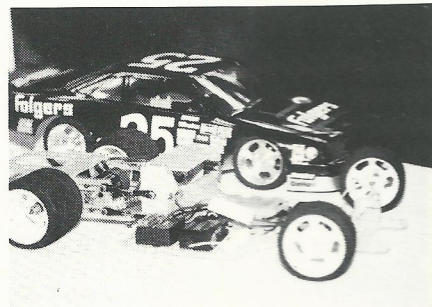
Airtronics displayed their CS2P and XL2P radios. These two channel pistol-grip radios are powerful, lightweight and the handle is easily reversible. It provides a sensitive trigger throttle response and precision control in every situation. Airtronics, 11 Autry, Irvine, CA 92718, (714) 830-8769.



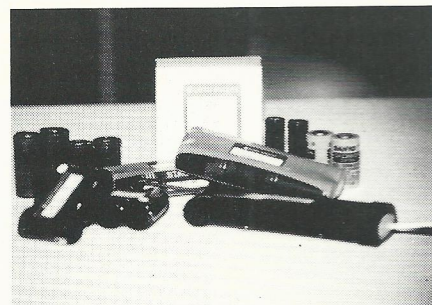
Simply Awesome Products displayed their line of batteries and wires. 7 cell matched 1700 mah Sanyos, true 14 gauge silicone wire and true 12 gauge battery hook-up wire. Simply Awesome, P. O. Box 738, Elmhurst, IL 60126, (312) 832-4908.



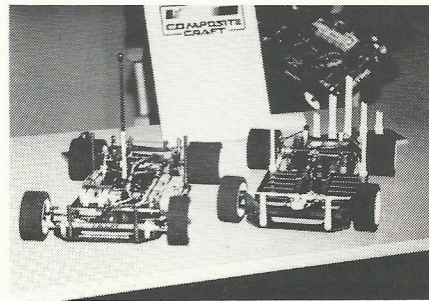
Radio Control Race Center premiered their new sprint car kits. They are modular kits where you first purchase the basic kit and then either a sprint car, prostock or nas-car oval kit to add to it. These are the first complete sprint car kits available. RCRC, 18240 S. Vermont Ave., Gardena, CA 90247, (213) 324-3105.



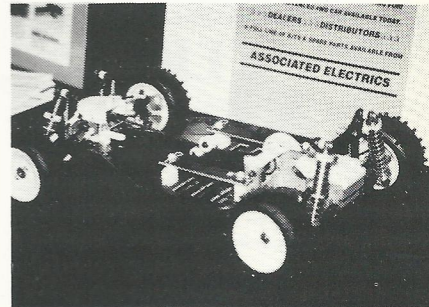
Advanced Engineering & Mfg. introduced their 1/10 and 1/8 scale cars. Also a new monster truck conversion kit and a pulling truck. Advance Engineering & Mfg., P. O. Box 766, Woodland Park, CO 80866, (719) 687-2626.



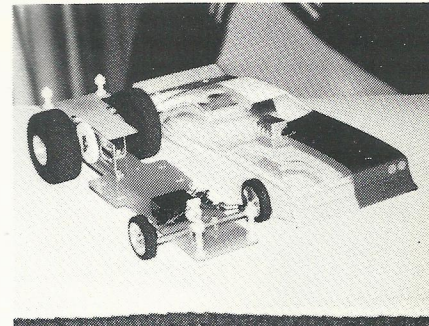
Energy Concepts displayed their line of Sanyo batteries. These SCEs and SCRs are matched and available in packs or loose cells. Energy Concepts, 6351-A Yarrow Drive, Carlsbad, CA 92009, (619) 438-2202.



Two fine companies, TRC and CompositeCraft, have teamed together to bring you a new line of 1/10 scale cars, The Lynx. These cars feature an innovative rear A-Arm suspension. Two models are available, the sport and the elite. TRC, P. O. Box 1058, Albemarle, NC 28001, (704) 982-0507.

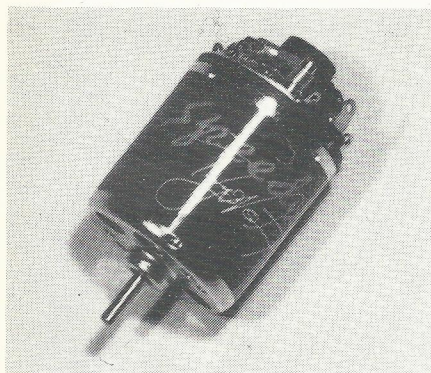


Associated Electrics featured their YZ-10 1/10 scale 4WD Off-Road car. A full line of kits and spare parts are now available for this race winning car. Associated Electrics, 3585 Cadillac, Costa Mesa, CA 92626.

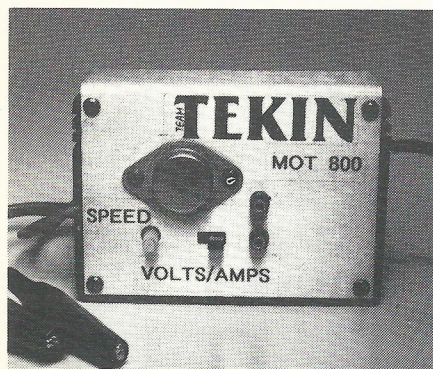


Braun Distributing is the exclusive distributor of the Holeshot's Drag Cars. These 1/12 scale dragsters and funny cars are available in either chain drive or belt drive. Braun Dist., 5366 115th Ave. North, Clearwater, FL 34620, (800) 227-2520.

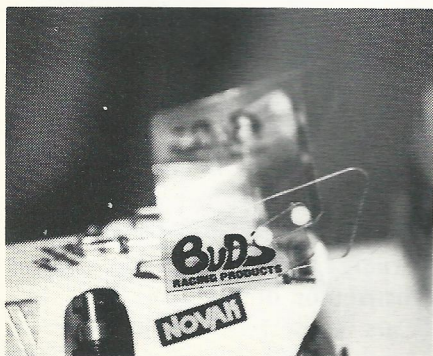
New Products Continued . . .



Trinity presents the Speedworks Legion Series. The "Tony Neisinger" Signature motor is an off-road modified motor featuring wet magnets, adjustable timing, 14 turn quad and turns 40,000 RPMS. Trinity Products, Inc., 1901 E. Linden Ave., #8, Linden, NJ 07036, (201) 862-1705.

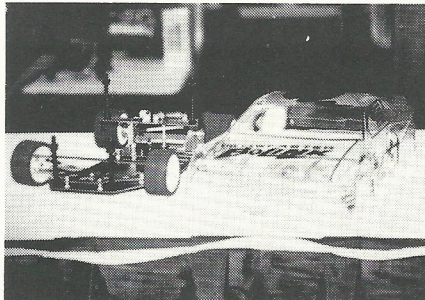


Tekin introduced some new products one of which was the motor break in box. This box has a 1 to 10 volt output, up to 5 amps current, volt and amp meter jacks. It's impossible to overheat, short circuit or burn out. Tekin Electronics, 970 Negocio, San Clemente, CA 92672, (714) 498-9518.



Bud's Racing Products introduced a new wing, the airflow adjustable bi-level wing. This allows for extra

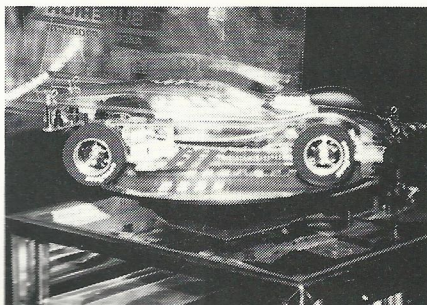
down force and it's adjustable so you can decide just how much down force you'll need. Bud's Racing Products, 52435 Rt. 113, Wakeman, OH 44889, (216) 965-5247.



BoLink introduced their new 1/10 scale car, the Eliminator LTO. Look for a December release on this car. BoLink, 420 Hosea Rd., Lawrenceville, GA 30245-4695, (404) 963-0252.

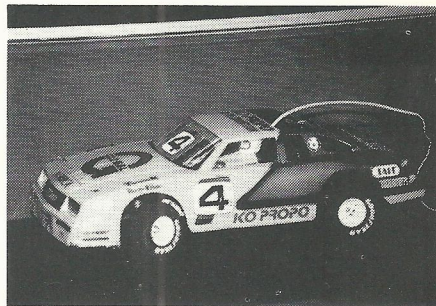


AstroFlight displayed their new charger. It's an AC/DC Peak Detector, that will charge from 4-12 cells from 12 volts and it's short circuit protected. This is a peak detector you can count on. AstroFlight, 13311 Beach Avenue, Marina del Rey, CA 90292.

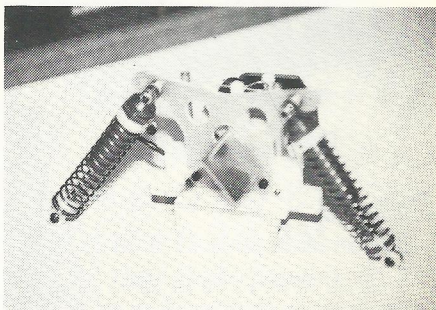


Superior Racing Products presented their SRP-1. This 1/10 scale oval racer has been sweeping the country.

Superior Racing Products, P. O. Box 25913, Santa Ana, CA 92799, (714) 751-5882.

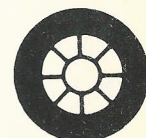
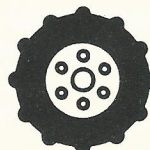


Global Distributing, the distributors of the Panda car were a big hit this weekend. These cars were run in the IROC race all weekend where Ralph Burch, Jr. finished on top and became RCHTA Show's IROC Champion with his Panda car. Global Dist., 10725 Ellis Avenue, Fountain Valley, CA 92728-8610.



New from CRP is their aluminum receiver mount. It fits the RC10 and the JRX2. CRP, 3250 El Camino Real, B-3, Atascadero, CA 93422, (805) 466-6945.

The Chicago RCHTA Show was very impressive this year. There were many exhibitors with hundreds of new products on display. Competition Plus recommends contacting the various companies about their new products for more information.



TEAM ASTRO
FINE DESIGN
CRAIG MODEL CO.
DIAL RACING



BOB & JIM'S HOBBY
BLACK MAGIC
FUTABA
PDI-ZETA
SANYO

WINTER NATIONALS

Top record holders from the East are coming to meet Top record holders from the West.
It's a Drag Race Shoot-out.

Trophies awarded to the first THREE finishers in each class. Plus High MPH & Low ET.

Friday practice: 9AM-4PM; Saturday Qualifying: 10AM-4PM; Sunday Mains: 10AM-4PM

EAST/WEST DRAG RACING SHOWDOWN

1/10 Scale; Sat. & Sun. Jan. 20 & 21 at Bob & Jim's Raceway, Colton, CA

Top Fuel Rail up to 20 Cells ★ Alcohol Funny Car up to 10 Cells ★ Alcohol Rail up to 10 Cells ★ Pro Comp up to 14 Cells ★ Top Fuel Funny Car up to 14 Cells ★ Pro Stock up to 8 Cells ★ Bracket* Open

* A class for everyone! Racers are 'handicapped' by electronic Christmas Tree. Skill & consistency win!!

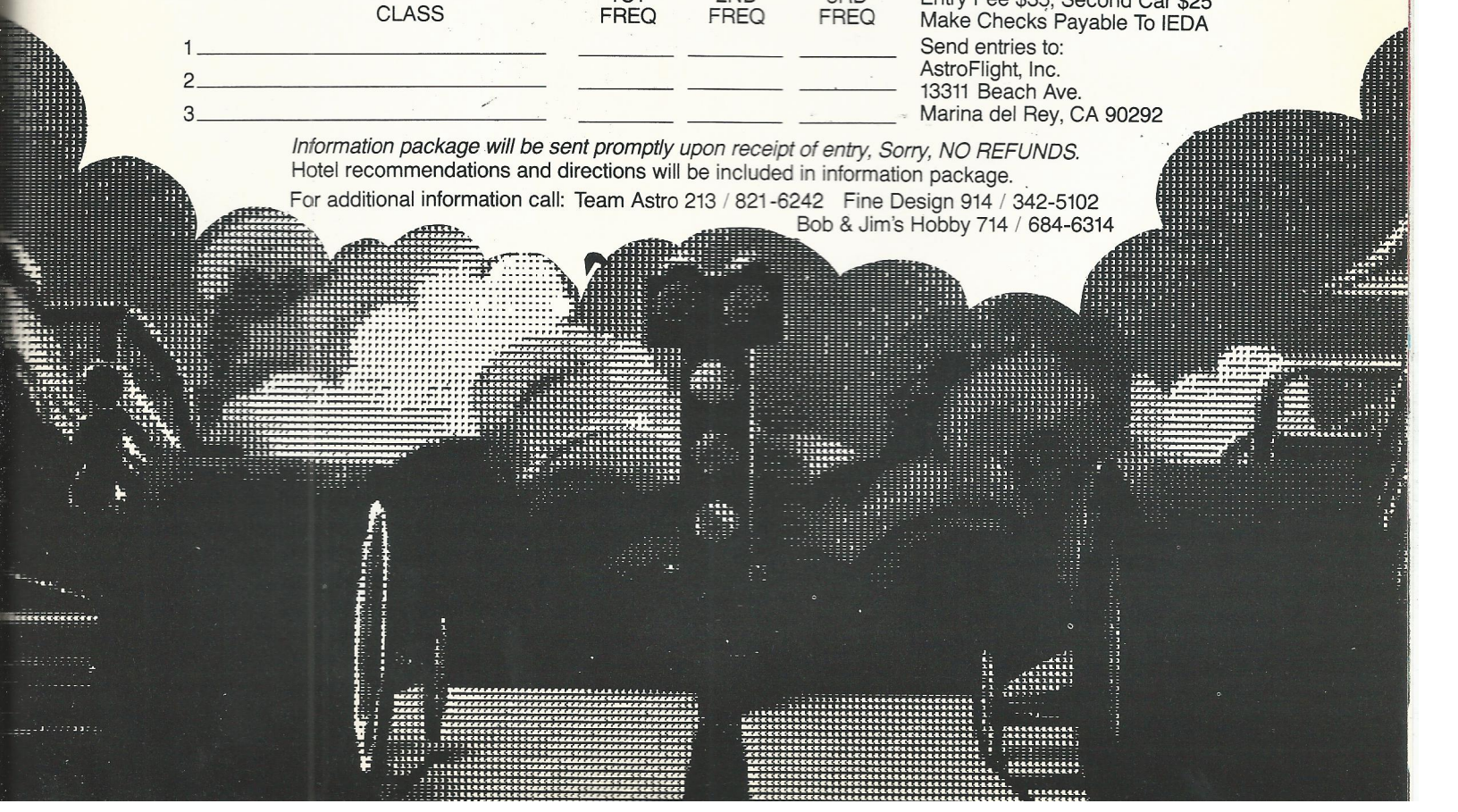
OFFICIAL ENTRY FORM

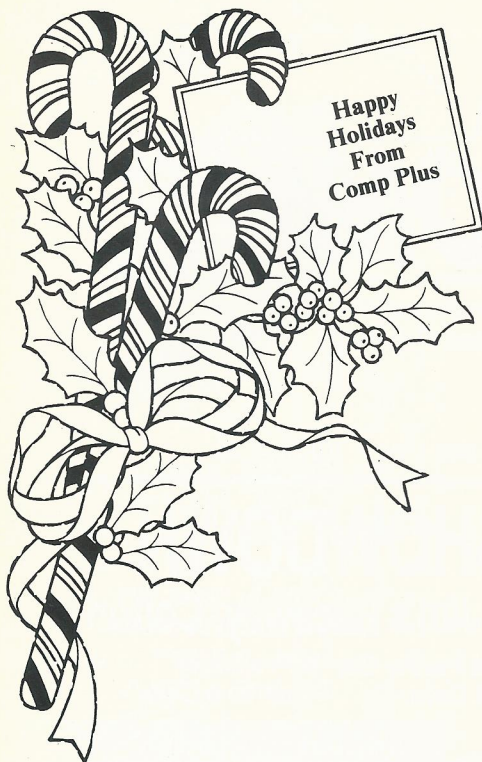
Entries MUST be postmarked before January 15
ONLY the first 250 entries will be accepted. IEDA Rules

Name _____ Sponsor _____
Street Address _____ City _____
State _____ Zip _____ Telephone () _____

CLASS	1ST FREQ	2ND FREQ	3RD FREQ	Entry Fee \$35; Second Car \$25 Make Checks Payable To IEDA
1 _____	_____	_____	_____	Send entries to: AstroFlight, Inc. 13311 Beach Ave. Marina del Rey, CA 90292
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	

Information package will be sent promptly upon receipt of entry, Sorry, NO REFUNDS.
Hotel recommendations and directions will be included in information package.
For additional information call: Team Astro 213 / 821-6242 Fine Design 914 / 342-5102
Bob & Jim's Hobby 714 / 684-6314





*Happy
Holidays
From
The Staff
At
Competition Plus*

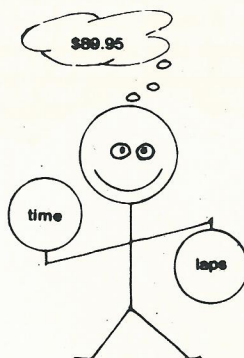
**P. WEE CORP.
TIME & LAP COUNTER PROGRAM
For The Commodore 64 Computer &
The Commodore 128 Computer in 64 Mode
Version 1.2A**

FEATURES:

- Color background
- 10 car capacity
- On screen clock
- On screen car positions continuously updated
- On screen lap counter for each car
- Buzzer sound to start and finish race
- Selectable time or laps of race length
- Selectable key delay
- Restart corrections are easy
- Pause feature to temporarily stop race
- On screen results of race
- Personalization of car numbers & freq. channels
- Cartridge loads program within 2 seconds
- User friendly instructions
- Customer service available

PRINTER PRINTS:

- Name of your club
- The date
- Name of race
- Personal car numbers & freq. channels
- Individual lap times
- Total time of each car
- Total laps of each car
- Number of lead laps of each car
- Length of race
- Finishing position for all cars



Remote Push Button System Available
Version 1.2A required. \$249.00 plus shipping, call please.

Order by phone or send money order, and include shipping charges. CT. addresses add 7.5% tax. \$4.00 shipping US addresses; UPS air \$6.00; COD or Money Order add \$4.00 to continental US only; Canada \$8.00; all other countries \$11.00, and must include US Certified Money Order only.

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49 Circle Drive - Mansfield Center, CT 06250
(203) 456-7029 - 5 pm. to 9 p.m. EST. Monday thru Friday

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TEKIN

COMPETITION R/C ELECTRONICS

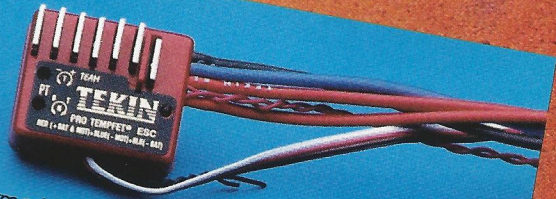


BC100S CHARGER - 2 types of output. Soft pulse for SCE cells, and hard pulse for SCRs. Get more power, life, and run time from your cells. From the inventors of peak detection charging.



BATTERY CHARGER MODEL BC250S has built in digital coulomb meter to estimate battery capacity and run time each time you charge your pack. From the inventors and leaders of peak charging - now with soft pulse circuit.

TEMPFET SPEED CONTROLS



Competition type aftermarket speed controls handle high power modified motors. Tempfets mean no overheating; extra strong braking action. New BEC circuit improves radio reception, especially with "BEC" Receivers. Model 600 has hand selected mosfets and now 13 gauge wire for absolute maximum power. Model 600 also now uses "Soft Pulse" motor current, so the motor runs cooler and develops more power. Smooth response improves driver performance. Mini size, lightweight, high performance, and reliable, dependable operation.



ESC REVERSE MODULE - Adds proportional reverse to most competition type ESCs. Simple plug in installation. Easily handles 6-7 cells, and motors down to 17 turns. #ERM-80 Fut J, air, KO (Available December '89)

BATTERY PACK PEAK CHARGERS - Fully automatic, compact 9 amp peak chargers. Maximum power for any application. You can not get a better, more powerful charge. New, high capacity heat sink, adjustable current 1-9 amps, and works from a 12 volt battery, or a 12 volt automobile battery charger or power supply.



MICRO RECEIVER - 1.2" square, 0.4 oz., much smaller and lighter than most stock receivers, and it works. Crystal filter provides maximum noise rejection available in a mini receiver. Resists speed control noise. Available for most AM radios.

COMING SOON NEW HIGH POWER ESC



ESC 700

NATIONAL AND WORLD CHAMPIONS

Everything we make is the best of its kind. For reliable, dependable, hassle-free equipment that delivers performance to compete at the highest levels, TEKIN is it.

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Available at competition oriented hobby shops everywhere.



The Only Difference Between The Motors In These Two Cars Is 318 lbs. & \$59,920.47



Well, maybe we're stretching the point a little bit here. The point you should remember is that Peak Performance builds their motors with the same kind of skill and high-technology thinking as "the big boys."

Because winning is the goal of every motor car enthusiast.

From our top quality stock motors to our twelve turn "BEAST" (our high-performance champion), Peak Performance is dedicated to building durability, speed and reliability into all our R/C car motors.

So if your just as serious about your racing as we are, check out the full line of Peak Performance motors at you local hobby dealer today.

- 1986 & 1987 1/12th Scale Nat'l Champs
- 1988 1/10th Scale West German Champs
- 1988 & 1989 1/10th Scale Dirt Oval Nat'l Champs
- 1989 1/10th Scale On-Road Nat'l Champs
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- 1989 1/12th Scale Swiss Nat'l Champs
- 1989 1/10th Scale Danish Champs

PEAK PERFORMANCE

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MAGNUM FORCE.



Tony Neisinger wins the 1989 Futaba Grand Prix with Magnum.

Every race day, more and more Magnums are showing up at the track. That's because Futaba makes a complete selection of Magnum pistol-grip systems to suit every kind of radio controlled car. Each Magnum system is loaded with competition features to give you an edge, whether it's your first race or the World Championships.

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

MOVE INTO THE WINNERS CIRCLE

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

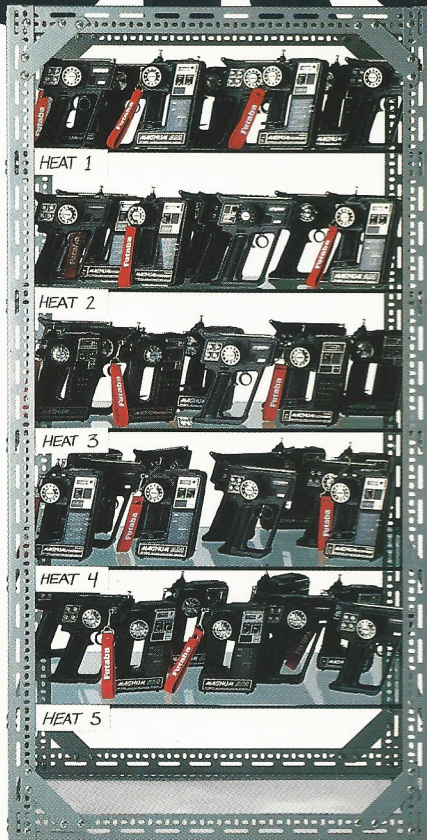


2PB/Sport

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



2PBKA/Junior



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

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



2PD/AM

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



3PB/PCM1024

THE ALL NEW MAGNUM AM

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

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



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

THE ULTIMATE MAGNUM

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

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

MAGNUM
Futaba

Futaba Corporation of America
Four Studebaker, Irvine, CA 92718

NOW, THE RACER'S EDGE AT A SPORTING PRICE.

Altech makes wet magnet technology affordable.

Until now, you had to spend like a pro-racer to own a wet magnet competition-type motor.

Not anymore. Now Altech's 540 size motors feature the power punch of wet magnets without the sky high price tag. These wet magnet motors make for increased output, impressive heat resistance and durability that spells more enjoyment.

Take our Racing (R, RH) Series motors. They are dynamically balanced with skewed armatures for high speed and torque. And just like the best racing motors, they have soft material brushes, silver-plated braided wire and gold

plated wire terminals for strong non-corroding, low loss contact. The top of the line RH models sport precision ball bearings, as well as adjustable timing.

Even our Standard (MT) wet magnet motors give you power, dynamic balancing, oilless metal bushings and skewed armatures. And most important, you'll get superior performance without complicated adjustments.

So, if you want to feel like a pro, drive like a pro and do it at a sporting price, ask your hobby dealer for Team Altech Motors ... and get the racers wet magnet edge ... for up to half the conventional price.

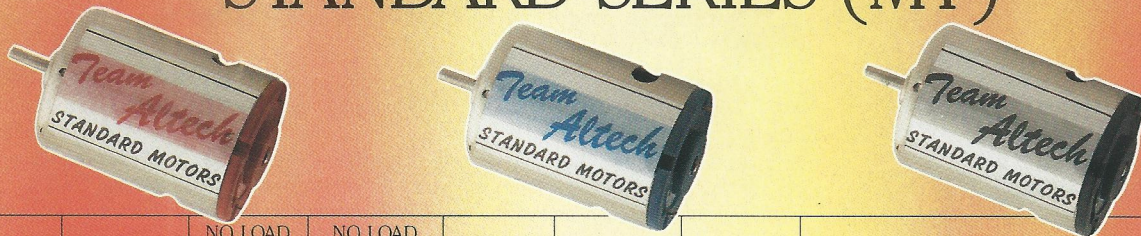
RACING SERIES (R, RH)



MODEL	END BELL COLOR	NO LOAD SPEED R.P.M.	NO LOAD CURRENT A.M.P.S.	WINDING	TIMING	BEARING TYPE X	TYPE/SUGGESTED USE
RH26517	ORANGE	32,000	2.5	DOUBLE	Adjustable	B	High Speed and Torque, Sprint*
RH0918	RED	30,000	2.5	SINGLE	Adjustable	B	High Speed, Medium Sprint
RH25524	BLUE	21,000	1.9	DOUBLE	Adjustable	B	Endurance, Off-road
R08522	YELLOW	19,000	2	SINGLE	Fixed	O	Medium Speed, Off-road
R0821	BLUE	19,000	1.7	SINGLE	Fixed	O	Endurance, Off-road

*B = 2 Ball Bearings, O = 2 Oilless Metal Bushings, Ratings at 7.2 volts

STANDARD SERIES (MT)



MODEL	END BELL COLOR	NO LOAD SPEED R.P.M.	NO LOAD CURRENT A.M.P.S.	WINDING	TIMING	BEARING TYPE X	TYPE/SUGGESTED USE
MT0824	RED	22,000	1.6	SINGLE	Fixed	O	High Speed*
MT0821	BLUE	20,000	1.5	SINGLE	Fixed	O	Medium Speed
MT06527	BLACK	17,000	1.5	SINGLE	Fixed	O	Endurance

O = 2 Oilless Metal Bushings, Ratings at 7.2 volts *Try these in your favorite R/C Speed boat.



P.O. Box 391, Edison, N.J. 08818 (201) 248-8738