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COMPETITION



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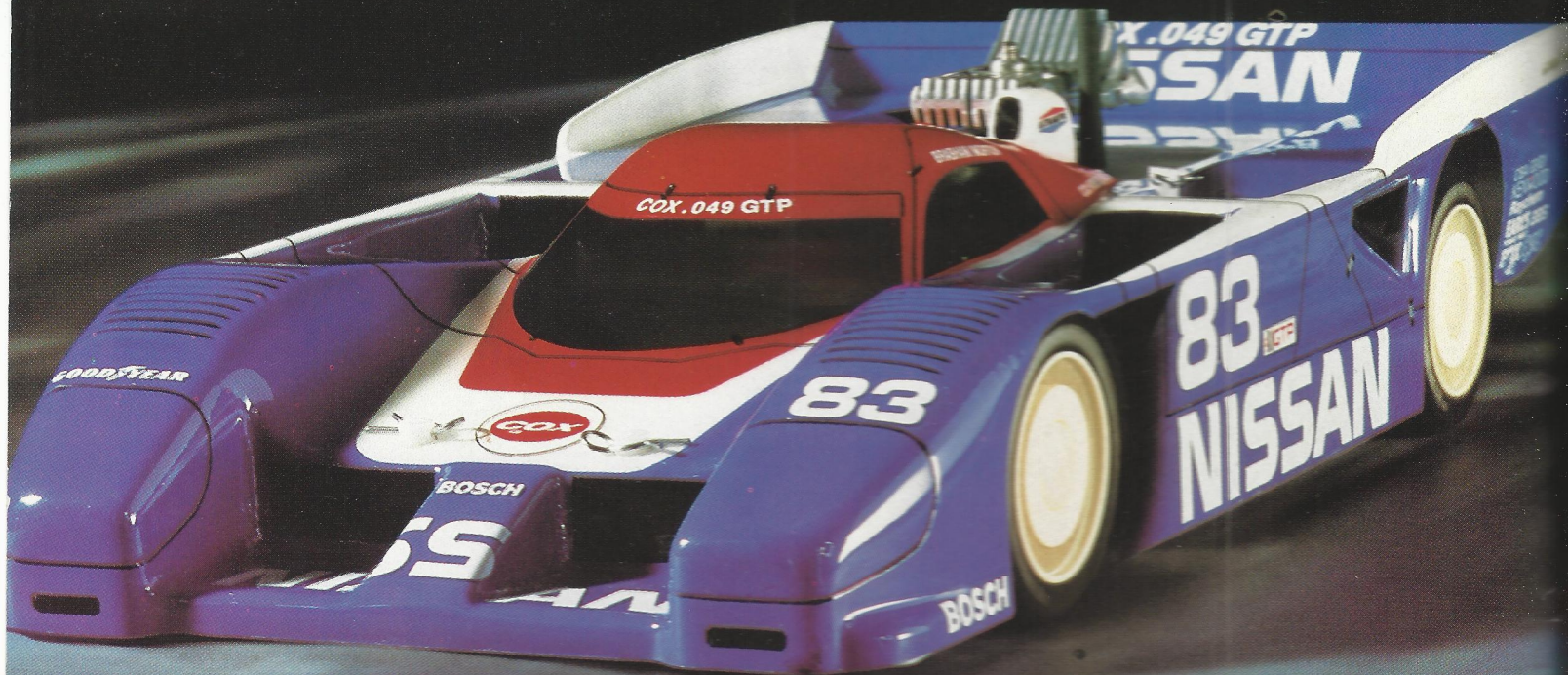
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RACE OF CHAMPIONS



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

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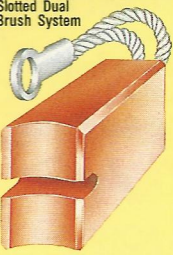
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No matter what type of racing you do, there is a high horsepower, low friction, long wear Trinity Motor brush to suit your needs!

Trinity brushes are molded, not cut like cheap copies, which are prone to stress related breakage. These brushes are designed as replacements for all Trinity, Orion, Yokomo, Kyosho and Air Supply motors.

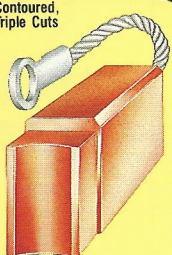


Slotted Dual Brush System



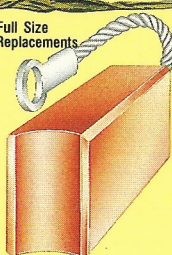
The first new brush designed for today's motors! Dual shunts for lowest resistance, new non-glazing formula. Slotted face for less arcing, less heat build-up and a more positive brush to commutator contact area. These are the only brushes that allow the hottest 8 thru 14 turn modified motors to produce maximum horsepower. #4103-\$3.50

Contoured, Triple Cuts



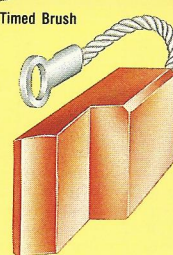
For 1/12 scale, on-road cars. Gives more torque and less arcing by maximizing the ratio of current draw vs friction on the commutator. For 14 to 20 turn motors. Speedworks 0007, 0012. #4034, soft compound for 4-cell #4037, for 6-cell \$4.99

Full Size Replacements



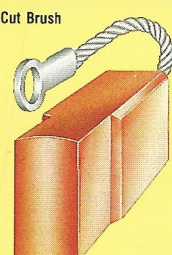
#4005, \$5.25 Soft compound comes in stock Trinity and Speedworks motors. w/springs. #4038 \$3.00 Hard compound for longer life in off-road motors. In Trinity modifieds 1700 to 1704. #4046 \$3.00 Soft compound produces higher rpms in stock and on-road motors. #4065 \$1.99 Same as 4038 but without terminal.

Timed Brush



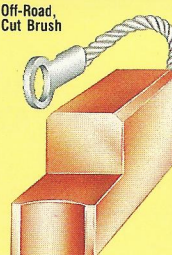
Shape increases timing and RPM's in stock motors. These work so well they should be illegal! For Trinity 2000, 2020, Speedworks 0004, 0005, 0444 and all Yokomo and Kyosho stock motors. #4007 - \$4.79

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The narrow face increases RPMs, reduces arcing. Designed for oval racing or motors with lots of timing advance. #4006 - \$4.79

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WINDS X TURNS	MEGA MOTOR APPLICATION CHART											
		1/10 PAVED OVAL	1/12 PAVED OVAL	1/10 DIRT OVAL	1/10 2WD OFF-ROAD	1/10 4WD OFF-ROAD	1/10 ON-ROAD	1/12 ON-ROAD	TRUCK RACING	TRUCK PULLING	ELECTRIC BOATS	ELECTRIC PLANES
12X2	PAVED OVAL	★	★	▲	•	•					•	•
14X2	DIRT OVAL	▲	▲	★	•	▲	•				•	•
16X2	4WD OFF-ROAD	•	•	▲	▲	★	▲	•	•		•	•
18X2	2WD OFF-ROAD			•	★	▲	★	▲	•		•	•
20X2	ON-ROAD				▲	•	★	★	•		•	•
22X1	OUTLAW STOCK	•	•	•	▲	▲	•	▲	•	•	•	•
360	MONSTER TRUCK				•	•				★	★	★

★ = EXCELLENT FOR THIS APPLICATION. ▲ = VERY GOOD FOR THIS APPLICATION.
• = ACCEPTABLE FOR THIS APPLICATION UNDER CERTAIN CONDITIONS.

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COMPETITION



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PARMA'S PRO PANTHER 12

Parma's entry into the 12th Scale Arena.

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REEDY OVAL RACE OF CHAMPIONS

*Top World Drivers Vie For This Title at
Lake Whippoorwill Speedway.*

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FUTABA'S MAGNUM FORCE

A review of the PCM and AM Radios.

About The Cover

This month's cover features Parma's Pro Panther 12 ready for take-off.

Photo by The Control Room

MAILBOX

RESIGNATION

Dear ROAR Members:

Please accept this as my notification of resignation from the ROAR Executive Board effective upon finding of a replacement. I have enjoyed the privilege and opportunity to work with you and the other board members through the years. It has been a good feeling seeing ROAR grow and being a part of that growth. My resignation is due to personal reasons as business commitments and a realization that I am involved in

too many things, has caused me to pull back a little and make some changes. That, with the fact that it has been many years now and maybe it is time to step aside a little and see some new people come forth, has been the prime reasons for this decision.

I have always supported ROAR and will continue to do so. I will always be available if my ideas or opinions are asked for and I hope that you will see fit to let me continue on as ROAR's International Representative in my present capacity as ROAR IFMAR Director. I enjoy this

international work and involvement tremendously and look forward to being able to devote more effort to it.

Again, I have enjoyed my time working with you and will support you and ROAR every way I can.

Sincerely,
Mike Reedy



Editor's Note:

Everyone on staff at Competition Plus is saddened by the news that Mike Reedy has decided to withdraw from the Executive Board. As a former ROAR President and ROAR Regional Director, Mike is well qualified for this position and we are sorry to see him go. However, we all understand that at times there are too many commitments.

COVER CREDIT

Photo credit for the April issue was given to Dan Bullock, although Dan wrote the article and shot some of the photos in the article, Dennis Weathers actually shot the cover photo. This was our mistake and we would like to give Dennis credit for this cover shot. Dennis shot the cover with a Mamiya RB 67 2 1/4" format camera using Kodachrome 64 film, with Mt. Shasta in the background. Dennis is a professor of Art and Photography at the College of the Siskiyous in Siskiyou County, California. Again we apologize for our error.



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BOLINK CONGRATULATES
THE 1990 REEDY INV. WINNER
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ANDY THANKS FOR USING BOLINK'S 89 T-BIRD

HOW COME SO MANY TOP NAME DRIVERS RUN BOLINK BODIES?

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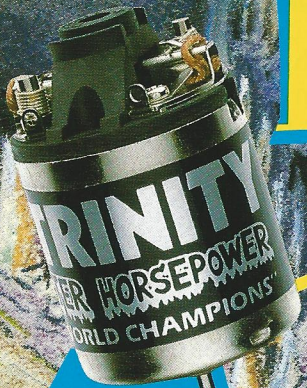
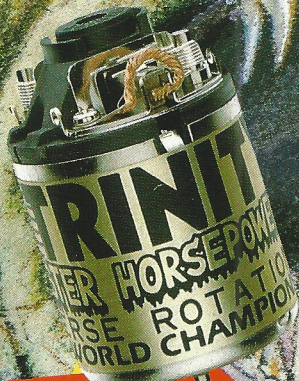
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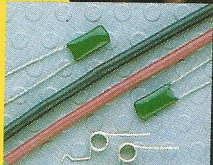
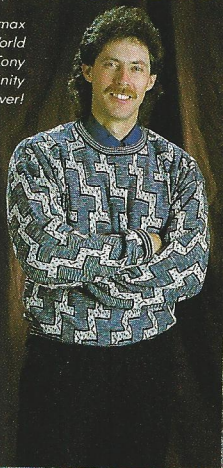
#2000 "Monster Stock" 4, 6 or 7 Cell, 24,200 Awesome RPMs

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!

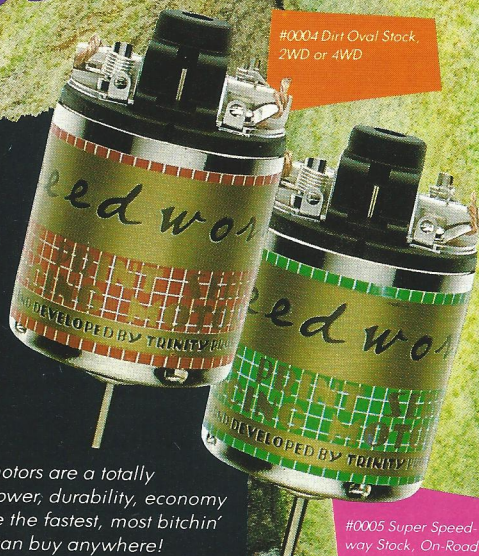
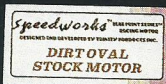
Awsome to the max 2 Time IFMAR World Champion driver Tony Neisinger chooses Trinity Monster Horsepower!



Trinity rad motors don't need bogus hop-up kits to boost 'em to the max. All the trick tech items like 180° Springs, Capacitors and Lead Wires are in the box! Trinity sets you up right the first time.

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HARD CHARGING

By John Thawley

As popular as R/C racing has become, the pinnacle of that phenomena has to be that of the influx of "big" races. Those of you that travel to these "big" races know what I'm talking

about. There is just nothing to compare with 200-300 racers taking over for a weekend and doing nothing but losing sleep, eating bad, thrashing on cars and just plain old getting outrageous. I love it! The ROAR Regional and National Championships are fine examples of such decadance and bawdiness. While these events are a lot of fun to attend they can also be very rewarding for the promoter or host club.

A question asked often is what is involved in hosting a National or Regional ROAR event and more importantly, how is a host selected?

The first thing you must consider when reviewing this situation is the responsibility that the person doing the selecting is burdened with. When a club or promoter asks for one of these events he is basically asking, in the case of a Regionals, the Region Director to put his (ROAR's) seal of approval on that particular facility and race program. Now I don't know about you, but, I am not about to tell 1500-2000 ROAR members "Hey, this place is great!" unless I really believe it is and that the promoters will genuinely put forth an effort to make it great. I have to have the confidence that the event will live up to the quality deserved of a Championship.

Regardless of the outcome of their decision they usually can't please everyone. Whether its the Region Director selecting the host for a Regional Championships or the Nationals Committee and Executive Committee selecting a host for the Nationals.

I would like to offer some suggestions to the potential hosts and promoters out there on how to go about preparing a bid for a

Championship event. I will also include an outline of information that should be included in your bid.


First and foremost it is important to understand you cannot provide the person having to make the selection with too much information. You cannot just send a letter saying you would like to host the event and expect to get it. Personally, I like to have as much information as I can get.

Think of your bid as a selling job. Remember it is normal for human beings to judge books by covers. Your bid should look good and leave a good impression on the reader. Now that is not to say, you can get away with an empty wrapper.

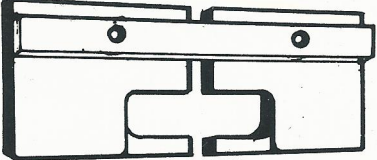
Also try to keep the time frame in mind when you send your bid or request. I like receiving bids nearly but on the same token that doesn't mean I'm going to award the race to the first bid that comes in. If there are other bids anticipated I will wait to review them all equally. The Region Director also has to allow for scheduling problems with other events in the Region and major or national events. However, it is nice when someone is considerate enough to get their bid in early. If you are in doubt of anything call your Region Director and ask if there is anything in particular he is looking for in a bid. For instance, most Region Directors like to move the event around the Region geographically from year to year. Don't try to be a mind reader. Ask! Communication is the key!

Although a lot of this information has been directed to potential hosts and promoters it is important we racers understand

(Continued on Page 16)

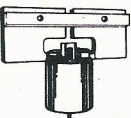


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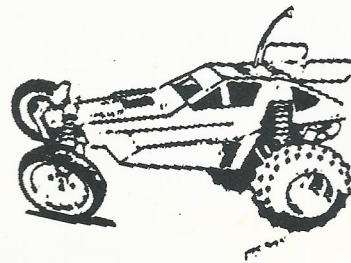


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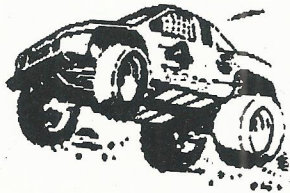
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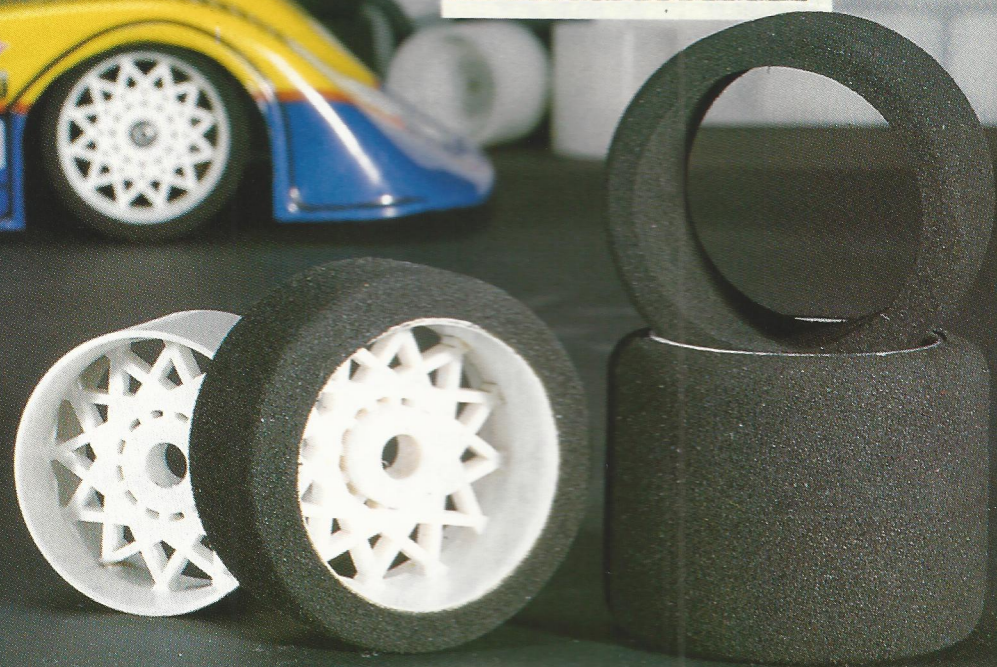
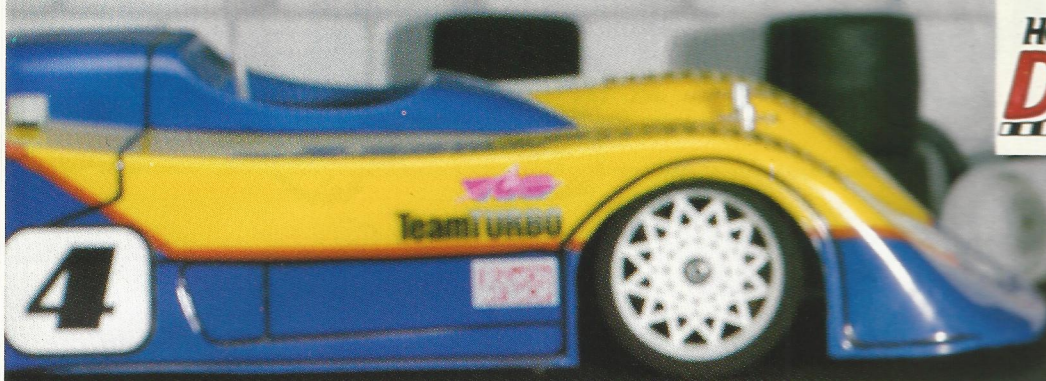
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<p>BBS Style Wheels— Fit all on-road cars. Fronts and rears available.</p>	<p>Foam Slicks— Available mounted and trued on BBS wheels or donuts in three traction compounds. Available in fronts and rears in blue, green or yellow.</p>		<p>100% Rubber Block Tread Tire— Designed to fit all rear on-road wheels.</p>	<p>100% Rubber Slicks— Long lasting, high traction. Designed to fit all on-road and BBS wheels, front and rear.</p>		<p>On-Road Conversion Wheels— Designed to turn your off-road buggy into an on-road screamer. They fit RC10, JRX2, Kyosho and Tamiya cars without using adapters.</p>



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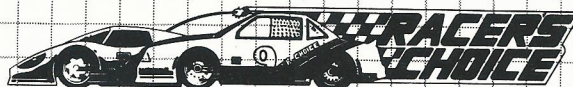
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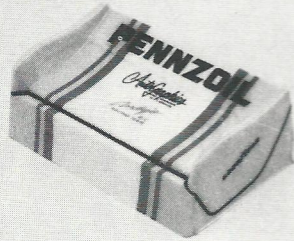
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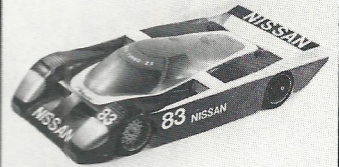
3025
ELAN "OFF ROAD" - MID OPTIMA



3240
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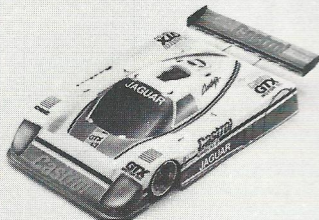
3022
HEATHEN "OFF ROAD"



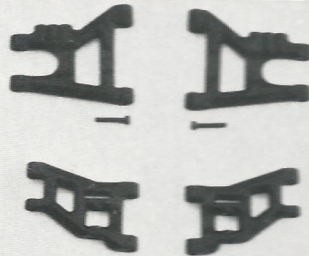
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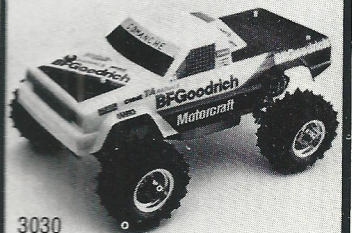
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3420
MONSTER TRUCK FRONT BODY MT.



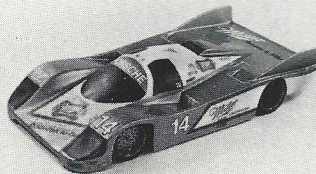
3412 RC-10 - 3512 ULTIMA
FRONT BUMPER MOUNT "OVAL"



3030
JEEP COMANCHE TRUCK BODY



3026
APACHE WARRIOR - YOKOMO



3140
PORSCHE 962 GTP



3023
HALF-BREED "OFF ROAD"



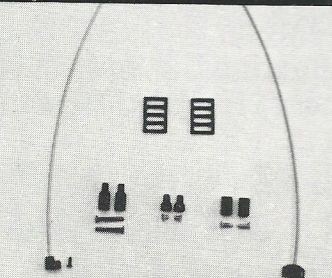
3414 - 3416
RC-10 "OFF ROAD" FRONT BUMPERS



3020 - 3021 - 3024
RENEGADE "OFF ROAD" SERIES



3160 - 4160*
89' PONTIAC GRAND PRIX - NASCAR



BODY PARTS & ACCESSORIES



3142 - 4142*
TOJ "ON ROAD" BODY

PIT BOARD

THE COUGAR

Developed by the World Championship winning team using advanced technology and innovative design to provide World Class performance out of the box. Straight forward construction and clear concise instructions give experts and beginners alike superb handling and performance every time.

The high quality alloy chassis gives great strength and rigidity with a super low center of gravity. The rear mounted motor puts the weight right where its needed for massive acceleration. The COUGAR high efficiency transmission features a 14 ball differential and high torque kevlar drive belt, strong enough to handle the hottest modified and superbly efficient to make stock motors really fly. Quick release 48 D.P. gears

give fast simple ratio changes and smooth reliable drive. The new front suspension has a unique rake angle adjustment system and offers easy assembly and maintenance. CAD-CAM designed suspension geometry gives the COUGAR unbeatable handling over the roughest off-road tracks. Coil over oil shock units manufactured from high quality alloy are used all round for the best off-road performance. The COUGAR uses Schumacher high density mini spike tires molded in the secret "Blue" compound natural rubber, to give you the racing edge. The body has the tough look of a real off-road racer. The alloy chassis is a close fit inside the body to keep out the dirt.

Performance and Technology you can buy.

Available April, 1990 by Trinity Products.

BIGGEST NEWS IN 1/8 SCALE SINCE THE 4WD!

The advent of the 4WD car was received as a mixed blessing by the 1/8 scale racing community. The car certainly handled better than its 2WD counterpart but became a mechanical nightmare by comparison.

The biggest problem lies in the front wheel drive system. Hit a wall and you are likely to lose a front dogbone. Several companies have tried to improve the situation with universal joints, larger dogbones, etc., but crashes still result in broken or bent front end drive components.

Rochelle Racing Products (RRP) has the answer to that problem! While the basic system has
(Continued on Page 19)

CAPPED TIRES FOR:

- RC-10 Rear: #0090
- Dominator: #0092
- 1/10 scale fronts: #0095 soft, #0999 firm
- 1/10 scale rears: #0096 soft, #1000 firm



THE LEADER IN RUBBER CAPPED R/C TIRES!

We've got'em! The hottest new item in R/C racing tire technology — Rubber capped foam tires from CKW! Six of ten drivers at the 1989 Thunderdrome rode CKW's to victory — Find out why they're the winning choice in capped racing tires!

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(Continued from Page 10)

this process as well. Sometimes we don't like where our Regionals are being held, but it is important we understand what the Region Director is faced with when making his decision. Believe me, it is never an easy process nor one where you can please everyone.

The following outline is one we have used to help clubs and promoters bidding on Nationals and one I have also used here in Region 3. These are just suggestions but I think you can see where this information is important and can be quite helpful.

INFORMATION OUTLINE FOR ROAR NATIONAL EVENT

The following is an outline of information needed by ROAR's Executive Committee when considering a host for a ROAR National Championship. Please provide the following information as completely as possible, so

as we may give your request the proper consideration it deserves. Please feel free to expand on any information you feel will enhance your position or qualifications.

REQUIRED INFORMATION

1. Club Background

- A. Age of club
- B. Number of active members
- C. Club scale interests and activities
- D. Number of members committed to help

2. Experience

A. Level 2, 3, & 4 races held by club (give dates & approximate number of entries)

B. Major races your club plans on hosting this year

C. Major races attended by persons who will run the race you are requesting

3. Race Information

- A. Proposed location
- B. Equipment available

- C. Proposed body types
- D. Entry fee, deadline and entry limit proposed
- E. Date and time table proposed for race

4. Miscellaneous

A. Sponsors:

- a. Local
- b. Major
- c. Exclusive

B. Motel accommodations and location from track

C. Food centers available

D. Family attractions available

E. Motor home parking available

Please try to be complete in providing the information requested. If you have any questions regarding the proposal, please call your regional director or the appropriate scale director. If your club does not own or have access to the required automatic lap counter or the appropriate tech equipment, you can rent items from ROAR.



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Jay Halsey

Cliff Lett

Mike Reedy

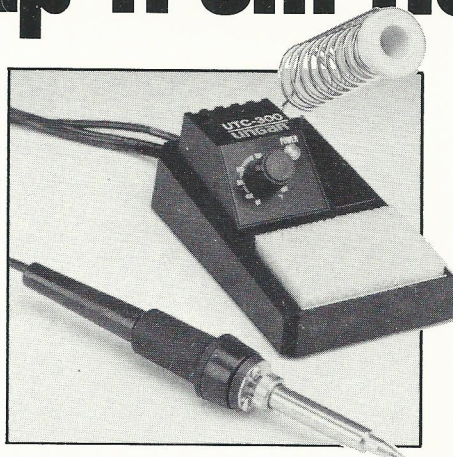
Butch Kloeber

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

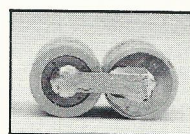
The key to the *Super Race Station's* incredible performance lies in its sophisticated electronics. Unlike conventional irons that have a fixed output rated in watts, the Ungar unit has an automatic variable output that keeps the iron tip at any temperature you select, all the way from a mild 400 degrees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

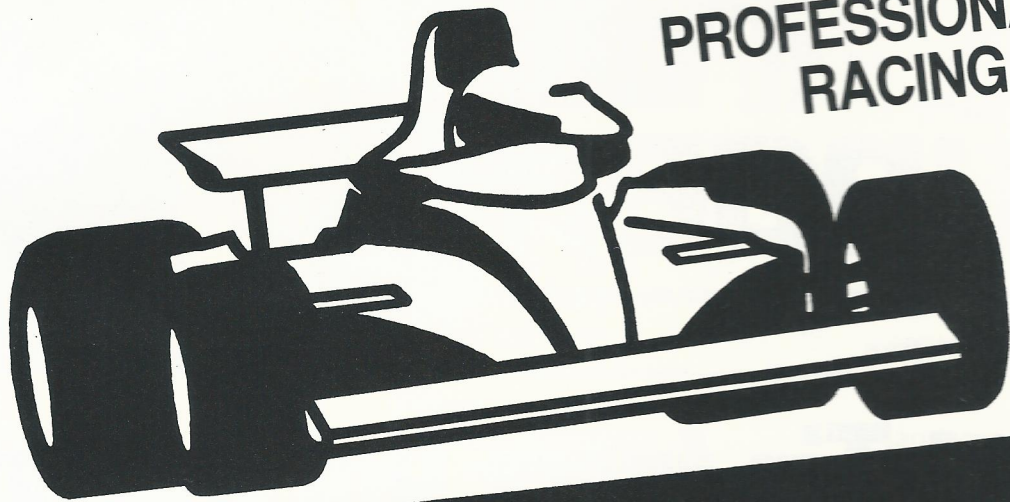
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(Continued from Page 15)

been tried before, the ultimate solution was developed by a Cornell engineer in the form of the all new "RRP Slipper Drive" (Patent Pending). Never again will you damage or lose another dogbone - We guarantee it!

The first application is for the Associated RC-500 car. It is a complete retrofit package which installs in less than an hour with no special tools. It fits both stock and aftermarket front bulkheads and adds no additional weight to the car! As an added bonus, the RRP Slipper Drive significantly improves steering response by controlling excessive front wheel-spin in high power cornering situations.

For the ultimate in "bullet-proof" front ends, the RRP Slipper Drive may be combined with the new RRP Steering Block assemblies. Never again will you strip the steering arm bolts out of the stock steering blocks (Note: The RRP Steering Blocks can be used only with the Slipper Drive).

Extensive testing was carried out during the 1989 season by leading Sportsman and Open class racers with outstanding results. The products are thoroughly proven, completely debugged, and ready for distribution im-

mediately. If you are interest in purchasing these products or would like more information, please contact us at: Rochelle Racing Products, 26 West Passaic Street, Rochelle Park, NJ 07662 Phone 201-845-8015 Fax 201-845-5824.

□
**1990 ROAR 4 CELL
MODIFIED NATIONAL
RESULTS**

- 1st - Rick Hohwart
- 2nd - Chris Doseck
- 3rd - Joel Johnson
- 4th - Louis LeBlanc
- 5th - Mike Blackstock
- 6th - Bill Jeric
- 7th - Joe Lawrence
- 8th - Bob Light
- 9th - Bob Schoenau
- 10th - Scott Smith

□
**JOEL "MAGIC" JOHNSON
TAKES TRIPLE CROWN**

Team Triad's Joel "Magic" Johnson with his outstanding performance and his combined points total, is the proud holder of the Sanyo 1/12 scale Triple Crown title for 1989-90.

Joel's consistent performance at the Indoor Champs (3rd), and the 4 Cell Nationals (3rd), combined with a devastating victory at the Winter Championships allowed Joel to arise victorious

and be crowned King of the most coveted title.

Joel again used Trinity horsepower (#1712 "Torkzilla"), Trinity Pushed Batteries and TRC green dot tires to bring him to the winner's circle. Joel regulated this power by using the latest Corally MMS High Frequency Electronic Speed Control and the Corally SP-12 car.

□
**MRC AWARDS TOP PRIZE TO
DRIVER DEREK FURUTANI
AT LOS ANGELES MODEL
HOBBY SHOW!**

The most prestigious drivers in America recently competed in the Second Annual International Race of Champions held at the L.A. Model Hobby Show in Pomona, CA on March 10 and 11. Each driver was equipped with an MRC/Tamiya Astute 2WD Off-Road Buggy. With top caliber drivers participating in this event, which included a wild jump over a criss-cross track, it turned out to be a duel right down to the wire.

Derek Furutani of Peak Performance, who this year captured First Place at the Reedy Race of Champions, once again turned out to be the top dog at this event. Derek walked away with the \$3,000 first prize donated by

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76.98 MPH IN 132 FT.!

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.

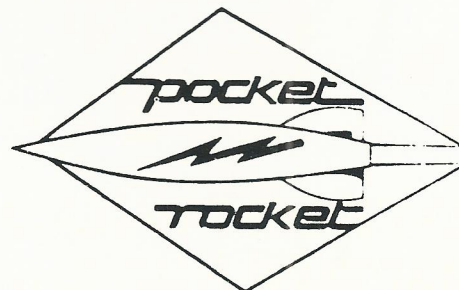
TWISTER'S NEW "POCKET ROCKETS"

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.



Model Rectifier Corporation. Furutani's winning speed averaged 16.22 seconds per lap at the show's 50 ft. x 60 ft. custom built dirt track.

Peak Performance's own Rick Hohwart captured second place with an average time of 16.37 seconds per lap. Rick, who has a list of wins under his belt, was awarded a \$500 prize also donated by MRC.

A total of 60 drivers competed, representing more than 30 manufacturers exhibiting at the show. Each team built their Astute buggy, "one of the hottest off-road cars to hit the market in a long time," according to Frank Ritota, Vice President of Sales for MRC.

The track was designed by Tamra Heppert of Metro Fast Raceway, Hanover Park, Illinois. It was crewed throughout the races by Joe and Laurie Dubay

of Sunkist R/C Park in Barstow, CA.

A new lap counting system and the Count R/C race management software was provided by Dave Delage of MIFCO Precision Racing Measurement, Portsmouth, NH.

A \$300 prize was awarded to third place finisher Curtis Strawn, Superior Racing, who averaged 16.85. The fourth place prize, an MRC King Cab Truck Kit, went to Race Prep's Steve Dunn, averaging 17.07. The fifth fastest racer, RC Race Center's John H. Smith, received \$50 for his average speed of 18.08.

The Los Angeles Model Hobby Show is sponsored by the Radio Control Hobby Trade Association (RCHTA) and co-sponsored by the Model Railroad Industry Association (MRIA).

The next race in the series will be held at the Philadelphia

Model Hobby Show, Philadelphia Civic Center, May 3-6, 1990.

PRO-LINE WINS IN 1990

ROAR Monster Truck Nationals March 2, 3, 4, 1990, Las Vegas, Nevada. Scott Montgomery - A Main, 2WD Stock, 8th Place; Wylder Barrows - B Main, 2WD Stock, 1st Place; Tim Clark - B Main, 2WD Stock, 5th Place. Products used-Pro-Line Monster Truck Conversion Kit. Tires-Race Engineered Design PRO - 40, #7040 2.2" Rear, PRO - 45, #7045 2.2" Front. Wheels - #2526 Front and #2528 Rear. Body - Nissan Hardbody Racing Truck Body #3003.

JOE AND PEAK TAKE REGION 3

Peak Performance driver Joe Lawrence won the Region 3 1/12 Scale 4-Cell Championships in March with his Peak Performance powered Agitator.

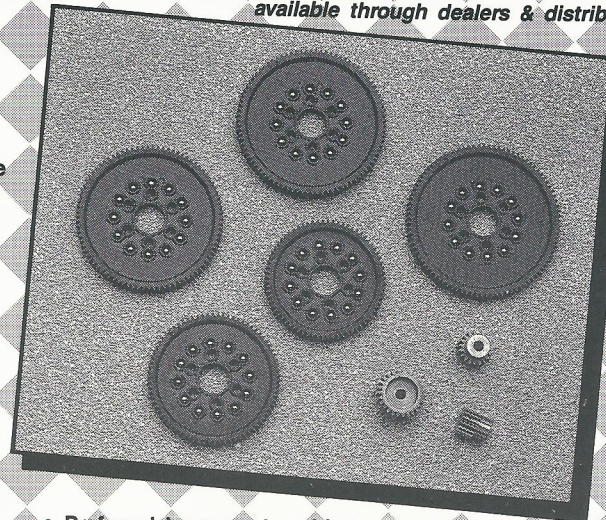
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• Peak-, time-, thermal CHARGE
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PIT TALK

By J. R. Sitman

Well here we are into the 90s and already the racing calendar is jam-packed with events. At the time of this writing, we have already completed almost a dozen races (On-road, dirt oval, and off-road events) and it's only the third month of the year! Eight races were held in California, one in Massachusetts, one in Virginia and one in Texas.

At the first off-road race of the Winter Series, some of the drivers signing up expressed some confusion about NORRCA's new way of splitting up the classes into two groups; Expert and Sportsman. Here are a few general tips to help you decide which way to sign up. If you have placed in the top ten at NORRCA or ROAR National events, then you automatically rate as an Expert. Experts are not allowed to race in the Stock or Novice classes. You may enter any way you want, but once you enter Expert, you can't go back to Sportsman that season. You may move up from Sportsman to Expert any time but if you do it midway through the season, you probably won't accrue enough points to place in the top ten. NORRCA won't bump anyone up from Novice to Stock or Sportsman to Expert during a season. You can contact J.R. Sitman for more detailed info. at (714) 981-9641. J.R. admits that the formula is not 100% perfect, but so far it has been working out very well and it might take a short while to iron out any kinks. It has worked out so well, in fact, that the Novice classes have doubled since last year and J.R. credits this new system for that.

NORRCA prides itself on being a race sanctioning body that is run by racers (not manufacturers) for racers and proves that fact by its innovative ideas. One of NORRCA's new ideas is to offer racers 12 years of age and younger the opportunity to purchase a year's membership for half the regular price in order to promote the "family oriented" aspect of this hobby/sport. Under 12 drivers pay only \$10.00 instead of the normal \$20.00.

The dates and locations for this year's National events have been set so mark your calendars with the following: PAVEMENT ROAD COURSE NATIONALS, June 1-3, Racer's Haven, Bakersfield. OFF-ROAD NATS, July 6-8, Norm's R/C Hobbies, Dallas, TX. DIRT OVAL NATS, August 17-19, Cooper's R/C Center, Chatham, VA. PAVEMENT OVAL NATS, Cajon R/C Speedway, Cajon, CA.

Some questions have been raised on how NORRCA decides on the locations for National events. NORRCA relies on the expertise of seven individuals (whom will remain anonymous), who are heavily involved with the sport and are NOT manufacturers to vote on sites using a points system. Each voter is given a list of things to consider (Hotels available, pit space, snack bar at the tracks, other attractions near the sites for family members, etc.) and are asked to rate each one with points from one to ten. NORRCA simply tabulates the scores then makes a decision. NORRCA favors

the racers and their families only in its choices and does not favor any particular racetrack.

I am personally a real concourse nut and therefore could imagine the disappointment one unlucky racer must have felt at a recent event. NORRCA has revived its "running concourse" rule, requiring concourse winners to run their award winning bodies in at least one of the heats at the event that their entry is placed in. Apparently this particular racer was unaware that he was supposed to run his body and during the main events a protest was lodged by another entrant and he was subsequently disqualified. Tough break but at least he is still eligible to enter in any subsequent event. Also, remember that driver figures inside of cars gain you more points during judging. You may remove driver figures and those expensive wheels you might have for the race but you must RUN THAT BODY!

Well that's it for now so farewell till next time and beware of the backmarkers... they'll take you out!

□CP

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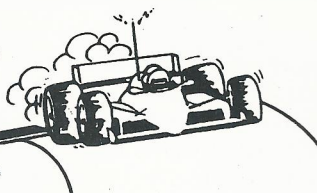
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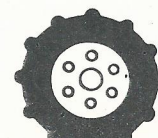
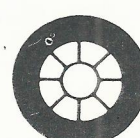
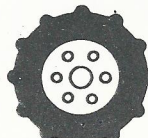
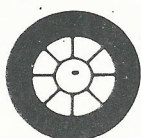
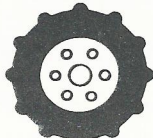


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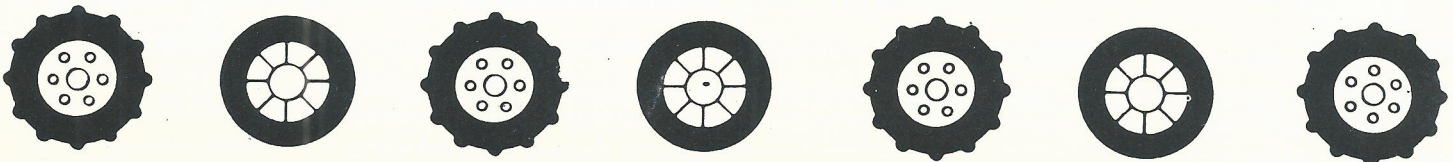
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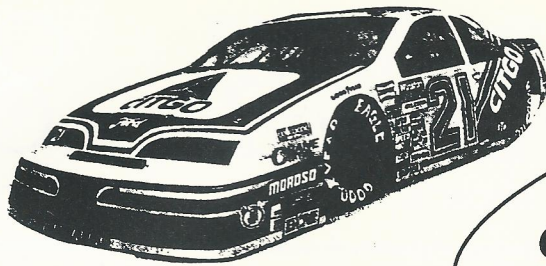


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NR/CTPA

By Dave Sproul

WHAT IS THE NR/CTPA?

The National Radio Control Truck Pulling Association (NR/CTPA) was formed as a nonprofit organization in August of 1987. Dedicated to promoting R/C pulling and monster truck competitions, the NR/CTPA has established affiliated clubs and sanctioned events around the U.S.

WHERE DID THE NR/CTPA BEGIN?

The NR/CTPA was created by a group of R/C enthusiasts in Pittsburgh, Pennsylvania who had a desire to compete in R/C pulling competitions and saw the need for a national governing body. In May, 1989 the NR/CTPA office moved to its present location in the Midwest.

WHAT DOES THE NR/CTPA DO?

The Association provides rules

and guidelines for pulling and monster truck competition, sanctions local, regional, and national events, and publishes R/C Puller. In addition to the above, the NR/CTPA works with various manufacturers to produce specialty products for pulling. The Association also promotes the Annual World Championship Truck Pull which in 1989 drew 183 entries from three countries and over 1000 spectators.

WHO ARE THE MEMBERS?

NR/CTPA members come from all walks of life and live in various locations throughout the U.S., Canada, New Zealand, Korea, Greece, Japan, and Puerto Rico.

WHAT DOES

MEMBERSHIP INCLUDE?

Membership includes: NR/CTPA Official Rule Book, membership

card, decal sheet, subscription to R/C Puller, discounts on NR/CTPA shirts, hats, and jackets and reduced entry fees at sanctioned events.

HOW MUCH DOES MEMBERSHIP COST?

Membership dues are \$15.00 per year for U.S. residents and \$25.00 per year for foreign members.

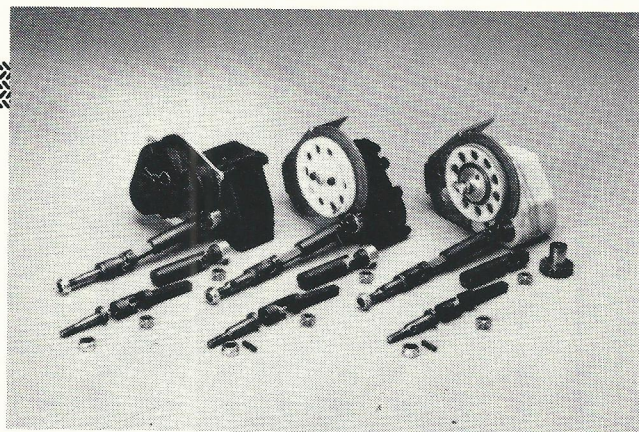
WHAT IS R/C MOTORSPORTS INTERNATIONAL?

RCMI was formed by NR/CTPA in January, 1990. Created as a nonprofit organization, RCMI's primary purpose is to promote and establish R/C pulling and monster events outside the U.S. RCMI also serves as a parent organization to the NR/CTPA.

HOW DO I BECOME A MEMBER?

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NEWSLINE

12th SCALE INDOOR RACING ON PUGET SOUND

By Terry Graham

The first day was practice day, which quite often turns out to be a free for all at an event this size, however, there was an air of friendly competition which led to an adherence to the rules imposed by SARCAR. Only eight drivers were allowed on the stand at a time with frequency clips on their antennas. They didn't even have to impound radios.

One thing became apparent during practice; the stock class cars were turning in some pretty fast lap times. I checked with Dave Steen (he and his wife Georgia own and operate Race-

way Hobbies) to see which motor had been used as handouts. It turned out to be Trinity's new Signature Series Joel Johnson Stocker. I have personally used this motor in my RC10L for indoor oval track racing and without changing springs or brushes it outperforms other stock motors that I have spent hours dyno-tuning.

With practice day over without a hitch, day two brought the qualifying rounds.

There were a total of 10 qualifying heats; heats 1-7 were modified class with a total of 49 entrants, and heats 8-10 were stock class with 16 entrants. In order to keep things moving as quickly as possible, Georgia Steen grouped drivers into their

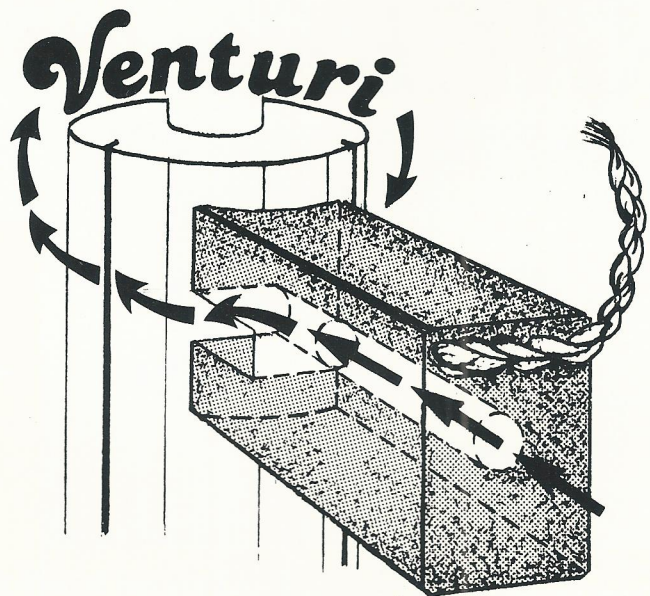
qualifying rounds according to their currently know driving ability. This worked well to provide some relatively smooth heats. There were originally only three rounds of qualifying heats scheduled for the day but everything ran so quickly and smoothly that a few of the drivers petitioned for a fourth round. The SARCAR officers held a quick vote and racing continued.

Byron Bressel from Portland, Oregon was the top modified qualifier in the first round, however, Steve Curry from Edmonds, Washington and Bob Stormer all the way from Glasgow, Montana were right there with 29 laps each. The second round was where Bob Stormer was to earn the title of

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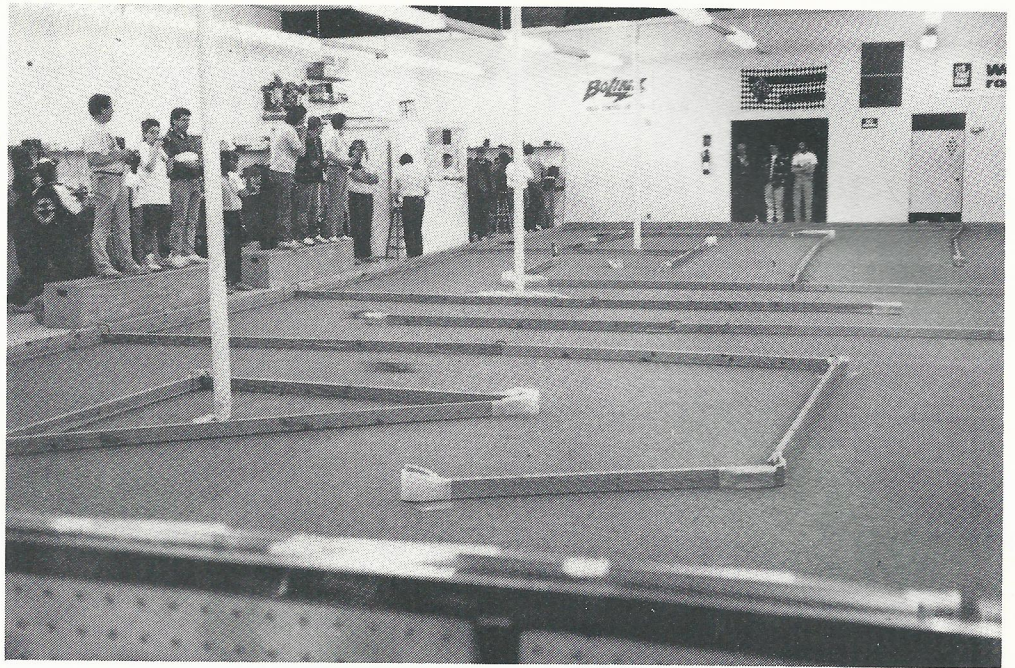
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Top Qualifier in the modified class with a scorching 30 laps in 8:17.16. These three drivers were to hold down the top three spots throughout qualifications. The current SARCAR points leader, Jeff Travelstead of Bothell, Washington, who had run very strong all season qualified sixth attributing his lack of performance to tired batteries and radio problems.

In the stock class, Don Landaker from Salem, Oregon was TQ in the first round with Jon Wadkins and Randy Holst from Beaverton, Oregon right behind. In the second round Randy Stucker from Black Eagle, Montana took over the first spot where he remained turning in 27 laps in 8:12.75 in the 4th round earning himself the TQ award in the stock class. Randy Stucker and Bob Stormer captured TQ in both classes for Stormer Racing.

With qualifications out of the way on Saturday, Sunday was to be full speed ahead racing. This



An overall view of the carpet track.

is how it happened. The track opened at 10:00 a.m. Sunday morning and racing began at 11:00. There were six modified events scheduled and two stock events. Racing started with the Modified F main, - only three

cars in this one because the modified field had thinned out to only forty-three cars. You could feel the excitement in the air as each of the mains were run. There was no less tension at the beginning of the F main than

THE FUTURE, NOW!

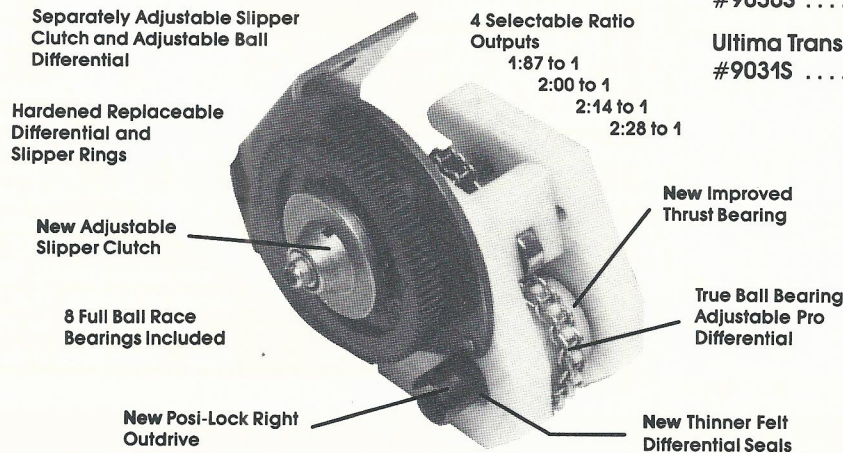
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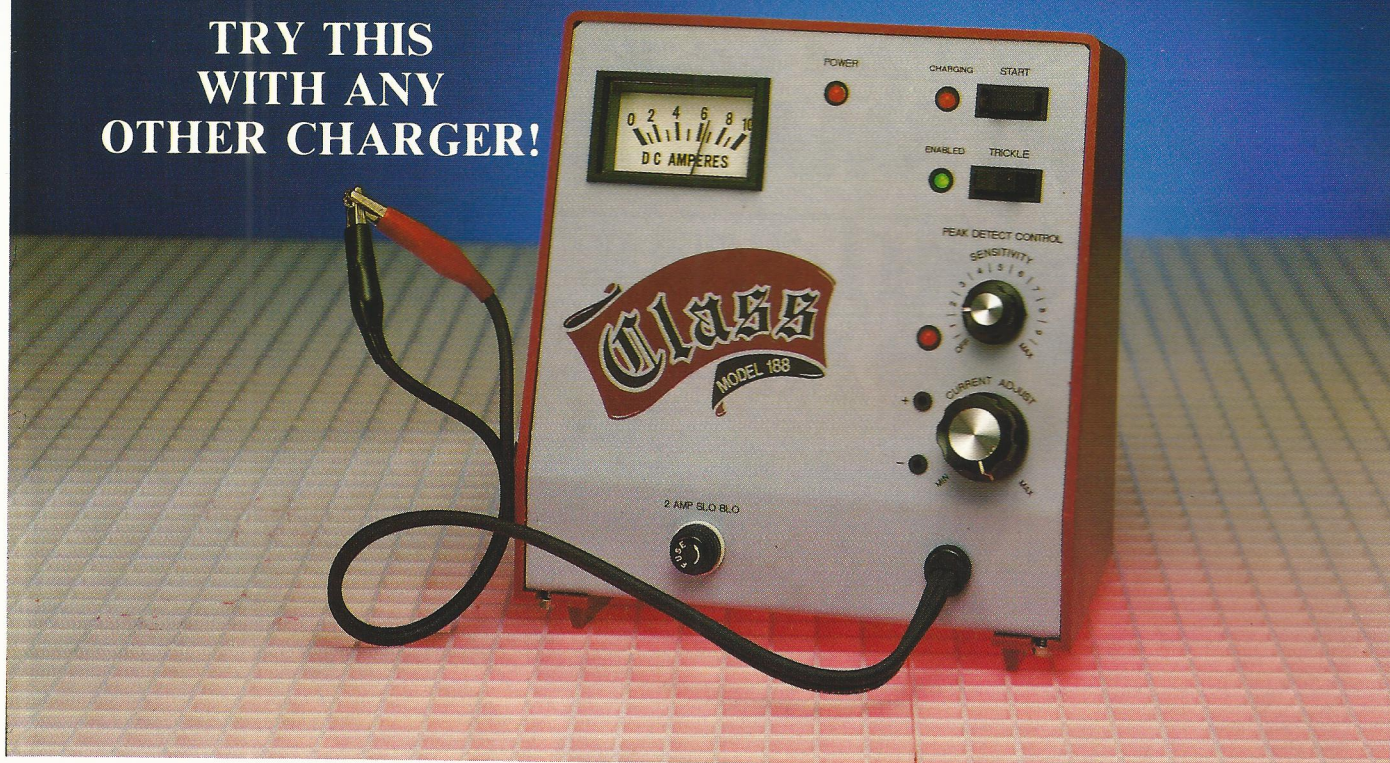
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there was at the beginning of the A main; and there was no more thrill of the win at the end of the A than there was at the end of the F. Racing is racing, but it remains that the fastest cars and drivers were in the A and B mains.

Lee Robertson of Seattle led the Stock B main for the first three minutes when a broken spindle took him out of the action and Stewart Keene of Beaverton, Oregon took over the lead for a decisive victory with twenty-four laps in 7:56.39. Carlos Gonzales of Edmonds, Washington, who just missed qualifying for the modified A Main, won the B Main after maintaining the lead for the entire race. Carlos, who is better known for national level off-road racing, turned twenty-eight laps in 8:4.13.

Perhaps the most exciting race of the day was the Stock A Main. Randy Holst went out for the early lead with Darren Stucker, Jon Wadkins, and Don Landaker right behind him. Early on Jon and Don began mixing it up for the third spot, exchanging positions several times while the two leaders were cruising just seconds ahead. After a few minutes of this it became apparent that Don was dropping just slightly off the pace. Meanwhile, at about the four minute mark, Randy and Darren began mixing it up for the lead. Every eye in the place was watching with jaw-dropping awe as these two traded off the number one spot more times than could be counted; more often than not, several times a lap, Jon was right behind this squabble waiting for the leaders to make the mistake that never happened. Folks, this race was the race of the day. The only way to describe it was that it was the cleanest dog fight I ever saw. On the last lap Darren made the final pass for the win with twenty-six laps in 8:9.69.

The Modified A Main was not so spectacular, but it was a good race. Byron Bressel took the early

A LAP MANAGEMENT COMPUTER

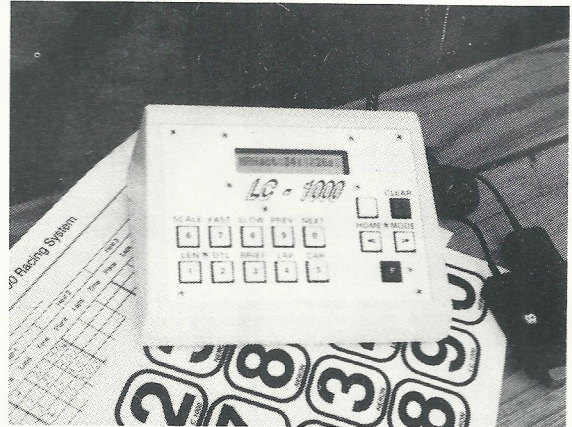
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lead with Steve Curry, Chris White of Edmonds, and Bob Stormer close behind. Bob was able to overtake Chris in the last laps for third, but it was Byron Bressel for the win with thirty laps in 8:12.36, and Steve Curry in second. Bob Stormer was third, Chris White was fourth, Ernie Beasley of Portland was fifth, and Ron Steen of Mount-

lake Terrace, Washington (Dave and Georgia's son) was sixth. Jeff Travelstead and Kevin Tupper of Troutdale, Oregon both dropped out in the early laps with equipment problems.

This was racing in Edmonds, Washington early in March, 1990. It was a great weekend of fun and excitement for all thanks to the efforts of SARCAR and



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their officers Terry Varner, Sherman Joseph, and Eric Bourlet. Also thanks to Dave and Georgia of Raceway Hobbies in Edmonds for their facility and efforts. And a special thanks to Georgia again and Chris Lamb for accomplishing the impossible tasks of counting laps and weighing cars without a hitch.

**Modified
A Main**

- 1st - Byron Bressel
- 2nd - Steve Curry
- 3rd - Bob Stormer
- 4th - Chris White
- 5th - Ernie Beasley
- 6th - Ron Steen
- 7th - Jeff Travelstead
- 8th - Kevin Tupper

**Stock
A Main**

- 1st - Darren Stucker
- 2nd - Randy Holst
- 3rd - Jon Wadkins
- 4th - Don Landaker
- 5th - Terry Rutz
- 6th - Chris Brown
- 7th - Tim Roberts
- 8th - Roger Moore



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CORCAR begun the late winter off-road race in 1987 and the idea has caught fire. The event held January 13th and 14th at the spacious Cooper Arena on the Ohio State Fairgrounds had to be limited to 320 entries this year. Thanks to the exposure the flier got at the 12th scale Indoor Championships in Cleveland and in issues of Competition Plus the race filled up before the Dec. 31st deadline.

Racers from thirteen states

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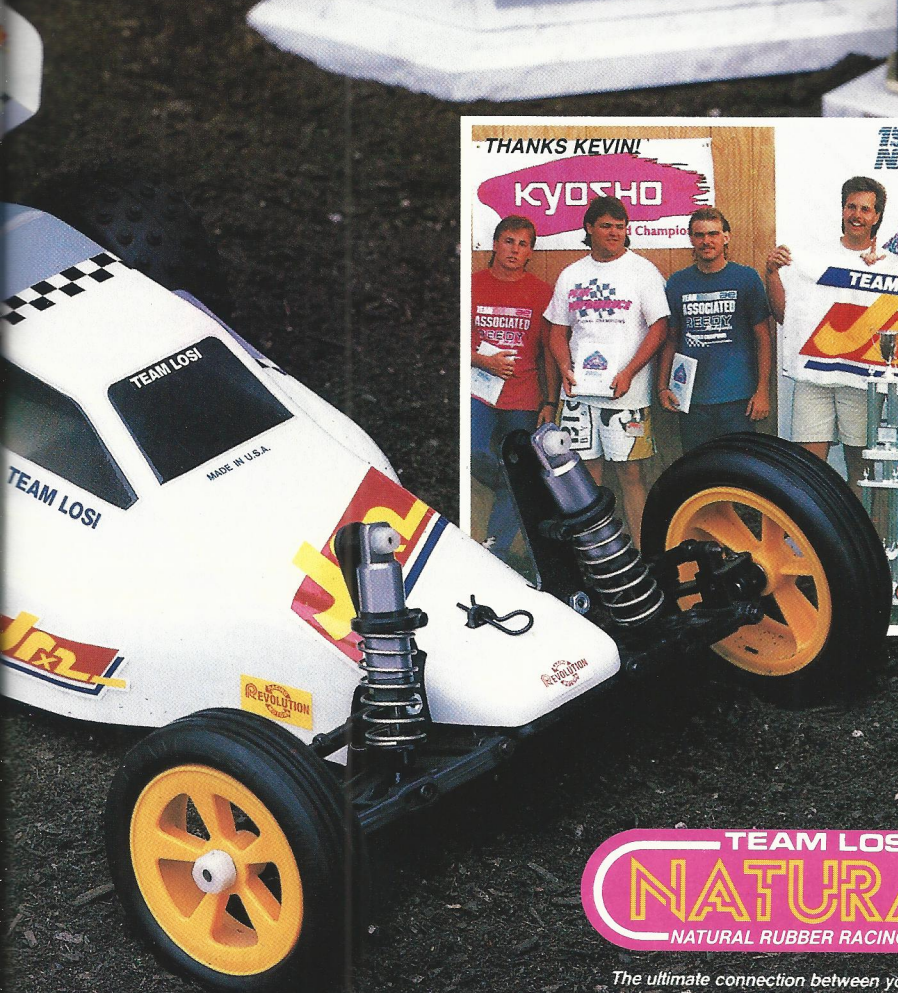
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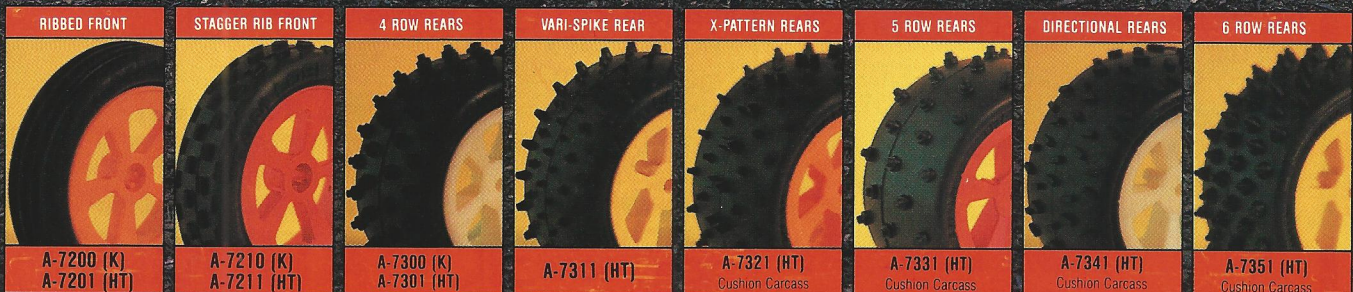
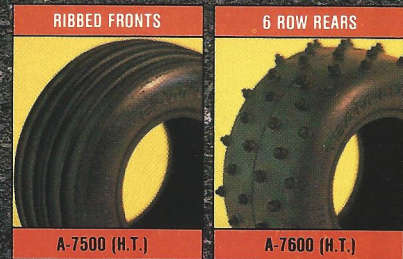


TQ- 1st Jack Johnson — JR-X2, Revolution "Motown Missile"
 2nd Kyle Reed — JR-X2, Revolution "JR's Choice"
 3rd Mike Dunn — JR-X2, Race Prep Powered

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checked in Friday evening to receive their handout motors and begin practicing. Two of the local TV News Channels gave the race excellent coverage. The exposure drew hundreds of spectators to the fairgrounds that weekend and CORCAR expects the race will continue to add new racers to the sport. The continued success of the event has also brought in many established racing teams from all over the country, as well as the top Region 3 drivers.

The track for 1990 was similar to 1989 with the addition of a table top jump. The track began with a long straight-away into a wide sweeper that gave way to a double hairpin with a ridge running down the middle. From there the track alternates left and right turns with a variety of surfaces on each. The entire track was easily visible from the elevated driver's stand. What the drivers saw was a very 3-dimensional track that would test their suspensions to the fullest. The principle for the race seemed to be to keep the wheels on the



The Ohio State Fairgrounds offers the most spacious indoor off-road track in the nation.

ground and you might win. Before the weekend was over many racers with improper setups would find their cars wrong side up near a jump.

The Stock competition was run on Saturday. After the first

qualifying round it was thought that 10 laps might be good enough for the A Main. Only defending 2WD Champion, Mike Ankney broke that and he smashed it with an 11 lap 4:06

(Continued on Page 59)

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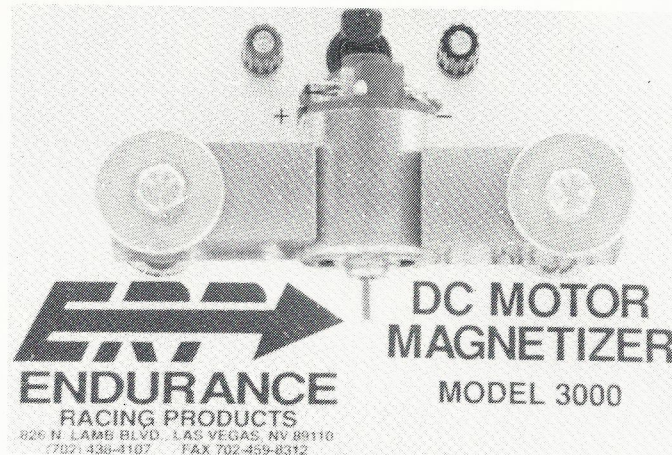
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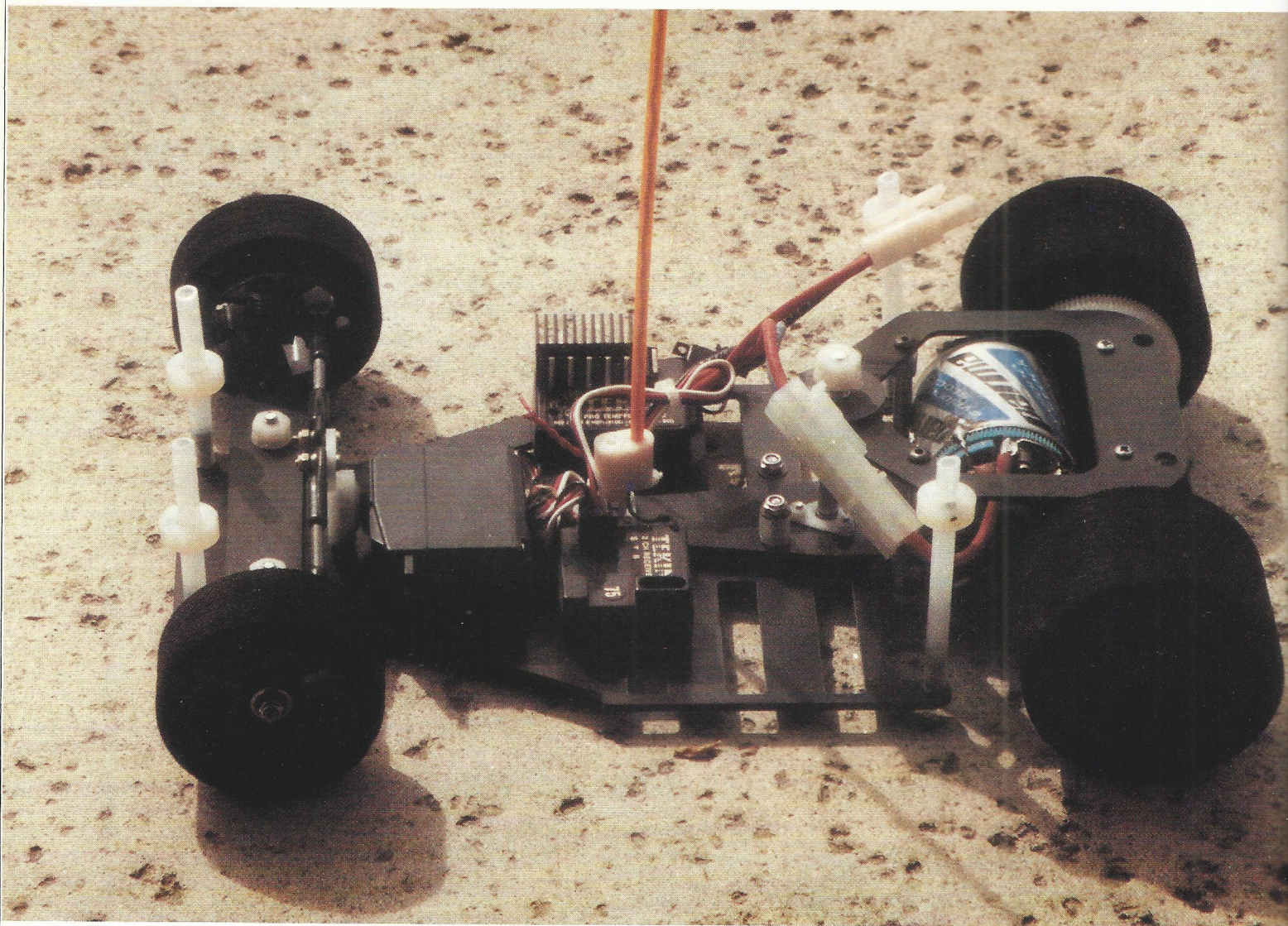
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PARMA'S

Pro Panther 12

By Jeff Palmer

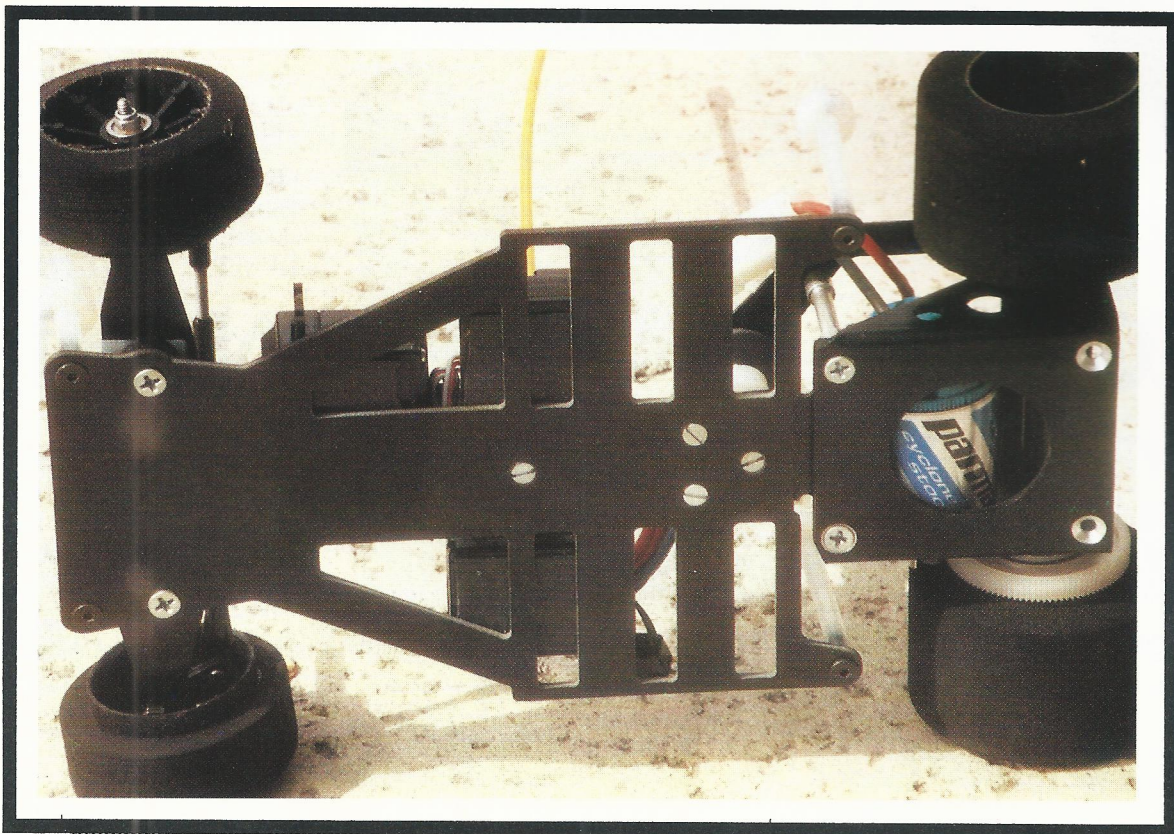


Today's 12th scale racing is one of the most competitive categories in R/C racing with the Associated 12L, TRC 12 and Corally SP II all jockeying for the

top position.

The sophistication of today's cars are evaluated on dampening the motion of the rear power pod, the overall weight/power ratio of

the car, and the efficiency of the transfer of power to the ground. Parma's Pro Panther 12 is a car that is designed to compete in this category. The graphite ver-



The above photo shows the Parma Pro Panther 12 chassis with the T-plate rear suspension and rear pod assembly.

sion of the Pro Panther 12 is Parma's entry into the 12th scale arena. It features ball bearings, graphite axle, simplified power pod and the Parma version of the Pro Diff. It has a cross-arm front end with spring dampened steering blocks, T-plate rear suspension and power pod assembly that is spring dampened. It's a car kit with very few parts and is simple in design.

CONSTRUCTION

The first page of the instructions describe tools that will be required to assemble this kit. Some extra materials required to assemble this kit are, a tube of Loctite "Threadlock 242" to secure many of the screws in place and Paragon "Ultralon" to lubricate moving parts like bearings because it dries to a powder and helps prevent any

dirt build up. However, if "Ultralon" is used on the bearings, it needs to be thinned 50/50 with Lacquer Thinner. Enough - let's check out the instructions.

The six pages of instructions, of which only 4 are text, reflect the simplicity of assembly of the car. They contain a number of detailed photos of each assembly step accented by short paragraphs of written detail. At first glance, these instructions look to be informative and complete, but the beginner may need some help building this kit from them.

The first assembly is the "Front End." The front end consists of a pair of steering blocks on king pins with springs as dampeners mounted on a crossbar; standard 12th scale stuff. What's unique about Parma's approach is, they use "caster wedges". Caster wedges are the rectangular pieces of plastic tapered at 1, 2,

and 3 degree angles. They are used to tilt the front crossbar at the proper angle to improve steering. The caster wedges are mounted on top of the nylon spacer, which separates the front end crossbar from the chassis. Start with the 2 degree and experiment to find the right caster for your driving style. The part that makes this difficult is the poorly reproduced photos, they're too light or washed out. Secondly, the first photo, a parts explosion of the crossbar assembly, is upside down in relationship to the other two photos used in this section. One other note for beginners, the term "stand-offs" means "spacers."

The next assembly is the "Rear Pod." Again, the first photo of the assembly is a complete parts layout of the assembly. That's great, but the reproduced photo in the instructions is very light

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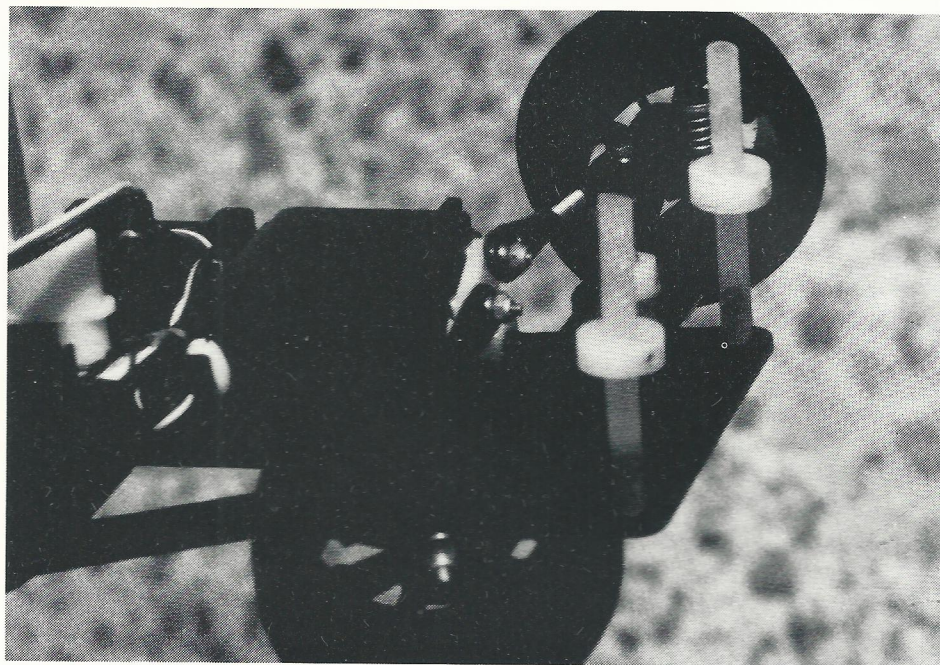
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and a lot of detail goes unnoticed. Follow these instructions to the letter and pay close attention to the position of the rocker balls. In the second photo for this section, the longer portion of the rocker ball goes on top. Special attention needs to be given to the last paragraph of the section where it talks about the rocker ball assembly. **IT'S CRITICAL TO THE HANDLING!!**

The third assembly is the "Chassis Assembly". Here the rear pod assembly is attached to the chassis and the T-plate damper is assembled. During the construction of the T-plate damper, I used a thick silicone diff lube to increase the dampening action. This slows down the spring action providing a slower but smoother action; more like a shock absorber.

The one paragraph in the Chassis Assembly that caused a lot of grief to me was "Next, assemble differential per instructions enclosed in bag." The instructions in the bag were the "Parma Associated Differential



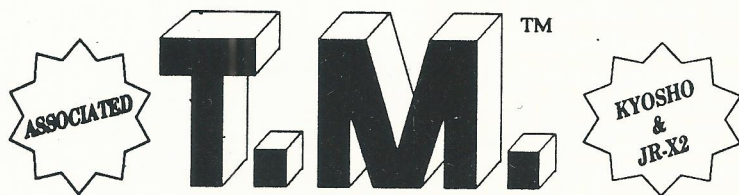
Note the cross-arm front end with spring suspension dampening steering blocks.

Instructions" which is not the diff in my kit. The graphite version of the Pro Panther 12 comes with the light weight spoke wheels which require a different diff setup; it's more of the Bolink style of the "pro diff". The ironic part is, the photo provided in the

instruction manual, is the one that has the correct parts explosion for this diff assembly. I used this photo to assemble the diff.

The "Final Assembly" is just that, put the wheels on and add the motor and electronics and

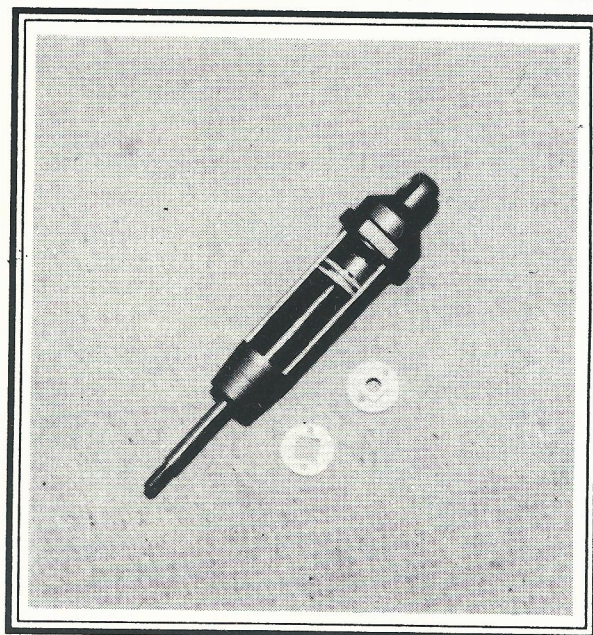
It's as simple as 1 - 2 - 3!



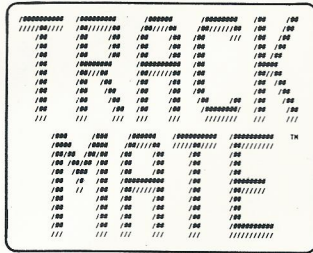
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let's get to racing. As usual, I used turn buckles for the front end steering tie rods to simplify alignment. Next, I found the smallest receiver and speed controller available, Tekin's Micro PRO Receiver and ESC-300PT. Parma's Stock Cylcone motor was used and now we're ready for the track. I crowned this chassis with one of Parma's own custom painted bodies, Osella PA9.

ROAD TESTING

As with all new cars, adjusting the diff was the first priority. The Parma Pro Diff has a very smooth action but I experienced some wheel hop problem. The problem was related to the right rear wheel. I solved the problem by adding a bearing to the outside of the wheel and changing the thrush washers to a thinner one solved the problem. While I had the diff apart, I changed the 32 pitch kit gears for 64 pitch gears, it offers finer tuning between torque and RPM.

Next, I added a Bud's "TOJ" stabilizer wing and now I was ready for the final setup and a trip to the track. To do the next two adjustments, the car must be completed, that is, the ESC, radio, batteries, and motor must all be installed. To the tweak, Parma recommended running the rear pod loose so it shifts easily. Translated "loose" means the silicone rubber tubes should only be slightly compressed. To adjust the tweak, tighten or loosen the nuts that hold down the silicone rubber tubes on the rear pod. Adjust the tweak until it's perfect, the instructions tell how to use the "knife method" of tweaking. To complete the setup, adjust the spring tensions of the rear T-plate so the chassis is parallel with the ground. The T-plate effects the steering by controlling the amount of push. The stiffer the T-plate, the less the car pushes when cornering and the more it tends to oversteer.

Caster is one of the setup options in the instructions. They

call for 2 degree caster on the front crossbar. Since caster is relative to the responsiveness of the car, work with it until it's right. Too little caster and the steering will snap the car through the corners; too much caster and the steering is sluggish in the corners. I settled for 3 degrees.

I took the car to the local carpet track, Eagle Hobbies in Dallas, Texas, and put the Pro 12 to the test. At the track, the Panther was stable and held good lines in the straight away and it had minimal push in the corners. With the car setup it was time to "wind it out" and see how it would perform. I added Paragon's "Ground Effect" to the tires for time laps for that little extra traction. The car accelerated well through straight aways, but in tight corners, it wanted to swap ends. Overall, the car handled well, but I felt the performance of the rear pod could be improved to provide increased traction. To accomplish this improvement, I disassembled the T-plate and polished the dampener post with a little rubbing compound. Then I re-assembled the T-plate, making sure the dampener washers move smoothly up and down the post. Then I placed Bud's #7460 Silicone Lube on the inside surfaces of the dampener washers. The polishing improves the T-plate up/down motion and the thick lube slows the action. This modification allows the PRO 12 to be competitive with the big boys - Associated 12L and the TRC 12.

CONCLUSION

Parma has a great entry to intermediate level racer in the Pro Panther 12. The only problem with this kit is the instructions and Parma is taking steps to correct this problem in the future. The car handles well and is fun to drive. Thanks Parma for your willingness to make minor changes and your continued delivery of quality products. "Til next time, GOOD RACING!!

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CAR KIT SPECIFICATIONS

KIT:
 Manufacturer Parma
 Model Pro Panther 12
 Type On-Road
 Scale 1/12

CHASSIS & BODY:
 Chassis Type Pan
 Material Aluminum/graphite
 Body not included
 Material N/A

ELECTRICS:
 Motor not included
 Receiver not included
 Speed Controller not included

WHEELS:
 Front Parma
 Rear Parma

GENERAL:
 Weight(compl./6 cell) 31.26 ozs.
 Wheelbase 7.38 in.
 Track (front/rear) 5.8/4.87 in.
 Length 14 in.
 Width 6.65 in.
 Height 3.25 in.
 Bearings/bushings bearings

SUSPENSION:
 Front Springs
 Rear T-bar dampener

DRIVE TRAIN:
 Type Direct drive/ball
 Ratio 5.4:1
 Gears (pinion/spur) 20/108

TIRES:
 Front Parma Panther
 Rear Parma Panther

OPTIONS
WHEELS:
 Front Stock
 Rear Stock

ELECTRICS:
 Motor Parma Cyclone Stock
 Receiver Tekin TER
 Speed Controller Tekin 300PT
 Batteries Parma SCE

TIRES:
 Front Stock
 Rear Stock

CHASSIS & BODY:
 Chassis Stock
 Material Stock
 Body Parma Osella PA9
 Material Lexan

COMMENTS:
 Chose Tekin receiver and ESC for its small size and light weight.

ROAD TEST:
HANDLING:
 Acceleration Excellent
 Cornering Good
 Rating Very Good

COMMENTS:
 This car needs some work on the T-plate suspension.

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Distributor Inquiries Invited

Kyosho Puts 1/8 Scale Gas on the Fast Track by Bill Jeric

Kyosho is launching a full scale campaign to bring 1/8 scale gas off-road racing to the attention and enjoyment of American R/C racers with a new series of sponsored races. The "Kyosho 1/8 Scale Off-Road Challenge" race series will work to bring you the best in experienced gas racers plus new entries from the ranks of electric racers.

America Follows Trends in Europe and Asia

In Europe and Asia, 1/8 scale off-road gas racing is hot. The size of 1/8 scale both in terms of the machine and the track allows for greater realism and increased excitement. There is a heft to the machine that means serious business. Seven and one-half pounds of highly engineered components are propelled down the straights at speeds from 40 to 50 actual mph.

What R/C enthusiasts in Europe and Asia have found out is that driving 1/8 scale gas cars brings them closer to the real thing. The sound of the engines, the horsepower, the speed, the appearance and even the smell of nitro creates a rush of excitement that Americans can relate to and race to.

For drivers of 1/8 scale gas who come from the 1/10 scale electric ranks it's a chance to test their mechanical and driving skills with a machine that's faster, heavier and moves like a pit bull on a mission.

New Event for Track Owners

The Kyosho 1/8 Scale Off-Road Challenge race series will be taking place all across the country. At chosen tracks, these sponsored race events will be given extensive publicity.

From these track locations, Kyosho expects the speed, the excitement, and the absolute fun of 1/8 scale gas to spread to selected R/C tracks all over America.

With 1/8 scale gas off-road a track owner is offered a new form of racing. One that turns up the volume and with speeds that can be best described as "ballistic." Spectators love the action and 1/8 scale runs a shiver up the back of R/C car hobbyists looking for a greater thrill.

Almost any good sized off-road track will accommodate 1/8 scale cars. Ideally, the

straights should be at least 100 ft. long and the lanes should be 6 to 8 ft. wide. Smaller tracks can simply run fewer cars per heat. An advantage of 1/8 off-road is that minimal track maintenance is necessary. These cars can tackle virtually any type of surface, no matter how rough.

Racers and spectators get more than just a few brief moments of action with 1/8 scale. In gas off-road, qualifiers are usually in the 5 to 10 minute range with mains lasting between 30 minutes and one hour. Pit stops for fuel are required during the main event.

A Proven Track Record

Kyosho is ideally suited to champion the 1/8 scale gas movement in America. As a leading manufacturer of electric R/C race cars and monster trucks, Kyosho has developed the technology that recognizes the demands of racing at 40 to 50 mph speeds on terrain that can be smooth, rough or anywhere in between.

Kyosho's Burns DX and Turbo Burns 1/8 scale off-road cars are classic examples of designs that match the demands of the racing category. The result is a combination of years of experience with R/C cars and advanced engineering. Unique suspension systems, .21 buggy engines and chassis configurations work together to allow maximum speed with optimum control.

The Kyosho Burns series is an out front 1/8 scale competitive choice and was raced to 2nd Place in the 1988 IFMAR World Championships.

Three Cars in One

All types of people are drawn to 1/8 scale gas cars. While 1/8 scale gas is ideal for dirt off-road racing, the opportunity for other forms of racing is clearly there. Some prefer dirt off-road courses while others lower the suspension, add an 1/8 scale ASA body and tear into some exciting dirt oval action. The addition of a set of slicks puts a 1/8 scale gas car on the asphalt for oval racing.

The versatility of 1/8 scale gives the owner an investment of three cars in one.

1/8 Scale Started It All

1/8 scale gas on-road racing is really the roots of R/C car racing as we know it today. In the 1970s, on-road gas was where it all began. Equipment was crude in those days and reliability was a major stumbling block to early 1/8 races. Electric racing came into being and is almost totally responsible for the explosion of interest in R/C cars of all scales, both gas and electric.

Today, with advances in technology of engines, radios and chassis, the 1/8 scale gas off-road category is a form of racing to be easily enjoyed by any R/C car enthusiast. Kyosho pledges to provide the push needed to raise the awareness of 1/8 scale racing and to rally the R/C racers who wish to share their interest in this high-speed racing class. The "Kyosho 1/8 Scale Off-Road Challenge" race series is only the beginning!

You Can Become Involved

Kyosho is serious about getting 1/8 off-road up to speed in America. If you, your club or track are interested in a ground floor opportunity to get involved in helping to promote this new, exciting category, call Bill Jeric or Tom Grogg at Kyosho (217) 398-3630 or write c/o Kyosho, P.O. Box 543, Champaign, IL 61824-0543.

Kyosho 1/8 Scale Off-Road Challenge Race Schedule 1990

Watch here in coming months for the latest race dates

"Let them eat dirt... it's the right thing to do."

Eating dirt in 1/8 scale gas off-road racing is nasty. But somebody's got to do it. When you command a **Kyosho Burns DX** or **Turbo Burns**, you have obviously decided it's going to be somebody else.

Burns DX: the affordable edge.

The Burns DX 4WD gas buggy puts you out front and keeps you there. Its heavy-duty steel drive shafts are driven through an adjustable center differential. The high-strength alloy aluminum chassis and heavy-duty suspension with oil-filled shocks take whatever punishment the terrain can dish out. Most people's extras are included as standard equipment: racing body, tuned pipe and header, and fuel tank.

You can do more with your Burns DX than race off-road. Add a 1/8 scale sedan body and you have one

mean 4WD dirt oval racer. How about on-road? All it takes is slick tires like DuraTrax makes and a body of your choice.

Turbo Burns: the best a 1/8 scale gas buggy can be.

Turbo Burns is serious, all-out off-road power, put together with absolutely the best parts and accessories available. A new heavy-duty suspension featuring longer arms improves running performance. Large volume shocks offer superb handling while complete ball bearings reduce friction for blistering speeds. Also included are a new aerodynamic body and wing.

For action that's bigger, better, and laced with the smell of nitro at a blistering 40 mph plus...command a Kyosho Burns DX or Turbo Burns.


And let them eat dirt.

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IFMAR World
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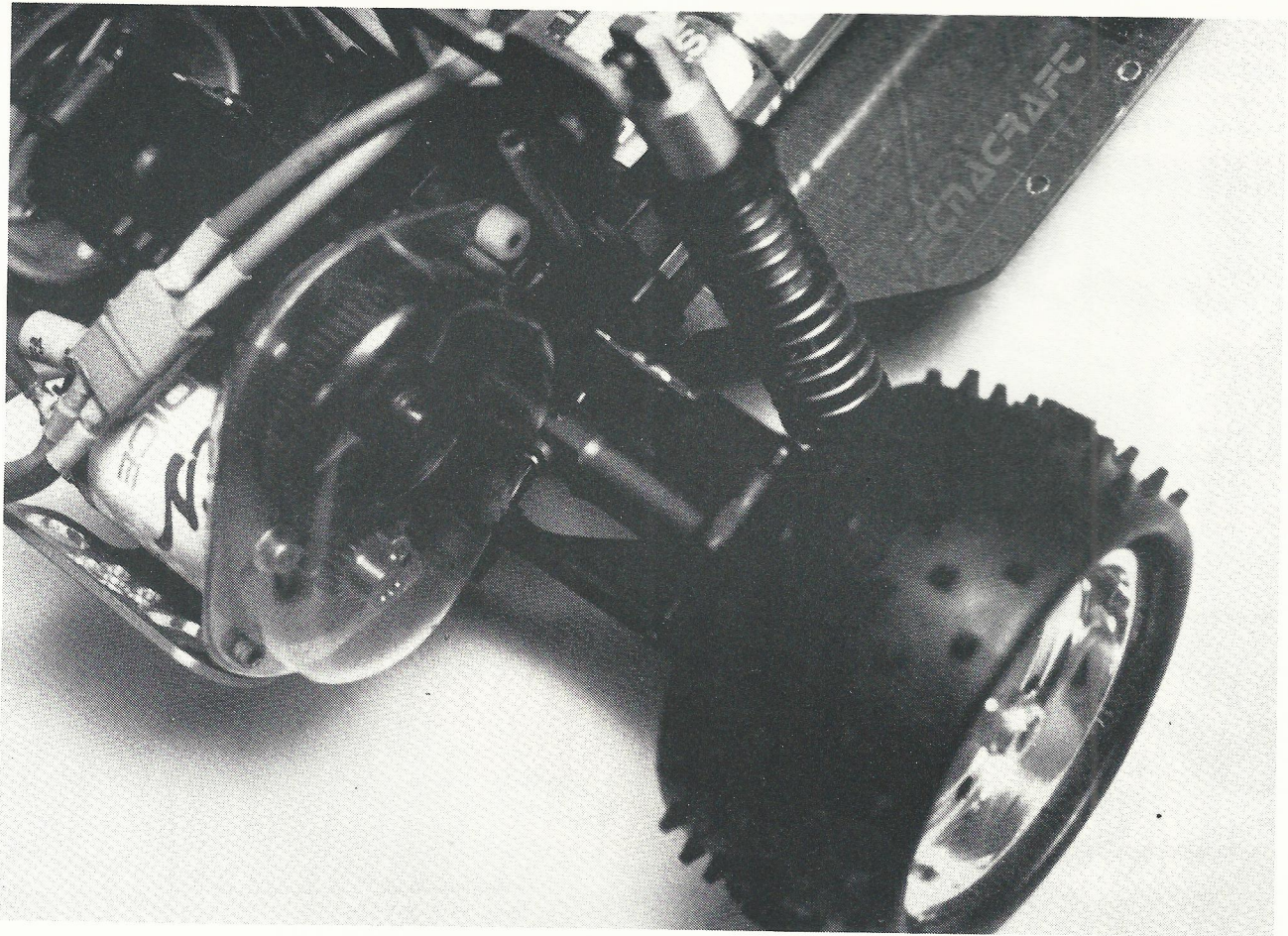
See the Kyosho Burns DX and Turbo Burns
at your hobby dealer.

TEAM LOSI'S

JRx2 PRO

PART II

By Dan Bullock



Note that the clear plastic motor cover is trimmed in the front edge to clear the upper control arm of the right rear suspension.

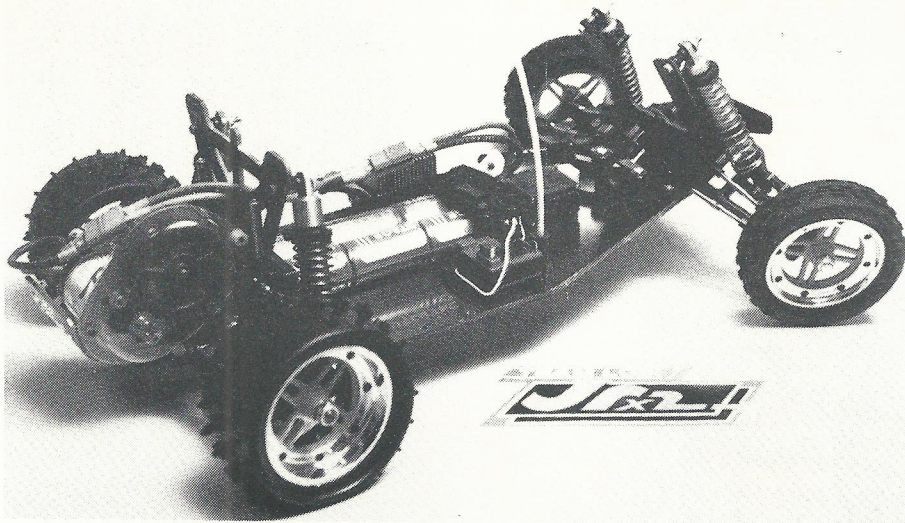
Stock antenna mounting position is maintained. The front Servo used is a Futaba 9601 with 33.3 oz-ins of torque. Care is taken to make sure that the titanium rod used to connect the servo saver to the steering sector arm ball end is adjusted to a 90 degree angle with the servo saver to give the equal right and left steering. After mounting the Tekin ESC600 speed controller at the mid point on the chassis, a

TERX micro receiver is placed on the opposite side of the battery cup, also at the mid point of the chassis. Wiring with Stage III 13 gauge fine strand wire is done to maintain the shortest possible connection distance to the motor. The rear shock tower can be used as an alternate speed control mounting point.

The "Junior's Choice" 17 double motor is wired and lightly broken in. Race Prep gold plated

connectors are used throughout. Care is taken to provide suitable capacitors to limit noise production and a 21 tooth pinion is fitted to the "Junior's Choice" motor for use with a 6 cell matched SCR pack. The clear plastic motor cover is trimmed in the front edge to clear the upper control arm of the right rear suspension.

Team Losi stagger rib high traction front tires and X-pattern



An overall view of the JRx2 Pro.

high traction cushion carcass, rear tires are fitted to your wheels of choice, in this case, Technacraft Polished Aluminum Modular Wheels and Team Losi A-6304, 10-32 aluminum lock nuts are used to secure the wheels to the axles. Superglue application to both front and rear tires will prevent them from stripping off the wheels or allowing wheel spin within the rear tires. For many applications high traction rib fronts will provide ample front steering.

A Team Losi Insane (15 double) or Mo-Town missile (12 single) may be used with SCE 6 or 7 cell packs to provide extra power where traction is excellent. Using the super suspension tuning guide, the ideal set-up for each track you race at can be determined. Remember to change only one thing at a time or you can get totally lost.

This set-up will give you approximately 2-3 degrees front negative camber and the same at the rear. Ride height should be adjusted by sliding the shock mounting clamps up and down on the shock body so that the front arms are parallel with the front bulkhead. If many jumps are present at your track, slightly higher nose ride height will keep the nose a little higher on jumps

but will give a little less steering.

In contrast to the Losi 5 link rear suspension, toe-in should be set so that the front tires are straight or with slight toe-out. Toe-out will give more low speed steering and may make the car "hook" more exiting corners.

CHASSIS TUNABILITY

That's the operative phrase for the JRx2 PRO. I have raced a JRx2 with the PRO set up for several months and have been extremely satisfied with the overall performance and especially the ease of fine tuning. A little more work is required for the JRx2 to tune it to each track but the level of performance is far superior to currently available cars.

Start with the track you're going to race on. Using the PRO long chassis and long front shocks and towers as the base set up, all jumping problems are gone. Get a high lighter and mark Jack's tips in this section and take them with you to the track. It is important to realize that the H-arms DON'T work every where. They're good for smoother, well groomed tracks with a consistent surface and good traction (regular watering). That's the way many national or regional tracks are designed,



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they're FAST, usually with several high speed sweepers. H-arms!! At most local tracks, however, the surface is much LESS consistent and well groomed. It's often choppy, rough and slippery. THINK 5-LINK!!! Sometimes you'll start high speed, smooth and the track deteriorates and you'll need to change from H-arms to 5-link.

Why? H-arms by nature give less rear bite and make the car

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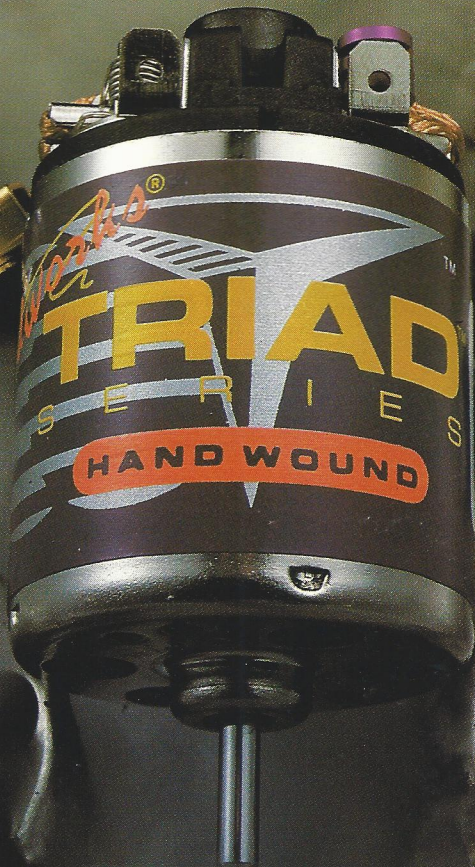
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more aggressive. It turns in better but is not quite as stable exiting turns under power. You can partially compensate by adding rear toe in with H-arms but overall the car is TRICKIER to drive fast. The 5-link in contrast has more rear bite, is more forgiving, and especially with the new shorter rear toe-in links tends to lock-in the rear end on exiting the turns. It's easier to drive fast!

Changing between the two is pretty easy. So analyze the track and install H-arms or 5-link as needed. Don't forget to adjust FRONT toe-in depending on the type of rear end you choose. With H-arms use front tires straight (max steering) to slight toe in (max front-end push), 5-link - Front slight TOE OUT (max steering) to straight (push). Small adjustments go far on the JRx2.

Now you can fine tune the car. Adjusting towards MORE TOE-IN gives more PUSH in the front end and makes the car more forgiving. If more high speed steering is desired, more front negative camber up to 5 degrees can be adjusted in. You can also adjust rear toe-in and anti-squat. The recommended H-arm set up is the number 1 pivot support with 6 degrees toe-in and 4 degrees anti-squat. This is MAX toe-in-Anti-squat and gives the best hard acceleration traction. If the track is pretty smooth with large radius turns, you may want to consider decreasing the anti-squat or toe-in.

I recommend making one suspension adjustment, then putting a fresh battery pack in the car and having someone time you for 4 sets of 3 laps each before making another adjustment. This will allow you to get a feel for the car and also give you an objective means of comparing performance by comparing lap times in the groups of 3 laps with lap times after the next adjustment. Be sure to have your timer note if you crash during each group of 3 laps to make the comparisons real. (You may want to forget that group). Ease of con-

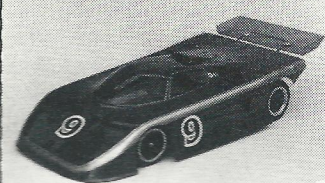
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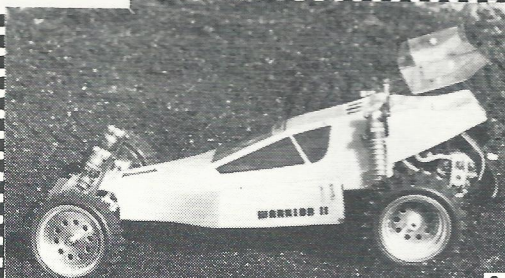


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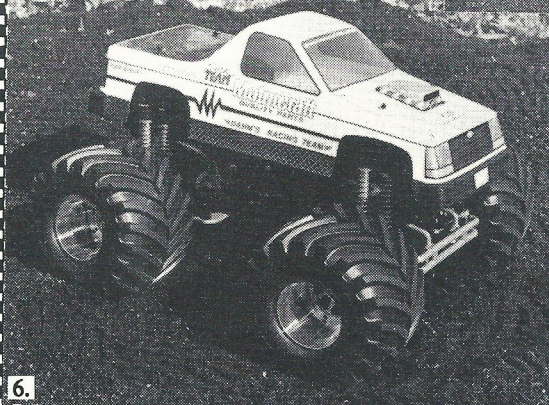
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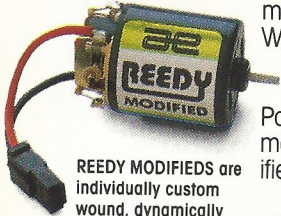
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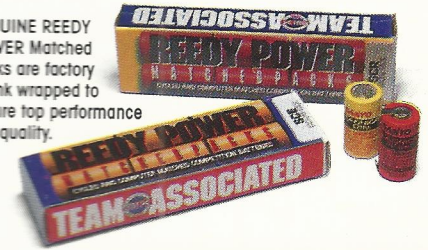
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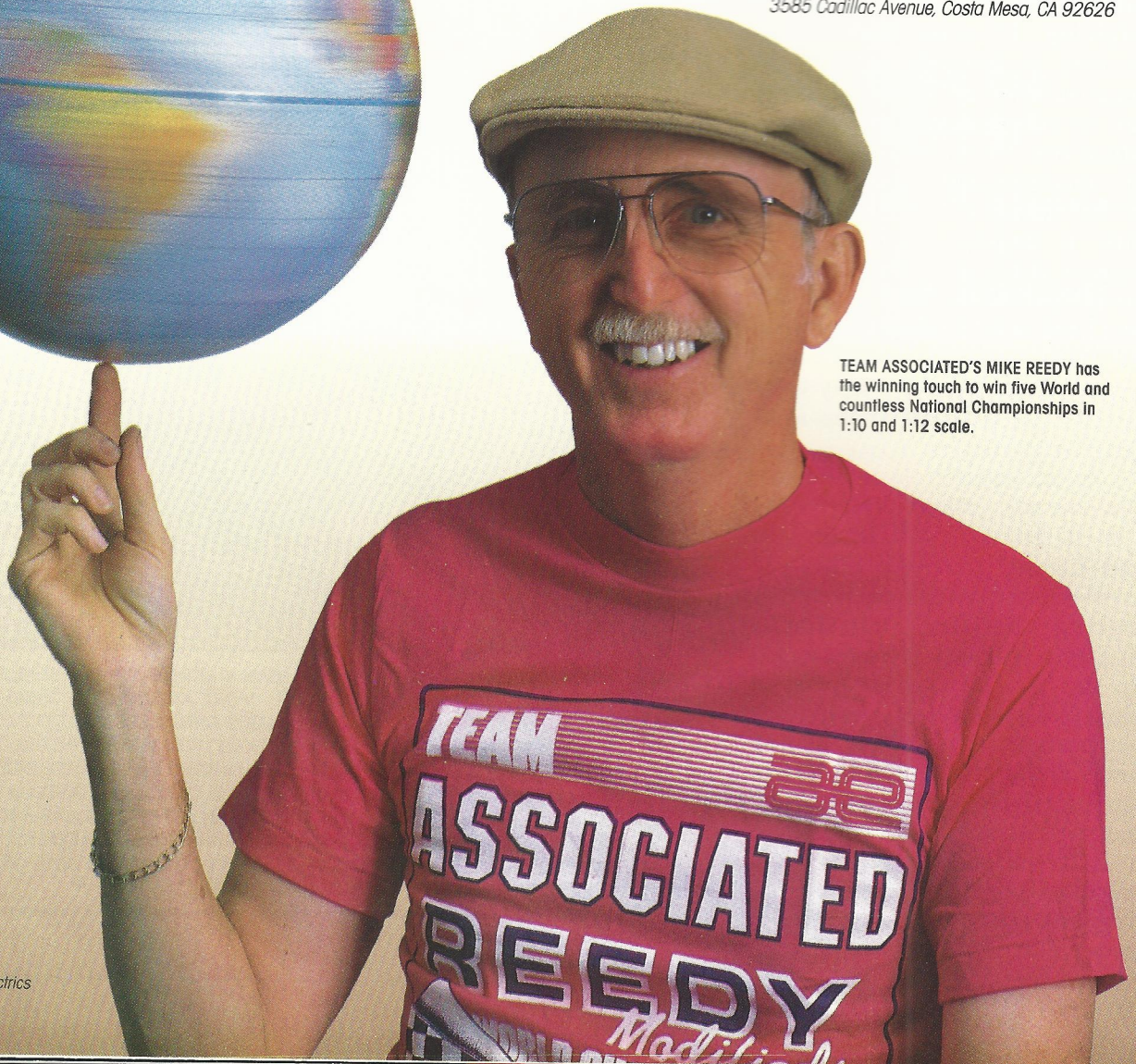
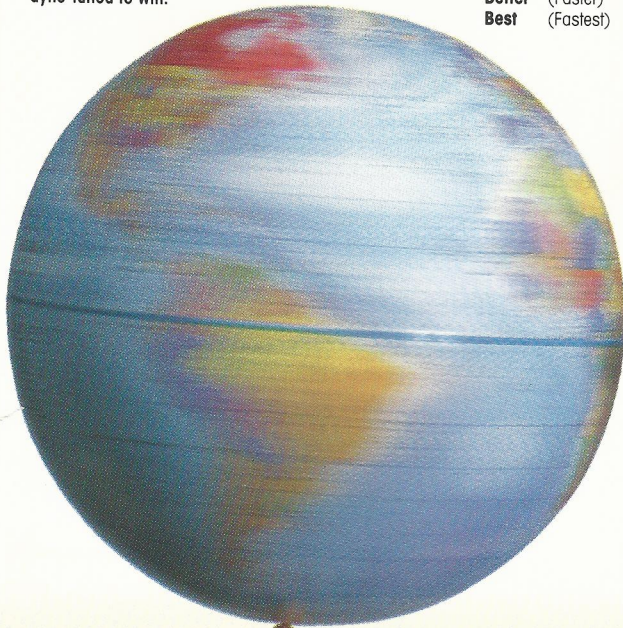
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trol and lap times will tell you what works best.

If there's one section or turn on the track you're having problems with don't be afraid to walk out and examine it closely and then practice on just that section over and over again if you can. If "practice makes perfect", you don't really need as much on the part of the track you're already good at!

All of the cushion carcass tires that I have tried are excellent with the X-spike pattern or the clipped directional rears providing the most traction and the 5 row rears a little less traction. Overall the 4 row or 5 row high traction tires are hard to beat.

We all know that a champion driver's most important skill is to read and drive the track on the smoothest and quickest line. This takes practice but it also takes a great car. Right now the best 10th scale 2 wheel drive off road car available is the JRx2 with their Performance Kit. With any "LUCK" at all, 1990 will

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bring us a production version of Team Associated's prototype RC10 so we can compare these head to head in their production versions. As usual the real winners will be all of us racers!

So that's how to set up a PRO JRx2 in 1990. Look for new light but strong dish wheels as soon as Team Losi continues to "grow" the JRx2. Thanks to Tecnacraft, Tekin, Gary Kyes and congratulations to Team Losi for redefining state-of-the-art.

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Saturday, June 16: 3 rounds qualifying, 10am. Practice ends 9am
Sunday, June 17: Concourse, 1 round qualifying, and Mains, 9am
- Classes** 2WD Stock, 2WD Open, 4WD Stock, 4WD Open, Trucks Stock, Trucks Open
- Awards** A-Mains 1st-10th, and 1st - 3rd all other classes. Concourse to winner.
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- Hotel** Travel Lodge Plaza Inn 1030 Wible Rd. Bakersfield, CA (805)834-3377
- Rules** ROAR rules apply
- Entry Fee** Pre-Entries by June 8: \$20 for 1st class, \$14 each additional class. Entries postmarked after June 3, add \$5 per entry. Maximum 3 entries per racer.
- Information** For more information and entry confirmation: Mail a 4x9 S.A.S.E. to Racers Haven.

Detach entry form and mail to: Racers Haven 7401 White Lane #9 . Bakersfield, CA 93309 . (805)835-0441

Pacific Coast Offroad Championships June 15 - 17

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Make checks payable to Racers Haven. Total amount enclosed: \$ _____

I am unable to attend this race, but please send me information about your racetracks and facilities.

(Continued From Page 40)

in the first qualifier. Jimmy Pullon came close to breaking 10 laps with a 10 lap 4:01 performance to lead the 4WD Stock field.

Mike Ankney's TQ honors held up through the beginning of the second qualifier for the 2WD A drivers. But two other drivers turned 11 laps up to that point to narrow Mike's advantage. Mike responded by bettering his TQ mark by a full three seconds pushing him near the 12 lap mark. John Lawson finally brought an 11 lap performance to the 4WD field taking the TQ honors there with an 11 lap 4:19 run. Both drivers would maintain the TQ distinction through the remaining qualifiers.

The 2WD Stock A Main was an exciting race from start to finish if you excluded TQ Ankney. Mike, as he did in all three qualifiers, lead from start to finish. The rest of the field, however; was locked in a fierce struggle as 2nd through 8th place was separated by less than 15 seconds through the first three minutes of the race. Second through fifth place was decided on the last lap. Below is the results of the 2WD Stock A Main:

2WD MAINS

A Main

- 1st - Mike AnkneyT/Q
- 2nd - Pat McCreary
- 3rd - John Lawson
- 4th - Greg Klugh
- 5th - Dean Karns
- 6th - Mike Marshall
- 7th - Jim Bronson
- 8th - Richard Love
- 9th - Wayne Gerber
- 10th - Mike Hampton

B Main

- 1st - Joe Kolp
- 2nd - Jason Edwards
- 3rd - Kenney Thorton

C Main

- 1st - Jim Pullon
- 2nd - Snake Whitaker
- 3rd - Chad Mortimer

D Main

- 1st - Rick Cann
- 2nd - Chris Smith
- 3rd - Ron Westkamp

E Main

- 1st - Dave Mott
- 2nd - Luther Griffin
- 3rd - William McCauley

F Main

- 1st - Steve Lafara

2nd - Zack McNealy

3rd - Bob Curtis

G Main

1st - Rich Weiss

2nd - John Kemp

3rd - Jay Maxwell

H Main

1st - Dan Zfela

2nd - Matt Dewitt

3rd - Ralph Gerkins

I Main

1st - Tom Prince

2nd - Greg Thelm

3rd - Mike Winders

J Main

1st - John Holzer

2nd - Dave Reiman

3rd - Troy Brandt

K Main

1st - Jason Corn

2nd - Ray Takahashi

3rd - Tim Fogelson

L Main

1st - Jerry Benson

2nd - William Dayton

3rd - Randy Bowling

M Main

1st - Steve Smith

2nd - Larry Riggins

3rd - Shaw Takahashi

N Main

1st - Scott Clark

2nd - Darin Kreilach

3rd - Bill McCall

O Main

1st - Jack Neary

2nd - Mike Nicholas

3rd - Brent Sheppard

P Main

1st - Steve Albert

2nd - Andy Kish

3rd - Mark Bettinger

As in the qualifiers, John Lawson just made it past the finish line for the 10th time as the time expired leaving him with a victory laps of sorts. The one 1.07

seconds that John led Jim Pullon by as time expired was enough to give John the 4WD Stock title. Here is how the 4WD Stock A Main ended:

4WD MAINS

A Main

- 1st - John LawsonT/Q
- 2nd - Jim Pullon
- 3rd - Randy Coleman
- 4th - Tim Wolski
- 5th - BJ Zacharias
- 6th - Brett Polivka
- 7th - Mark Hull
- 8th - Darren Williamson
- 9th - Scott Michael
- 10th - Matt Moritz

B Main

- 1st - Bob Nedved
- 2nd - Jeremy Bardell
- 3rd - Dave Martini

C Main

- 1st - Dan Miller
- 2nd - Fred Price
- 3rd - George Stanley

When the Modified qualifying began on Sunday further evidence was offered to the stated opinion that suspension setup was deciding the winners on this track. The cars that could take the wide array of jumps that the track offered were leaving the rest of the field behind. Once again the only 11 lap performances put in during the first rounds was by Mike Ankney in 2WD and John Lawson in 4WD. To add to the point, both drivers' TQ marks were within 5 seconds of their Stock TQ marks. Ankney was unable to better that mark in the

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remaining qualifiers but it did hold up for TQ honors though. He was joined in the 11 lap bracket by Mike Marshall who came within 6 seconds of Ankney's spot.

In the latter 4WD qualifiers, John Lawson was bettered by Tony Hines in the third round to take the TQ position with an 11 lap 4:11.62 run. Randy Coleman also had an 11 lap race in the third round making the 4WD A Main the only one to have more than one 11 lap performer in the field.

As the qualifiers for Mike Ankney went so went the 2WD Modified A Main. Mike led by a small margin over Mike Marshall after one lap but all weekend nobody was able to pass Ankney once his lead was established. Marshall and Pat McCreary made it closer but it was not to happen this weekend.

2WD MODIFIED MAINS

A Main

- 1st - Mike AnkneyT/Q
- 2nd - Mike Marshall
- 3rd - Pat McCreary
- 4th - Greg Klugh
- 5th - Conan Honeck
- 6th - Dean Karnes
- 7th - Scott Moody
- 8th - Brian Fields
- 9th - Jason Edwards
- 10th - Richard Love

B Main

- 1st - Jason Corm
- 2nd - Rex Gillespie
- 3rd - Dan Louis

C Main

- 1st - Andy Prince
- 2nd - Kenny Thornton
- 3rd - Bob Nedved

D Main

- 1st - Luther Griffin
- 2nd - Wayne Thomas
- 3rd - Jay Overman

E Main

- 1st - Chad Miller
- 2nd - John Buckley
- 3rd - Mike Winders

F Main

- 1st - Randy Kastl
- 2nd - Tim Wolski
- 3rd - Ron Dorfield

G Main

- 1st - Pat Barber
- 2nd - Jabo Hayes
- 3rd - Brian Boone

H Main

- 1st - Butch Eaches
- 2nd - Mike Meyer
- 3rd - Bill Steinbrook

John Lawson got off to a fast start along with Harold Taylor in the 4WD A Modified main. TQ Hines got off to a bad start and that was enough to leave him with the finish line between him and the leaders when time expired. John Lawson managed to pull away from Taylor on 8 of 11 laps run to give him the title. Here's how the field ended the final race of the event:

4WD MODIFIED MAINS

A Main

- 1st - John Lawson
- 2nd - Harold Taylor
- 3rd - Terry Peabody
- 4th - Tony HinesT/Q
- 5th - Phil Zimmerman
- 6th - Tim Wolski
- 7th - Randy Coleman
- 8th - Jason Conley
- 9th - Mike Hampton
- 10th - Brian Howell

B Main

- 1st - Steve Lafara

2nd - Brett Polvika

3rd - Scott Melcher

C Main

1st - Shaw Takahashi

2nd - Brent Weher

3rd - Sumio Takahashi

D Main

1st - Rob Passerelli

2nd - Robert Tribe

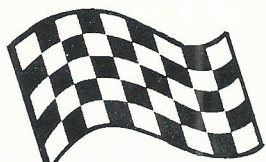
3rd - Paul Marizana

This year CORCAR would like to extend a special thanks to the racers who participated in the weekend's races. We attempt to give the racer the finest races possible but it is the quality field that is making this event one of the finest indoor off-road races in the nation. We would like to extend an invitation to all ROAR racers to attend the '91 event.

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The new Big Boss is sponsored by Kyosho as is the "Heavy Metal" Monster Tank, a 1951 Ford F100 mounted on a M-45 tank chassis. This is just a part of Great Planes' ongoing commitment to bring the excitement of Radio Control to audiences previously untapped by the R/C industry!

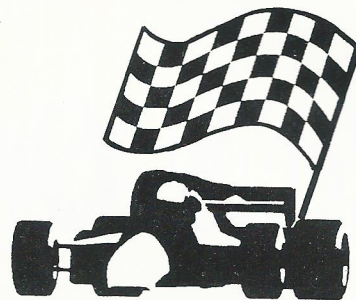


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Andy Dobson was the winner of the Reedy Oval Invitational Class. Andy was driving a Lynx/Trinity Combination.

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ing, in fact, they reminded me of Mark and Brian (two very funny L.A. morning DJs). The pre-race ceremonies included concourse, a car line-up, interviews, and even the National Anthem. Truly a class event!

The Invitational Class featured the 25 best drivers in 1/10th Paved Oval. The program for this

class was a little different from the Reedy Off-Road Race. They were going to run eight main events, like off-road with two throw outs. The difference was in the last round. There would be no throw out in this heat. The ten drivers with the lowest points would be put together in one
(Continued on Page 79)

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By Jeff Palmer



PCM's Control Center. Note the various settings.



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Futaba has been the leader and trend setter for R/C gear for the past decade and they refuse to be left behind by technology. In keeping up with technological advances, Futaba has replaced its legendary Magnum transmitter with a new pair of Magnums. The first Magnum, the PCM (Pulse Code Modulation) is a significant advancement in R/C technology. The second Magnum, the AM (Amplitude Modulation) version is an electronically updated continuance of R/C technology that has made Futaba a household name in R/C.

AM, FM or PCM?

To help develop a better understanding of the different types of transmitters, let's start with a simple problem: As the steering wheel on the transmitter is turned from full left to full right and back full left, voltage change is caused in the steering circuit. Since the purpose is to drive a servo, the voltage change is converted into "timed pulses" (graph 1a); the longer the pulse, the greater the servo horn movement to the right of center. Conversely, the shorter the pulse, the greater the movement of the servo horn to the left of center. These pulses are then combined



Futaba's Twins - but not identical

with the carrier signal of your transmitter, in other words, the carrier signal (graph 1b) is modulated using the "timed pulses" from the steering circuit. If the transmitter is an AM type, the amplitude of the signal would be changed. Graph 1c shows the results of AM modulation; notice how the carrier signal amplitude is changed as the steering wheel is moved. Also note that the fre-

quency did not change. The second transmitter type, Frequency Modulation (FM), uses different frequencies to represent changes. In graph 1d, the carrier signal or frequency is changed to a slightly lower frequency (full left) to a slightly higher frequency (full right). The increase and decrease of frequency in graph 1d is denoted by the space between the wave of the signal;

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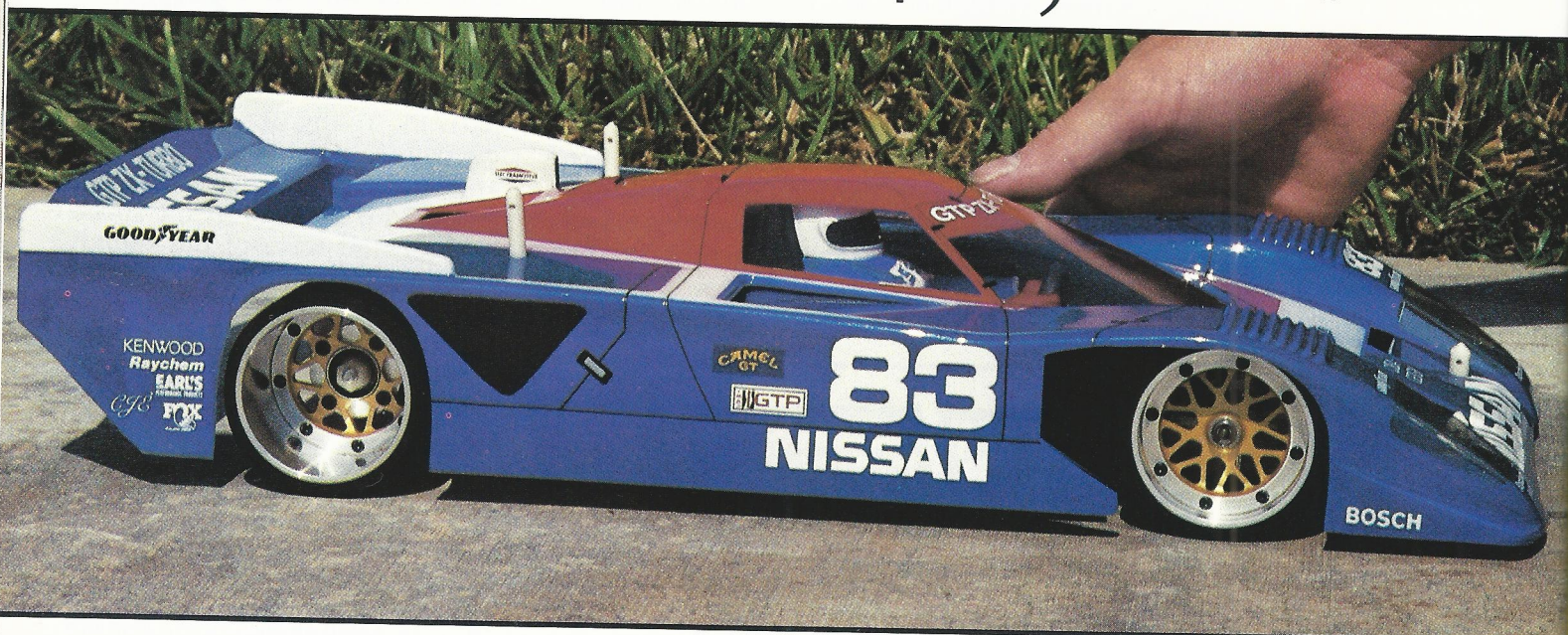
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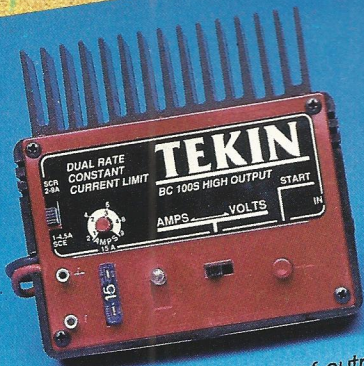
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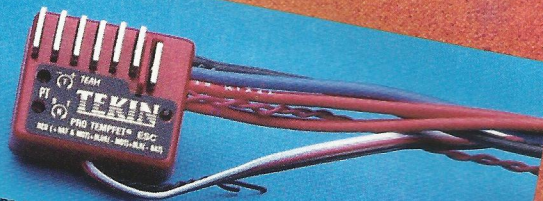
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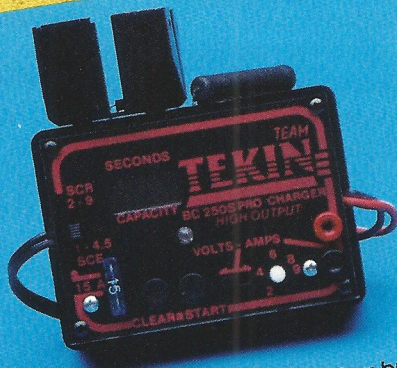


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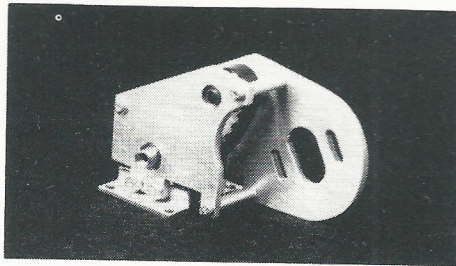
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advantages and disadvantages of FM. Well, the reason is, in the world of R/C there is only two types of transmitters, AM and FM, and Futaba's PCM is an FM transmitter with a digital twist. PCM is actually an advanced encoding method for digital signals which uses FM for its transmission. Going back to our earlier problem, as changes were made with the steering wheel, PCM converts (encodes) these movements into digital pulses (graph 1e). It may not be evident from graph 1e, but timing is one of the characteristics of PCM. Every 1/20th of a second, the controls are sampled and this information is sent to the receiver. Each series of pulses represents information to the PCM computer. The series of pulses at the left of graph 1e represents the command to turn full left while the pulses to the center of the graph represent the command to turn full right. What is not seen in the graph is the series of commands that stepped the servo through intermediate portions of the left and right turns.

THINGS IN COMMON

Up to now we've discussed the two types of transmitters and each of their theories of operation, so let's turn our attention to Futaba's excellent offerings. To begin with, let's look at what controls they have in common. Start by examining the face of the two units,- the steering wheel, level meter, pilot lamp, on/off button, steering angle adjuster, throttle alt knob, throttle trigger, and the panel door all stand out as similarities. These controls have all been seen before as they were the controls on the old Magnum. The PILOT lamp will light red when the power is turned on and the LEVEL METER will indicate the relative amount of battery power being supplied to the transmitter. The STEERING WHEEL is the most obvious control on the face of the transmitter but the STEERING ANGLE ADJUSTER is the least obvious. All of us know that the

the closer the peaks, the higher the frequency. Conversely, the further apart the peaks, the lower the signal. In short, as the voltage is changed in the steering circuit, the AM transmitter changes the strength of its signal and the FM transmitter changes its frequency.

Now, let's relate the above paragraph to the world we live in - sometimes frequencies interfere with one another, altering its wave form or amplitude. Since specific frequencies are used in FM transmitters to represent control changes, amplitude changes are ignored. However, any high energy magnetic field, like an air conditioner or heater blower motor, microwaves, high powered CBs or commercial transmitters can disrupt or alter your transmitters signal to the point of making it unintelligible to the receiver whether it's AM or FM. One final note, the cost of building an FM transmitter and receiver is greater than that of similar AM units, since the FM units have to be able to handle multiple frequencies.

You may be asking yourself at this point why did we just spend



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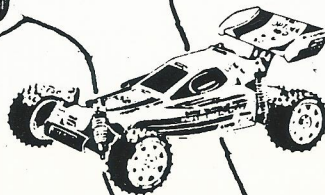
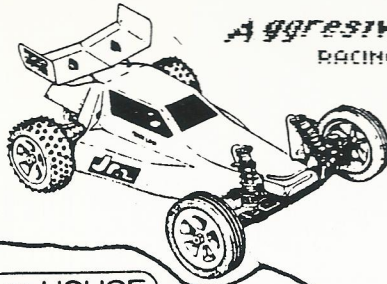
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	1st Ch	2nd Ch	3rd Ch
2 WD STK			
4 WD STK			
2 WD MOD			
4 WD MOD			

For stock entries, how many extra motors? _____

PLEASE CHECK CLASSES DESIRED AND ENTER CHANNEL NUMBERS (72) OR COLORS (RED)

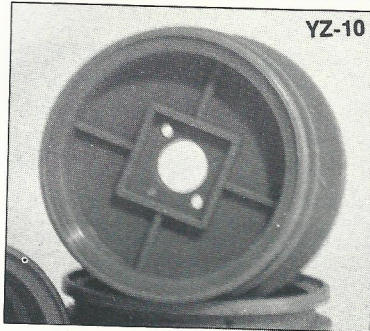
T-Shirt Size: SM ___ MD ___ LG ___ XL ___ XX ___ 3X ___

Amount

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JG'S BOLT-ON ADVANTAGE



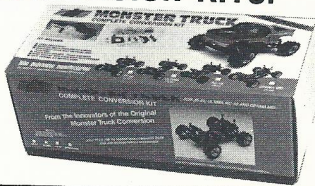
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These "new" dyable nylon rims are ultra lightweight for less unsprung weight. Front rims use stock bearings and axle nuts, rear rims use stock axle nuts. Both front and rear rims are ribbed across back for super strength.

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- 1458 JRX2 Front Nylon Direct Bolt on Rims.
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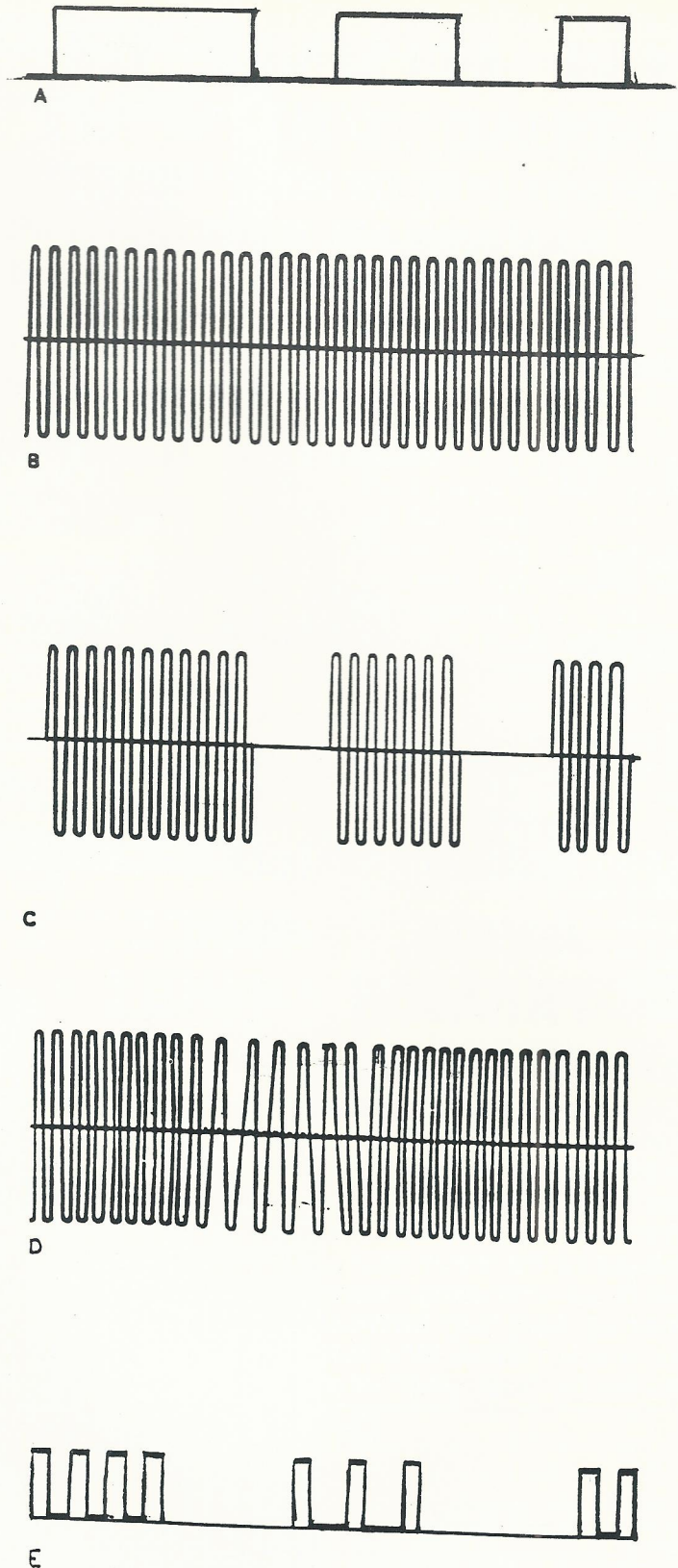
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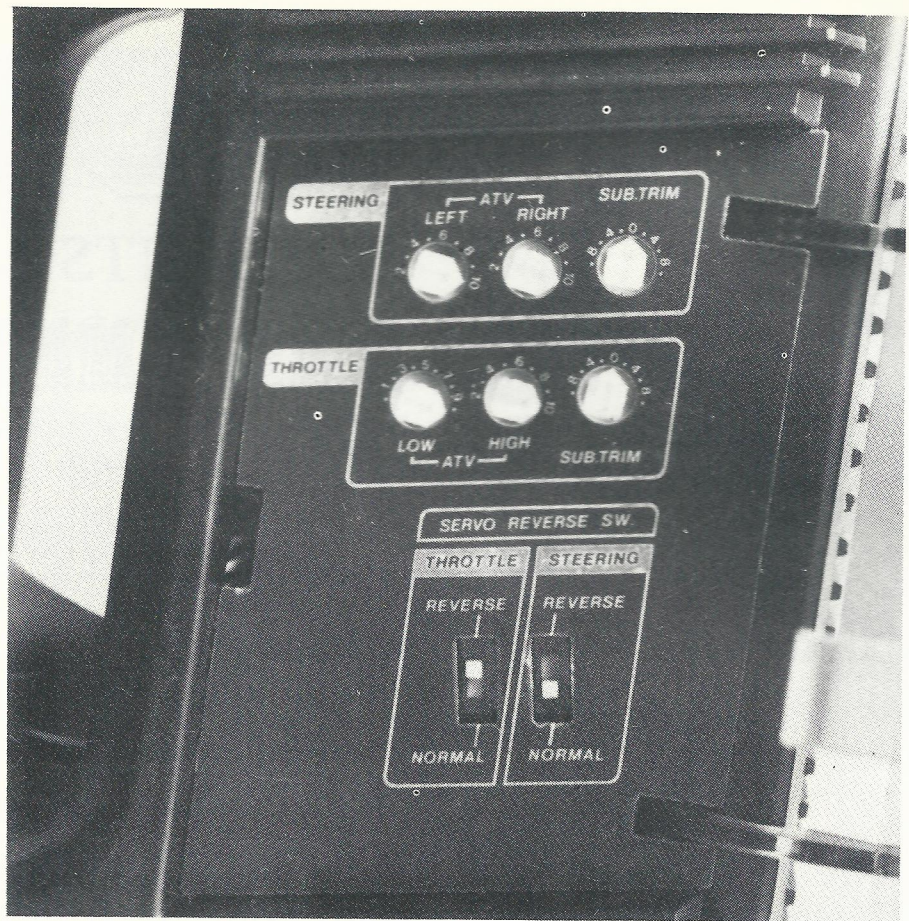


This is a simplified comparison chart of the different modes of signal transmission. A) Control Signal From Steering. B) Typical Carrier Signal. C) Modulated AM Steering Signal (Control and Carrier signal combined.) (Modulated). D) Modulated FM Steering Signal (Control and Carrier Signal Combined.) E) Demodulated PCM Binary Computer Mode.

steering wheel controls the direction a car will travel but the steering angle adjuster controls indicate how far you must turn the steering wheel to get full left or right steering from the servo in the car. Adjust the knob up to decrease the amount of steering travel required to get full

movement from the steering servo and adjust the knob down to increase the amount of steering wheel travel required to get full movement from the servo. To start with, set the steering angle adjustment in the middle. The THROTTLE ALT knob would be better defined as the brake adjustment knob. Changing the setting of the throttle alt, changes the amount of braking. Since full braking is needed with an electronic speed controller(ESC), set this knob to "10" otherwise, only a percentage of full braking will be done.

On the back of the two transmitters are two more controls worthy of mention, the THROTTLE NEUTRAL ADJUSTER and the STEERING D/R. The THROTTLE NEUTRAL ADJUSTER is used to set the actual amount of movement the trigger has for accelerating or braking. On "1/2" each direction gets equal travel. On "1/3" the accelerating portion gets twice as much travel as the brakes; this is



AMs Command Center. Note the settings.

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

OVER 40 2WD STOCK - FREQ 1. _____ 2. _____ 3. _____

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

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

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

MONSTER TRUCK - FREQS 1. _____ 2. _____ 3. _____

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LIMIT ENTRIES STOCK 175

MOD 150



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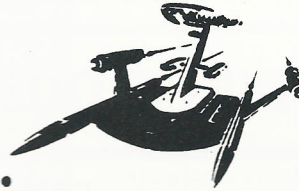
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(4) MIN RACES

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2. 6-CELL BATTERIES ONLY
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10:30 AM START SAT RACE OF CHAMPIONS QUALIFYING
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7 PM START SAT TIRE DASH

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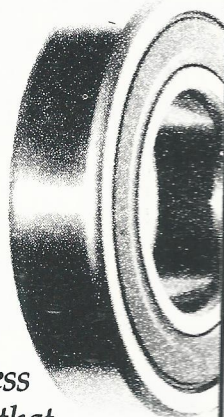
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the setting I like, since I set my brakes for instant full when applied. The STEERING D/R is used to set the transmitter up for different turning radii for different tracks. I use this control in conjunction with the WHEEL ANGLE ADJUSTER to set my minimum turning radius at full turn of the steering wheel.

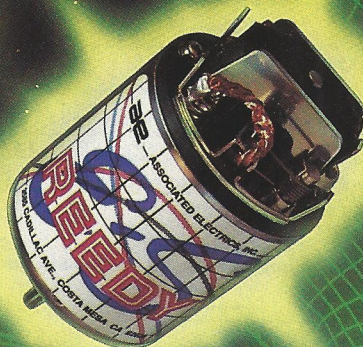
BEHIND THE

SMOKEY DOOR: AM

On the face of the AM transmitter is one more control, the THROTTLE TRIM. This control is used to set the neutral position of the speed controller and needs to be used in conjunction with the THROTTLE SUB-TRIM which is behind the panel door. The normal setting for both of these controls is "0" and the car should not move; if it does, re-adjust the neutral setting on the ESC. Set the throttle trim so that the car takes off with the slightest touch of the trigger. As you open the door on the main body of the transmitter there are

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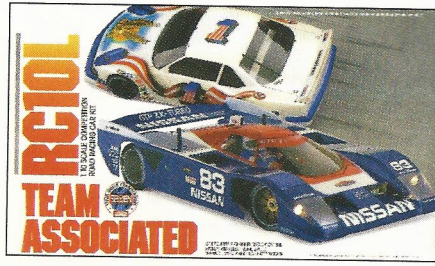


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THE RC10L
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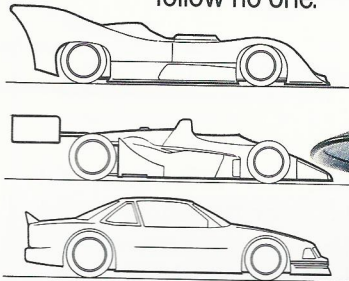


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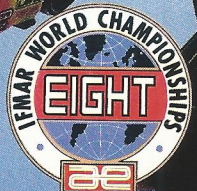
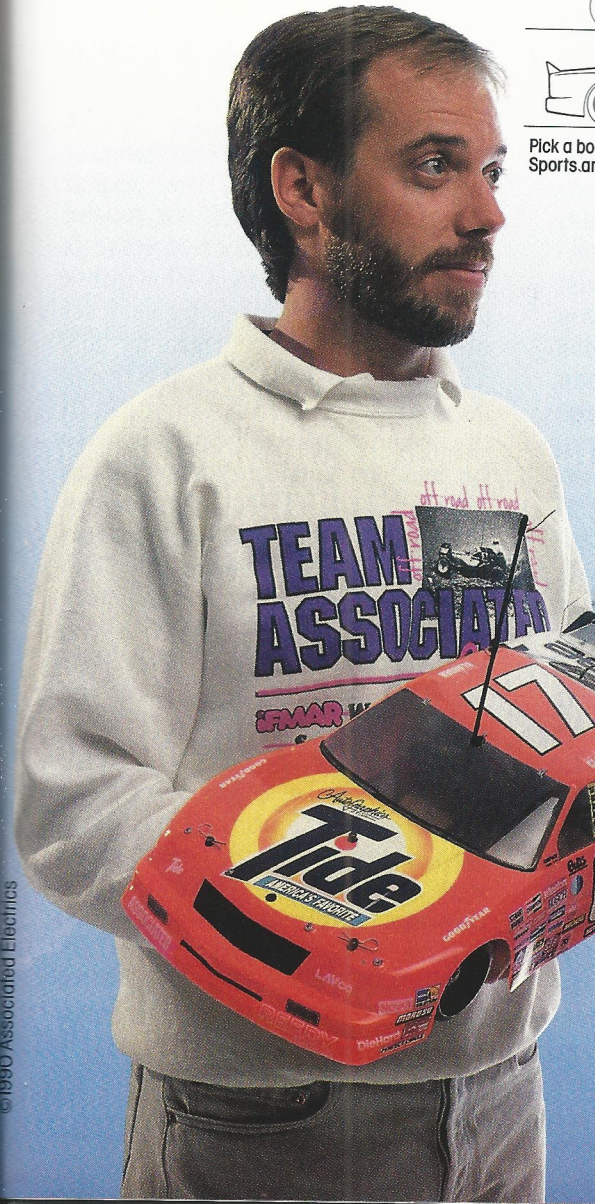
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Strong, simple and easy to dial in, the RC10L is already rewriting the record books, indoors and out. Lay out a track and the RC10L wins on it. The RC10L's T-ball, monoshock rear and independent coil spring front suspension can be quickly tuned to all smooth racing surfaces.

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eight controls; four for throttle and four for steering. There are servo reversing switches for both throttle and steering. These switches control; the direction in which the servo responds when the steering wheel or throttle trigger is moved. Set these switches to the appropriate position for each of the controls. The STEERING ATV controls set the amount of steering travel required to get maximum steering from the car. Both of these controls should be kept symmetrical or both controls should be set to the same setting; set this control to "10", which will require full steering wheel travel to get full servo movement. Set the STEERING SUB-TRIM to "0". Use the steering trim control for adjustments. The THROTTLE ATV controls, provide fine tuning for throttle and brakes. I set mine to "10" and use the throttle trim and alt controls for setting up my driving controls. We've already discussed the throttle sub-trim.

BEHIND THE SMOKEY DOOR: PCM

Two of the controls on the PCM that are noticeably different are the THROTTLE TRIM and STEERING TRIM controls. These controls are now push button controls. They work the same, but they have been strategically placed so they can be altered while driving. The thumb can be used to change the THROTTLE TRIM and the forefinger of the right hand can be used to change the STEERING TRIM. To aid the THROTTLE TRIM, Futaba has provided an LED display just below the THROTTLE ALT control. Now let's open the panel door. Since the PCM is a three channel unit, there are three rows of trim controls and a bank of switches. The first row of controls are the STEERING ATV controls. These controls set the amount of steering travel required to get maximum steering from the car. Both of these controls should be kept symmetrical or both controls should be set to the same setting;

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set this control to "10", which will require the steering wheel travel to get full servo movement. Set the STEERING SUB-TRIM to "0". Use the steering trim control for adjustments. The EXP controls select linear or exponential response to steering. A new control, the EXP, adds a new twist not available in the AM version, it controls the type of response the steering wheel gives when turned. If EXP is set to "0", the steering wheel and steering servo act linearly or in direct proportion to each other. If EXP is set to the left of "0", you get more steering from the servo in the early travel of the steering wheel and when EXP is set to the right of "0" you get more response from the end (full) of the steering wheel travel. I like a linear response so I set mine to "0". The next set of controls is the THROTTLE ATV controls. They provide fine tuning for throttle and brakes. I set mine to "10" and use the throttle trim and alt controls for setting up my driving controls. The EXP controls the type of response the trigger gives when depressed. If EXP is set to "0", the brakes and speed act in a

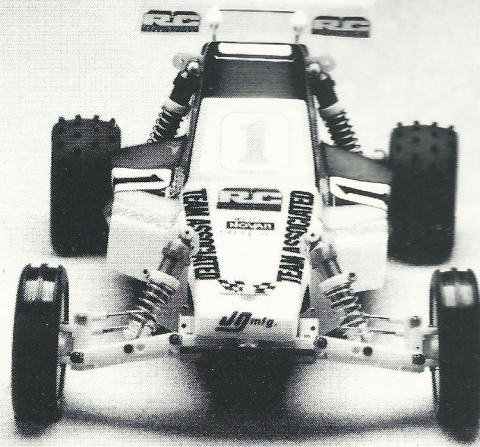
linear fashion or uniformly as the trigger is pushed. If EXP is set to the left of "0", you get more response proportionally in the early application of the trigger than at the end of the trigger travel. When EXP is set to the right of "0" the early response is less than at the end. I like quick acceleration and braking so, I set mine to "1" to the right of "0". The THROTTLE SUB-TRIM is used to set the neutral position of the speed controller and needs to be used in conjunction with the THROTTLE TRIM. The normal setting for both of these controls is "0" and the car should not move. Set the throttle trim such that the car takes off with the slightest touch of the trigger. The third set of controls, controls the third channel. Since there is no direct control for the third channel 1 or 2. In other words, as channel 1 or 2 performs a function, channel 3 performs its function. The MIX SET switch chooses which channel is to be mixed with channel 3. When MIX SET is in position 1 or "BRAKE" its mixed/controlled by channel 2. If your car has a brake servo then this is the set-

ting for you. Set the MIX LIMIT to the full right position and adjust the rate to suit your driving style. Position 2 or the BOAT setting will be skipped for this driving style. Position 2 or the BOAT setting will be skipped for this article. Position 3, 4WS (4 wheel steer), is used when four wheel steering is required. This setting ties channel 1 to channel 3 so that when the front steering servo is activated, the rear steering servo is also activated. Set the MIX LIMIT to "0" and adjust MIX RATE to suit driving style. Of course, none of these settings will work if the MIX switch isn't set to "ON". To center the channel 3 servo, use the AUX trimmer potentiometer.

The first switch on the switch block is the MIX switch which was discussed in the previous paragraph but the second switch is the PRESET SWITCH. The switch should be "ON" if 1/3 was selected on the THROTTLE NEUTRAL ADJUSTER (see THINGS IN COMMON) otherwise set it to "OFF". The PCM/PPM switch must be set to "PCM" to operate with the PCM receiver - FP R113IP. The last three switches on the switch block are the reversing switches for channels 1-3. These switches control the direction in which the servo responds when the steering wheel or throttle trigger is moved. Set these switches to the appropriate position for each of the controls.

One of the most misunderstood features of the PCM transmitter is the FAIL SAFE options. To set the FAIL SAFE ACTION, push the trigger to the desired position and push the FAIL SAFE SET button. Now, whatever trigger setting you set, when a fail safe condition is detected that set action will take place; i.e. if the trigger was set to brake, then when low voltage is detected or the receiver loses the transmitter signal the car will brake. If the FAIL SAFE switch is set to HOLD, the last action command received from the transmitter will be the action continued until the signal is regained. What all this means is: set the FAIL SAFE switch to F/S and set the FAIL SAFE SET to

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brake, it'll buy time to regain control. If you are using a NiCd receiver battery pack, set the "Battery Fail Safe" to BAT F/S, BECs and regular batteries don't count, otherwise, the PCM will act just like a traditional transmitter and let the car go into a run-a-way condition. In summary, set the FAIL SAFE option to brake; the default setting of "HOLD" is trouble most of the time.

Another feature of PCM that's a radical departure from the norm is the DIRECT SERVO CONTROL (DSC). The feature allows you to test your car without turning the transmitter on. This is a great help for the mechanic in the pit making those last minute adjustments or repairs just prior to the next heat. The problem is, getting the transmitter out of the radio impound.

CONCLUSION

One of the things that made the old style Magnum so popular was its ability to be fine tuned; it

could be setup for a specific car, track or racing conditions. Futaba has increased this ability with the new Magnums. If you're in the market for new radio gear, check these units out.

'Til next time, GOOD RACING!!

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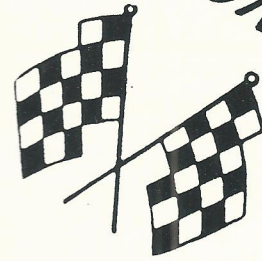
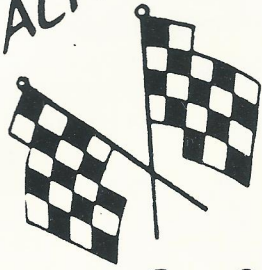
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SHOCKING NEWS

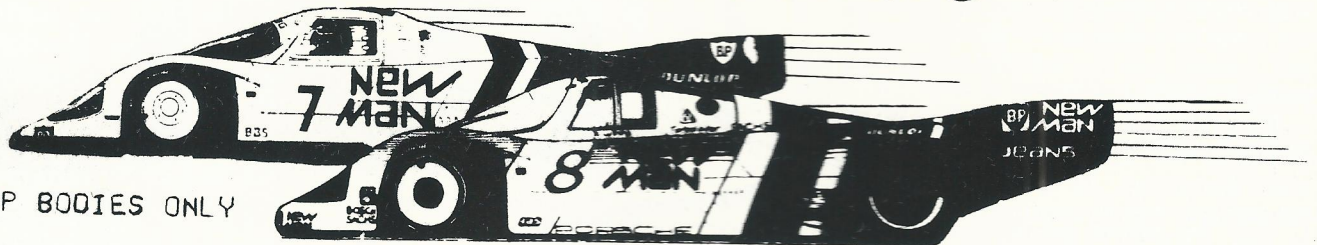
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1/12th Frequency: 1. _____ 2. _____ 3. _____ 4. _____

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NAME _____ ROAR # _____

ADDRESS _____ PHONE # () _____

CITY, STATE, ZIP _____

REGISTRATION CLOSES JULY 31, 1990

TOTAL AMOUNT ENCLOSED _____



Mike Boylan won the Stock and Modified Open Class for a fantastic weekend! Also shown are Miss Lake Whippoorwill and Mike Reedy, both offering their congratulations!

(Continued from Page 62)

main, and so forth. This was done in the last heat only. It was almost like an A Main event. Another change was in the points. From first to fifth place it was the same as off-road, with first receiving one point, second receiving two points, etc. The change was implemented in the sixth through tenth position. Sixth through tenth all received the same amount of points as fifth place, five points. This was to keep racing alot closer. This system seems to be popular with off-roaders, however, with paved oval there were mixed reviews. Some drivers felt that this system did not determine the fastest driver, but the most consistent. They also felt that with oval racing the intent was to determine the fastest driver.

QUALIFYING

Qualifying for the non-invitational drivers was on Saturday. There were three rounds of Stock and three rounds of Modified and this event was sponsored by BoLink.

Stock qualifying got started

with Mike Kohler taking the TQ spot in round one with a time of 38 laps, 4:00.40. Mike Boylan was just a half second off that TQ pace. Your third qualifier was Jimmy Simmons with 38, 4:01.67. In all there were five drivers that went 38 laps in the first round. I felt that by the time qualifying finished the A Main would be

fulled with 38 lap runs and a few 39s. Mike Kohler made certain that if you were going to take the TQ away from him you would have to go 39 laps. Mike improved his TQ time by .45 of a second. It was the fastest time turned in round two.

In round three there were some fast runs turned in. The fastest being turned in by Joe Randow. Joe broke the 39 lap barrier and put himself in a league by himself. Joe's pole position time was a blistering 39 laps in 4:04.63. Mike Kohler moved down to a strong second and Mike Boylan was third qualifier. The A Main had one 39 lap run, seven 38 lap runs and two 37 lap runs.

With the Stock TQ going 39 laps, it was going to be interesting to see what the Modifieds would do. Phil Simms quickly told everybody what it was going to take to put your car on the pole in Modified. It was going to take 41 laps. Phil set the TQ time of 41 in 4:03.87. Ricky Jordan also went 41 laps with a time of 4:12.23 to put him in second.

Round two saw no 41 lap runs turned in. Ricky Jordan was the only driver to turn 40 laps. This, however, did him no good as he had already turned in a 41 lapper in round one.

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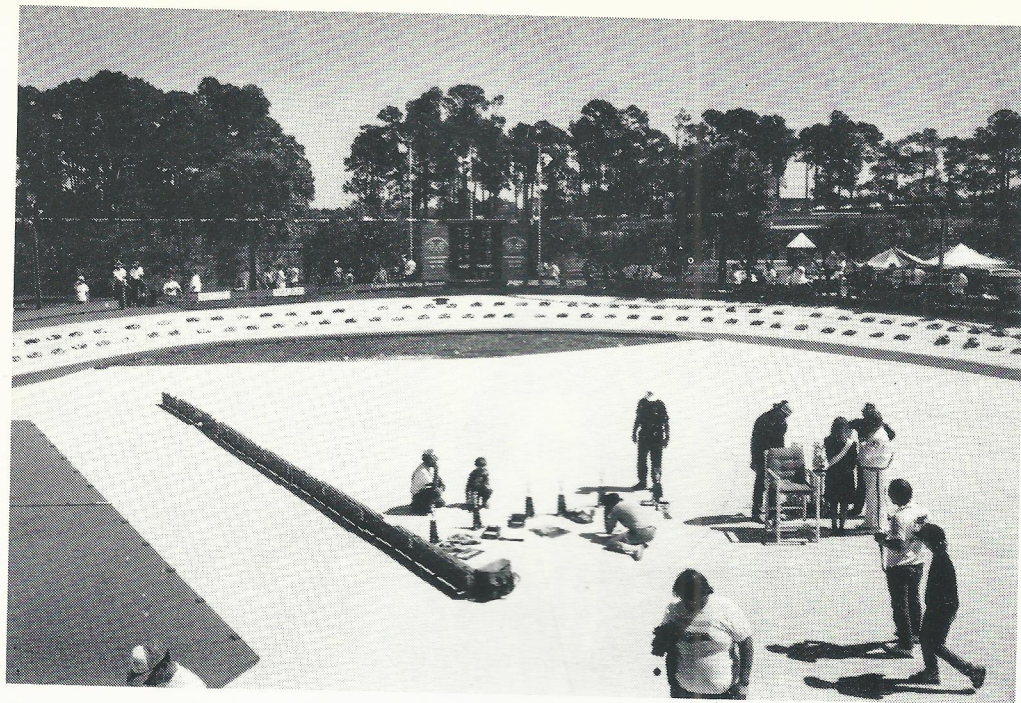
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Round three again saw no 41 lap runs. Phil Simms ran fast in round one but had problems in his next two qualifiers, so he could not challenge his pole position time. Ricky Jordan and his BoLink ran strong in all three qualifiers, but could not topple his first round's best. Ricky would start next to Simms on the front row for the A Main. Ernie Bucci ran the fastest of the third round when he turned in a 40 lap 4:05.86 which gave him third on the grid. Going into the A Main Phil Simms was a whole eight seconds up on the field, but his consistency was the question.

STOCK A MAIN

Being on the front row for the Stock A Main was definitely not the place to start. At the start the two cars on the front row collided, causing a pile up at the start. Mike Boylan got the best start of them all from the second row, and put it in high gear. Unfortunately for the rest of the pack this was going to be their closest chance at being in front for the entire race. Ernie Bucci got out in second, followed by Jill Simms in third. By the first lap Boylan had opened up a 30 foot lead. Ernie Bucci was still in second, and Jill Simms was definitely a close third. Mike Boylan was not one to sit on his lead as he motored along with confidence stretching his lead with every rotation of his tires. When Bucci and Jill started to



Parade of cars and an overview of the fabulous Lake Whippoorwill Speedway.

come up on traffic, Bucci seemed to have the upper hand. Through traffic Simms tied up with a slower car and moved back in the pack. Leroy Carrigg, now found himself in third place. By the half way point Boylan had a full lap on the field. Bucci who was still second had an unfortunate tangle with a lapper and flipped it. This allowed Carrigg to move to second. Bucci was not going to give up his second place. Bucci closed the gap and started to apply pressure. The two battled for awhile, then Bucci went by Carrigg. The race ended with Boyland first, Bucci second and Carrigg 1.5 seconds back in third. Applause should go out to Mike

Boylan for his fantastic performance. He not only won the race by two laps, but also turned in a time of 39, 4:02.96 which would have put him on the pole by two seconds. A real hats off performance by Boylan!

MODIFIED A MAIN

The start of the main saw Ricky Jordan get the hole shot followed closely by no other than Mike Boylan, the Stock class winner. In third spot was Ernie Bucci. Around for the first lap it was Jordan and his BoLink followed by Boylan with his Lynx. The two were separated by no more than ten feet. Bucci was just out of striking distance in third. Ricky and Mike were pushing each other hard, normally in this situation the third place car would close in on the lead battle but in this case the two of them were stretching their lead over Bucci. After the one minute mark the battle for the top spot was not getting any easier. Boylan was starting to get away and wanted to make a move for the lead. However, Boylan knew better than to push a move and take them both out. He just applied more pressure. This paid off for him at about the two minute mark when Ricky

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was working his way through traffic and tied up with a backmarker and fell back. This gave Boylan the lead. Apparently after the crash Jordan's car never worked the same, as he could not make a charge back to the front and had to worry about retaining second from hard charging Dave Raber. At the 2:45 mark Raber was on Jordan and passed him for second place. Ricky Jordan started to regain his composure and moved his way back up to challenge Raber for second. The two were in a heated battle for the remainder of the race. Ricky got the upper hand and took second followed by Dave Raber in third. The real story of the weekend was Mike Boylan who won both Stock and Modified convincingly. I'm sure you will be looking for Boylan in the Invitational Class next year!

INVITATIONAL CLASS

With the numerous amount of races going on around the world these days it is a rare treat to have the two major motor manufacturers at the same location. Those being Mike Reedy of Reedy Modifieds and Ernie Provetto of Trinity motors.

After Friday's practice was over the fastest man for the Trinity Triad Team was Andy Dobson. Shawn Ireland was fastest for the Associated/Reedy Team.

Saturday was scheduled for four rounds of racing for the Invitational Class. Round one was dominated by Triad. Andy Dobson, Kim Davis and Paul Davis, all took wins. Round two saw Shawn Ireland and his Reedy powered 12L take a win followed by Chris Doseck with his horsepower provided by Cam and Buddy Bartos also being powered by Cam. With two rounds done the top three positions were first Shawn Ireland with three points; Andy Dobson second with four points; and Kent Clausen, Joel Johnson, Chris Doseck and Tim Lanier all tied with five points. Round three

saw Shawn Ireland tighten the reigns a bit as he took another win. Andy Dobson also took a win to keep him within one point of Ireland. Taking the third win in round three was Jim Fuller and his Triad package. The fourth and final round on Saturday saw the leader of the event, Shawn Ireland getting a DNF. Andy Dobson also took a DNF. Taking the wins in round four were Gil Losi, Jr., Bob Light and Paul Davis. At the end of four rounds with one throw out included it was Shawn Ireland with four points. Tied for second was Andy Dobson and Gil Losi, Jr. with five points. There was also a tie for third between Chris Doseck and Jurgen Lautenbach with six points. At this point it was still anyone's race. The fastest time at this point was turned in by Shawn Ireland with a 42, 4:06.45 run. Andy Dobson was just .4 of a second off that fast time.

Sunday came and there was still four rounds to decide your 1990 Reedy Race Champion. In round five the three winners were Kent Clausen, the Magic Man and Chris Doseck, with Ireland getting third in one heat and Dobson getting second in another, this put them tied for the lead with seven points. Losi, Jr. was DNF in the fifth round which put him back some points. With Doseck's win in this round he also had seven points to put him in a three-way tie for the lead.

Round six saw two back to back wins for two drivers. These two drivers were Joel Johnson and Kent Clausen. The third win went to Cliff Lett. Dobson got fifth in this round, which hopefully for him will be his throw out. Shawn Ireland got second in this round and Doseck took third.

At this point things started to get confusing as you have to start counting people's throw outs as there is only one more round to go. At this point I will not tell you where everyone stands and go on to the seventh round.

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In round seven the three winners were Kent Clausen, who now won three in a row, Jim Fuller and Andy Dobson. At this point the top position was a three-way tie between Shawn, Andy and Kent. With all the throw outs officialy counted, they all had eight points. Second place was another tie between Joel and Chris Doseck with ten points. In the last round, as stated earlier, there was no throw out. The top ten people with the fewest points would be put altogether in one main. This is how it looked going into the eighth and last round:

- 1st - Ireland - 8 points
- 1st - Dobson - 8 points
- 1st - Clausen - 8 points
- 4th - Johnson - 10 points
- 4th - Doseck - 10 points
- 6th - Light - 11 points
- 6th - Losi - 11 points
- 8th - Lanier - 12 points

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9th - Lautenbach - 13 points

10th - Lett - 14 points

After seven rounds there was still a three-way tie for the lead. It would all come down to this last main event. Realistically, those three drivers were the only people to have a chance to win. In the last round Kent Clausen and his Associated/Reedy combination took third. Shawn Ireland and his Reedy powered 12L took second. The winner of the eighth round and winner of the 1990 Reedy Paved Oval Race of Champions was Team Trinity Triad's Andy Dobson. Dobson was fast all weekend long and truly deserved this hard fought victory.

This weekend was a very exciting and highly competitive weekend of super fantastic racing! Congratulations to all who came to compete! Thanks to the sponsors: Reedy Modifieds for the Invitational Class and Bo-Link for bringing us the "BoLink Clash."

If you are ever in Orlando, I would strongly recommend checking out the legendary Lake Whip-poorwill International Speedway, you won't be disappointed!

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- 1st - Mike Boylan/10L
- 2nd - Ernie Bucci/Comp. Craft
- 3rd - Leroy Carrigg/Comp. Craft
- 4th - Craig Carey/Hyperdrive
- 5th - Mike Kohler/Comp. Craft
- 6th - Phil Simms/Lynx
- 7th - Jill Simms/Lynx
- 8th - Bill Kellum/Lynx II
- 9th - Joe Radow/Lynx
- 10th - Jimmy Simmons/TRC

B MAIN

- 1st - Chris McIlwain
- 2nd - David Carrigg
- 3rd - Mark Shirey
- 4th - George Smith
- 5th - Case Fessler
- 6th - John Jenkins
- 7th - John Jolley
- 8th - Wayne Croft
- 9th - Edmond Lacoste
- 10th - Dick Schafer

C MAIN

- 1st - Don Moncsko
- 2nd - Jerry Wynn
- 3rd - J. D. Crow
- 4th - Danny Monegan
- 5th - Keith Rockett
- 6th - Brad James
- 7th - Bob Posey
- 8th - Paul Messick
- 9th - Chuck Rencurrel
- 10th - Little John Walters

D MAIN

- 1st - Dave Monegan
- 2nd - Dennis Cutman
- 3rd - Robert, Jr. Highfill
- 4th - Stephen Miniea
- 5th - Darryl Reich
- 6th - Skippy Gibson
- 7th - Johnny Barlow
- 8th - Thomas Colclasure
- 9th - Jason Babb
- 10th - Sam Palazzolo

E MAIN

- 1st - Ken Hooper
- 2nd - David Neidhardt
- 3rd - Don Neidhardt
- 4th - Rick Waters
- 5th - Jeff Rey
- 6th - Shawn Rhoades
- 7th - Vince Bellino
- 8th - Jim Frahm
- 9th - Tom Ickes
- 10th - Bob Serra

F MAIN

- 1st - Mark Cosgrove
- 2nd - Dave Armstrong
- 3rd - Todd Sauve
- 4th - Bobby Layman
- 5th - Ricky Witt
- 6th - Billy Emenecker
- 7th - Armon Beckom
- 8th - Darren Gray
- 9th - Russell Upton
- 10th - Josh Moncsko

G MAIN

- 1st - Steve Rule
- 2nd - Craig Stiwald
- 3rd - Paul Elliott
- 4th - Tony Jolley

- 5th - Greg Spehn
- 6th - Mike Cohen
- 7th - Mark Gregory
- 8th - Dennis Vansant
- 9th - Randy Wheeler
- 10th - Robert Joyce

H MAIN

- 1st - Dan Toll
- 2nd - Jeff Flassig
- 3rd - Tony Carrubba
- 4th - Richard Price
- 5th - Brian Wood
- 6th - Steve Clark
- 7th - Richard, Sr. Kastner
- 8th - John, Jr. Leslie
- 9th - Rick Rockafellow
- 10th - David Martin

I MAIN

- 1st - Ed Clement
- 2nd - Tim Snider
- 3rd - Rich Dettinger
- 4th - Jerry Kikkert
- 5th - Robert Kniprath
- 6th - Tim Breedlove
- 7th - Chad Mears
- 8th - Chris Littrell
- 9th - Alan Inman
- 10th - Joe Zglinicki

J MAIN

- 1st - Jeffrey Stowe
- 2nd - Kevin Vermillion
- 3rd - Todd Braun
- 4th - Morris Kohl
- 5th - Matt Blazo
- 6th - Russell Mills
- 7th - John Kruase
- 8th - Tom Tilton
- 9th - Charles Niemann
- 10th - John Kunstbeck

K MAIN

- 1st - Rob Press
- 2nd - Roland Gass
- 3rd - Micah Thigpen
- 4th - Mel Levine
- 5th - Doug Satterfield
- 6th - Leo Bechard
- 7th - Eric Colee
- 8th - Jason Jacques
- 9th - Steve Vazquez
- 10th - Steve Redmond

L MAIN

- 1st - Charles Wade
- 2nd - Lee Dodgen
- 3rd - Christopher Wardell
- 4th - Joe Pitts
- 5th - Richard Carpenter
- 6th - Dan G. Smith
- 7th - Stephen Salley
- 8th - Lonnie Warren
- 9th - Travis Chambers
- 10th - Greg Titus

M MAIN

- 1st - Leonard Southard
- 2nd - Keith Urbanski
- 3rd - Diane Rivers
- 4th - Mike Luby
- 5th - Russ Thrift
- 6th - Brent Tetreault
- 7th - Ronnie Vines
- 8th - Michael Cottle
- 9th - Miles Nelson
- 10th - Michael Ray

N MAIN

- 1st - Chuck Rayburn
- 2nd - Terry Coon
- 3rd - Chris Rock
- 4th - John Leslie
- 5th - Robert Schoeneman
- 6th - Jeff Clark

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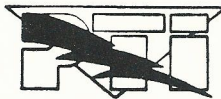
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O MAIN

- 1st - Doug Bancroft
- 2nd - Jack Baker
- 3rd - Bob Fairbrother
- 4th - Carey Kline
- 5th - Michael Rosenberger
- 6th - Jeff Rivers
- 7th - Jimmy Southard
- 8th - Tim Weaver
- 9th - Joey Staples
- 10th - Bill Evans

P MAIN

- 1st - David Harris
- 2nd - Scott Sokolowski
- 3rd - Bryan Flowers
- 4th - Mike White
- 5th - Brian Fowler
- 6th - Shaun McDuffie
- 7th - Mark Morse
- 8th - Ronald Moorehead
- 9th - Trevor Corbett
- 10th - Albert Sosa

Q MAIN

- 1st - Mike Ivanics
- 2nd - Michael Nelson
- 3rd - Richard Jr., Kastner
- 4th - Jeff Shupe
- 5th - Scott Schalk
- 6th - Adam Devaney
- 7th - George Olmo
- 8th - Herbert Consolvo
- 9th - Steve Platt
- 10th - Bob Waters

R MAIN

- 1st - Jimbo Bird
- 2nd - Wilton Adams
- 3rd - Ronnie, Jr. Hames

- 4th - Al Bouchard
- 5th - Dawn Delp
- 6th - Brian Vines
- 7th - Dan Norton
- 8th - Mike Breland
- 9th - Craig Markle
- 10th - Brent Braun

S MAIN

- 1st - Jerry Alford
- 2nd - Phil Farabough
- 3rd - Mike Leslie
- 4th - Frank Smith
- 5th - Barry Schroerlucke
- 6th - Chad Beal
- 7th - Sean Wager
- 8th - Drew Waters
- 9th - Timothy Daugherty
- 10th - Jeff Antle

T MAIN

- 1st - Vince Tate
- 2nd - Gret Fairbrother
- 3rd - Randy Collier
- 4th - Mathew Frye
- 5th - Graig Guido
- 6th - Randy States
- 7th - Jon Hill
- 8th - Randy Rawlings
- 9th - Joseph Sangimino
- 10th - Charles Long

MODIFIED MAINS

A MAIN

- 1st - Mike Boylan/Lynx II
- 2nd - Ricky Jordan/BoLink
- 3rd - Dave Raber/Associated
- 4th - Rob Cutman/Lynx II
- 5th - Phil Simms/Lynx
- 6th - Steve Rule/BoLink
- 7th - Kevin Lanier/BoLink
- 8th - Ernie Bucci/ Comp. Craft
- 9th - Case Fessler/Comp. Craft
- 10th - Paul Wynn/Scratch built

B MAIN

- 1st - Jeff Irish
- 2nd - Chris Smith
- 3rd - Mike Kohler
- 4th - Craig Markle
- 5th - Jill Simms
- 6th - Mike Mitzel
- 7th - Jan Limpach
- 8th - Mike, Jr. McBride
- 9th - Tyler Clements
- 10th - Craig Carey

C MAIN

- 1st - Gary Demory
- 2nd - David Davis
- 3rd - Jimmy Simmons
- 4th - Hoyt Stacey
- 5th - Jeff Rey
- 6th - Tony Carrigg
- 7th - Nick Themelis
- 8th - Ron Benash
- 9th - Damien Hallmark
- 10th - Andy Jacobson

D MAIN

- 1st - Bruce Triplett
- 2nd - Steve Swindle
- 3rd - James Cookie Prince
- 4th - Troy Schafer
- 5th - George David
- 6th - Vernon Harvell
- 7th - Tom Ahles
- 8th - Dave Monegan
- 9th - Lee Dodgen
- 10th - Greg Wilczewski

E MAIN

- 1st - Steve Wallace
- 2nd - Steven Maslin
- 3rd - Rob Press
- 4th - Stephen Miniea
- 5th - Darryl Reich
- 6th - John Jenkins
- 7th - Jim Shea
- 8th - Carey Slavin

- 9th - Steve Dunn
- 10th - Chuck Rayburn

F MAIN

- 1st - Brent Braun
- 2nd - Kevin Orton
- 3rd - John Nemcovic
- 4th - Rick Waters
- 5th - Keith Manton
- 6th - Barry Spinner
- 7th - Tim Helpard
- 8th - Little John Walters
- 9th - Joe Goodwin
- 10th - Paul Kelley

G MAIN

- 1st - David Vera
- 2nd - Jerry Kikkert
- 3rd - Tom Crowe
- 4th - Michael Bush
- 5th - Nicholas Schons
- 6th - Herk Strumpf
- 7th - Don Monesco
- 8th - Ed Clement
- 9th - Joseph McAdam
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H MAIN

- 1st - Jim Ryckman
- 2nd - Drew Wikander
- 3rd - Dave Vince
- 4th - Edward Weaver
- 5th - Mike White
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- 7th - Gordon Zito
- 8th - Daren Westman
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I MAIN

- 1st - Wayne, Jr. Gerber
- 2nd - Bobby Trinchitella
- 3rd - Roland Gass
- 4th - Mark Harnish
- 5th - Brian Fowler
- 6th - Joey Staples
- 7th - Bill Frame
- 8th - Bill Evans
- 9th - John Mitchell
- 10th - Keith Rockett

J MAIN

- 1st - Todd Braun
- 2nd - Bruce Bunch
- 3rd - William Rumpfelt
- 4th - Rick Pruitt
- 5th - Joe Higgins
- 6th - Ernie Smith
- 7th - Fred Scadron
- 8th - Joseph Sangimino
- 9th - Mike Reedy
- 10th - Randy Annis

INVITATIONAL MAINS

A MAIN

- 1st - Andy Dobson/Lynx
- 2nd - Shawn Ireland/Assoc.
- 3rd - Kent Clausen/RC10L
- 4th - Gil, Jr. Losi/Comp. Craft
- 5th - Chris Doseck/Cam
- 6th - Jurgen Lautenbach/Comp. Craft
- 7th - Tim Lanier/BoLink
- 8th - Cliff Lett/RC10L
- 9th - Joel Johnson/Comp. Craft
- 10th - Bob Light/Comp. Craft

B MAIN

- 1st - Jim Fuller
- 2nd - Paul Davis
- 3rd - Bud Bartos
- 4th - Tony Neisinger
- 5th - Kim Davis
- 6th - Stephen Oberle
- 7th - David Timmerman
- 8th - Craig Kelley

C MAIN

- 1st - Tem Raskin
- 2nd - Art Carbonell
- 3rd - Orlando Milian
- 4th - Bob Sumner
- 5th - Bill Horne
- 6th - Rick Jordan
- 7th - Ken Buzzard

— Racing Schedule —

— 1/8 & 1/4 Scale —

OUTLAW MOTOR SPEEDWAY

Every first & third Saturday - 1/4 Scale
Dirt Oval. 7920 Webster, Highland, CA.
Call (714) 864-1770

THE RANCH PIT SHOP

1655 E. Mission Blvd., Pomona, CA
91766, (714) 623-1506. Every second
Sunday.

MACHESNEY PARK RACEWAY

1/4 Scale - Large asphalt Oval racing
every Saturday and alternating Sundays
April thru October. 1220 Shappert Dr.,
Machesney Park, IL 61111, (815) 282-
1311.

CAJON R/C SPEEDWAY

1875 Joe Crosson, El Cajon, CA 92020.
(San Diego County) - Asphalt Oval/
Road - Dirt Off-Road. Race Schedule
Hot Line (619) 449-0788; Track Info (619)
449-9948; 1/12, 1/10, 1/8, 1/4 Scale Rac-
ing. Monthly schedule available at track.
Race Every Sunday, Tues. nite, Friday
nite.

HOBBY CORNER RACEWAY

Large indoor dirt oval track - racing year
'round - 1/8 scale racing Wednesday
evenings - 1/8 and 1/4 scale racing Satur-
days. 2195 E. Garfield, Decatur. IL
62526. (217) 429-4477.

TARCAR-TOLEDO AREA

New black clay tri-oval. 1/18 gas stock
cars. Sundays late April thru mid-
October. For more info call Dave
Scanes, (419) 893-1916.

SMR/CRC

First Sunday of Each Month at G.I.A.
1660 Stewart Street, Santa Monica, CA.
Sign-up 8:30 a.m., Practice 9:15 a.m.,
Qualifying 10 a.m. For more information
call Glenn Williams (213) 734-7888,
Chris Chan (213) 393-3735, Tom Wong
(213) 821-5472.

— 1/10 Scale —

G & S OFF-ROAD RACEWAY

Every Sunday - San Carlos & Meridian
Avenue, San Jose, CA.

KANSAS R/C RACING CLUB

Every 2nd Sun. - Junction City - 1 p.m.
Every 4th Sun. - Enterprise - 1 p.m.

CENTRAL NEW YORK

Lawrence Race Park

2509 Macedon Center Road, Palmyra,
NY 14522. (315) 597-6429. 1/10 and 1/12
electric auto racing. Nov.-Mar. Carpet
racing 1/12 scale. Oval and road racing.
April-Oct.

REECE'S R/C RACERS

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

PANTHORN RACEWAY

Panthorn Park, Burritt St., Southington,
CT. Every Saturday May 1st to Nov. 1st.
Off-Road, Oval, Baja, Truck Pulling.



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Call (203) 628-9345 Ben Carr, 272-9326
Pete Church, 237-6976 Bob Lavoie, 879-
2316 Steve Magnani.

R/C HOBBIES RACEWAY

Route 163 Bozrah, CT

Racing Every Sunday - May 1 to Oct. 30.
For more information call: R/C Hob-
bies, (203) 886-9441, ask for Mike or Bob.

R & R HOBBY

We have 1/10 scale dirt tracks both
inside and outside, also 1/12 tracks both
inside, also 1/12 tracks both inside and
outside. R & R Hobby - 1414 N. 24th St.,
Quincy, IL 62301, (217) 228-1133.

HAL'S HOBBY SHOP

Every Saturday from 9:30 a.m. to 4 p.m.
Practice: Track open all week. Hal's
Hobby Shop, 4886-A Hercules, El Paso,
TX 79904, (915) 755-1914.

RIVER CITY R/C OFF-ROAD

Racing is every Saturday, sign-ups 3
p.m., racing starts at 3:30 p.m. (512) 656-
5724 evenings.

MASON DIXON R/C CAR CLUB

Every Sunday at 1:00 p.m. Track location
at Hagerstown Fairgrounds, Hagers-
town, Maryland. Call King's R/C Cars,
219 E. Washington St., Hagerstown, MD
21740, (303) 739-0080.

SNORR

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

TEAM RACE R/C CAR CLUB

Fridays: 6:30 p.m. 1/10 scale 505 Spring
Ridge, Clinton, MS 39056. Call (601)
924-0722.

F/X CITY RACEWAY

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

RIVER CITY RACEWAY

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

WALT'S HOBBY & CRAFT

2 Dwight Park Dr., Syracuse, NY 13209,
(315) 453-2291. New 12,000 sq. ft. bldg.
Two indoor tracks. 1/10 Clay Oval, Mon.
6:30 p.m. & Sat. 12 Noon; 1/10 Gearbox
Carpet, Mon. 6:30 p.m.; 1/12 & 1/10 Car-
pet Cars, Tues. 6:30 p.m. Oval and Road
Course; Wed. Evenings Weight Pulling.
Daily Practice. Computerized scoring.

HITT'S HOBBY AND RACEWAY

Tuesdays: Oval Asa, Full Bodies
Thursdays: Off-Road - Stock
Saturdays: Off-Road - Novice
Sundays: Off-Road - Modified
Oval and Off-Road; 853 Wren Rd.,
Goodlettsville, TN 37072. For info call
Ben or Kent (615) 859-3465.

CARCLUB - COCHRANTON AREA

The Carclub races Fridays starting at 6
p.m., Saturdays starting 9 a.m. Sundays
starting at noon. Large indoor carpet -
dirt outdoor. Call for info Harry Turner,
120 W. Adams St., Cochranton, PA
16314. (814) 425-7788.

QUEEN CITY R/C RACEWAY

1/12, 1/8 and 1/10 scale cars. Every
Friday - 7 p.m. -Open Class Every at -2
p.m. Stock & Open. Every Sun. - 2 p.m.
Drag Racing 5050 S. Federal Blvd.,
Englewood, CO 80110, (303) 730-1391.

PDQ RACEWAYS & HOBBIES

1/8, 1/10, 1/12 Scales

Call times and details. 429 Bankhead
Highway, Mableton, GA 30059, (404)
941-2626.

SROKA'S INDOOR R/C

Racing every Sunday - Oval racing every
4th Sunday. 5216B Arboga Rd., Marys-



10th SCALE

10th SCALE

2 WD Modified & 4 WD Modified - July 19th - 22nd

2 WD Stock & 4 WD Stock - July 26th - 29th

Limited to 350 Entries Per Weekend ** ROAR Rules Apply ** ROAR Membership Available At Raceway

CLASSES: 2 WD Modified 4 WD Modified 2 WD Stock 4 WD Stock
Limited To 2 Classes Per Entry

Stock Classes Will Use "hand-out" Motors

Hobby Haven Will Confirm Your Registration By Mail As Soon As Possible After Receipt Of Application
Entries Limited To The First 350 Applications Received For Each Weekend

Mail This Entry Form Or A Copy, Along With Your Check Or Money Order Payable To:

HOBBY HAVEN RACEWAY
72 South N Street
Livermore, CA 94550

FOR ADDITIONAL INFORMATION CALL:
Tom Welding Jr. - 415/443-5828

ENTRY FORM

NAME _____

ROAR Membership Number _____

ADDRESS _____

CITY _____

CAR _____ MOTOR _____

STATE _____ ZIP CODE _____

RADIO _____ SPONSOR _____

TELEPHONE NUMBER _____

SKILL LEVEL Novice Intermediate Expert

CIRCLE CLASS(ES) 2 WD Stock
2 WD Modified
4 WD Stock
4 WD Modified

CHOICE OF FREQUENCIES 1st ____ 2nd ____ 3rd ____
1st ____ 2nd ____ 3rd ____
1st ____ 2nd ____ 3rd ____
1st ____ 2nd ____ 3rd ____

ENTRY FEE:
\$45.00 Each Stock Class - \$35.00 Each Modified Class (No Refunds) TOTAL ENCLOSED \$ _____

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ville, CA 95901. Call Michael or Vickie Sroka (916) 742-6148 or (916) 741-3051.

FLINT R/C CAR CLUB

Flint, MI. Summer: Every other Sun. from May to Sept., Fall & Winter 1/12 4 cell on carpet. For info: Ralph Herndon (313) 658-5390 or Tom Hoos (313) 658-1043.

MILE-HI R/C SPEEDWAYS

Thurs. & Sat. Off-Road, Fri. Carpet, Sunday 2 p.m. 178 S. Kalamath, Denver, CO 80221, (303) 722-6766.

AMERICAN HOBBIES

Thursday Night Oval Racing
Sunday Off-Road & Oval
For info call (201) 446-2010.

C.A.R. CLUB

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

ARROW HOBBIES

Wed. Nights - 1/10; Every other Fri. night 1/8 Sprint Cars only; Sat. nights 1/10 dirt oval. 2710 So. 1-35 West, Burleson, TX (817) 295-2821.

BLASTERS OFF-ROAD CLUB

Dirt Oval and Circuit Off-Road Course. 47 Riel Dr., St. Albert, Alberta. Contacts Dean M. Simpson, (403) 481-8634, 17319 69th Ave., Edmonton, Alberta, Canada T5T 3S7.

BUCKLEY SPEEDWAY

37 Douglas Street, Hartford, CT. Every Sunday April 1st to Nov. 31st Black Top Oval. For more information call "Ziggy" or Debbie Kwasnicki (203) 246-4778.

HOBBY HAVEN RACEWAY

1756 First Street, Livermore, CA 94550 AC power, paved parking, computer scoring, trophy races, trophy dashes, gift certificates. Coming soon night racing & oval races. For info (415) 443-5828 M-F 10-6 p.m.

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7:00 p.m. - Monday Pro Night
7:00 p.m. - Tuesday Boy Scout Nite,
7:00 p.m. - Wednesday Teen Night
7:00 p.m. - Thursday Indoor Clay
7:00 p.m. - Friday Roar Meetings
7:00 p.m. - Sat. & Sun. Family Days

HOBBY HUT

2665 Park Marina Dr., Redding, CA 96001, (916) 241-3737. 1/10 Off-Road Racing. Norcal Mini Off-Roaders. Ask for Kevin Paschke.

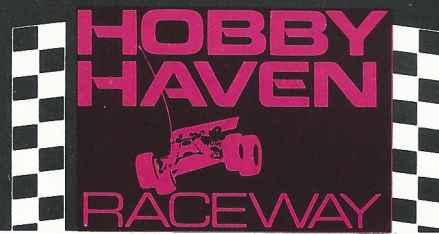
USA RACEWAYS

6083 Dixie Highway, Bridgeport, Michigan, (517) 777-7USA.

Every Thursday Oval & Off-Road
Every Fri. Indoor Carpet Oval

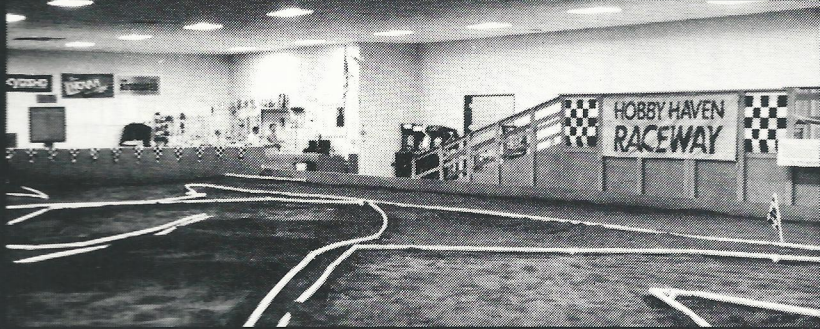
R.C. BUGGYWORLD & RACEWAY

7511 Hamilton Ave. - RT. 127, MT. Healthy, OH 45231, 522-0809. Wednesday night off-road and oval on alter-



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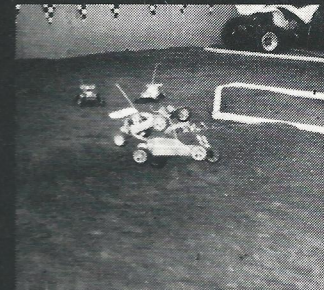


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Hobby Haven Raceway
3983 First Street
Livermore, CA 94550
415/443-7826

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(Peak Performance)

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nating weeks. Also carpet races on Monday nights 40 x 80 banked oval.

OUTLAW MOTOR SPEEDWAY

7920 Webster, Highland, CA, (714) 864-1770. Tues. Tamiya Off-Road; Thur. Off-Road & Dirt Oval; Fri. 1/10 & 1/12 on-road; 1st Sun. Dirt Oval; 2nd Sun. 1/10 & 1/12 On-Road; 3rd & 4th Sun. Off-Road.

LITTLES HOBBIES

Monday Nite - 1/10 Trucks
Tuesday Nite - 1/10 Sprint Cars
Wed.-Fri. - Open Practice Available
Sat. - 11 a.m. 2WD 6 yrs. to 16 yrs.
Sun. - 11 a.m. - All Classes Indoor Clay Oval and Road Track Fast -Stock & Modified Classes. Bolink AMB Lap Counter. 111 Main St., Rt. 66, Hebron, CT 06248, (203) 228-4942.

R/C WORLD & TRACK

New indoor facility for 1/10 off-road and oval dirt racing. Wed. and Fri. -oval. Sat. Daytime and Evening off-road. Practice anytime. Call Glen or Debbie at (303) 789-0838, 2788 S. Federal, Denver, CO 80202.

FAST LANE R/C

On Road Asphalt Track. 21616 Golden Triangle, Saugus, CA. Call (805) 255-2404.

RPM R/C RACEWAY

1112 S. 16th, Elwood, IN 46254. Indoor off-road racing every Sunday at 12:00 noon. For info call (317) 552-7758.

REC. R/C RACEWAY

1/10 scale clay oval track. Racing Sat. - Oval 10-2:30 - Racing at 3:00 p.m. - Sunday - Off-Road 10-2:30 Racing at 3 p.m. Call Erin Clancy (914) 868-7715. Route 82 to Standfordville, NY 12581.

MADISON AREA RADIO CONTROL CAR ASSOCIATION, INC.

Factory Outlet Mall, Madison, Wisconsin. 1/10 and 1/12 scale carpet racing. Practice Sat. Afternoon Racing 6 p.m. Sat. & 7 p.m. Tues. George Jerdee (608) 873-7286.

THE RANCH PIT SHOP

1655 E. Mission Blvd., Pomona, CA 91766 (714) 623-1506. Every Wednesday night at 6 p.m. Alternating Oval and Off-Road.

COMPETITION HOBBY

Off-Road racing indoors on dirt. Every Wednesday night 6:30 - Sunday 12 noon, Juniors (12 and under) & Novice Saturday 12 noon. 8169 S. State St., Midvale, UT 84047, (801) 562-9452.

CONNECTICUT AUTO RACING TEAM
1/10 Off-Road and Sprint Car Oval. 37 Douglas Street, Hartford, CT 06114, Zig (203) 246-4778.

HOBBYTOWN

1/4 Mile High Banked Indoor Carpet Tracks at two of our stores. The Lincoln track is at our Sutter Place Mall store located at 5221 S. 48th St., Lincoln, NE 68516 (402) 483-7427. The Omaha track is located at Rockbrook Village at 11011 Elm Street, Omaha, NE 68144, (402) 391-5669.

Tues. - 7 p.m. - Lincoln
Wed. - 7 p.m. - Omaha
Sat. - 1 p.m. - Lincoln & Omaha
Sun. - 1 p.m. - Lincoln & Omaha

ROMAC

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

COOPER'S RC RACE CENTER

Racing every Sunday 2 p.m.
Open Wed. and Fri. 6 p.m.
Open Sat. & Sun. 12 noon
Oval and Off-Road
Contact Norris, Rt. 4 Box 122B, Chatham, VA 24531, (804) 724-4182.

VICTORIA HOBBY SHOP

Every Saturday - 2 p.m. - Off-Road;
Every Sunday - 2 p.m. - Ovals.
5211 John Stockbauer, Victoria, TX 77904, (512) 575-3270.

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

155540 E. Batavia Dr., Aurora, CO 80011. (East on 17th Ave. at Chambers Rd.). Indoor 1/10 Off-Road Racing on Wed. & Sat. Practice/Track Time Tues., Thur., Fri., Sun. Complete Hobby Shop, pit area has AC & DC power, a nice clean handicap accessible racing facility. For info call Jess Brockman, (303) 343-0151 after 3 p.m. MST. Closed Monday.

HOBBYTOWN RACEWAY

4915 W. Elm, McHenry, IL 60050, (815) 344-1777. Hobbytown Raceway, 219 W. Cedar Lake Rd., Round Lake, IL 60073. Indoor - Dirt 80' straightaways, (312) 546-0707. Oval Racing every Friday 7 p.m.; Off-Road Sunday 10 a.m.

BNS COMPETITION HOBBIES

Route 7, Box 380, Anderson, SC 29624, (803) 224-8591. Contact Bob Sanford. Racing and Open Practice Wed. 6:30 p.m., Every Saturday 1:00 p.m. 1/10 Dirt Oval.

DESERT HOBBIES & RACEWAY

Off-Road racing 1st & 3rd Sundays. Sign in 10-11:15 a.m. Every Friday nite 7:30 p.m. 25 minutes from San Bernardino. 17210 Main St., Hesperia, CA 92345, (619) 94858.

TAIT'S HOBBY SHOP

Sat. Off-Road 12 noon, 2WD/4WD Monster Trucks. Sun. Dirt Oval 12 noon 2WD/4WD Any body style. Mon. Indoor Oval Carpet 7 p.m. 1/10 & 1/12. Tues. Truck/Car Pulls 7 p.m.. Wed. Outlaw Dirt Oval 7 p.m. 2WD/4WD Stock cars/ 2WD Sprints. Friday. Off-Road 7 p.m. 2WD/4WD Off-Road cars. 3270 Bay Rd., Saginaw, MI 48603, (517) 799-3900.

J.G.S.

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

TRACKSIDE RACEWAY

Dirt Oval Racing every Thursday night 6 p.m. Fully stocked hobby shop, com-

puter scoring, lights, bleachers, concessions. Menomonee Falls, WI (414) 255-2040.

WAGONHILL HOBBIES

Indoor 1/10 & 1/12 on-road racing every Friday night. Outdoor Off-Road every Saturday Night. 225 S. Board St. Grove City, PA, (412) 458-4711.

DIXIE R/C HOBBY SHOP

Every weekend Sat. & Sun. The races will alternate between oval and motocross starting May 14 with oval and May 15 with motocross. Dixie R/C Hobby Shop, P. O. Box 135, Ramseur, NC 27316, after 6 p.m. (919) 824-2770.

BREMEN RACEWAY

Clay Oval Track 60 x 100 ft. Under roof, lighted Friday nights 7 p.m. May thru Sept. Call for information (219) 546-3807. Bremen Hobbies, 308 N. Bowen, Bremen, IN 46506.

WEST TEXAS R/C RACEWAY

3477 Lee Blvd. - Racing every Sunday. 1/10 scale off-road and oval dirt. Mailing address: 301 Edith Dr., El Paso, TX 79915. For more information call Hector (915) 772-1382.

JIM'S R/C SPECIALTIES

3107 S.W. Van Buren, Topeka, KS 66611 (913) 273-4070. Racing off-road every Sunday 12 noon to 5 p.m. Oval racing every Saturday night 6 p.m.

EAGLE HOBBY CENTER & RACEWAY

Every Saturday night at 7:30 p.m. 1/12 4 cell stock and modified. 1/10 6 cell stock on-road, call for body style. Eagle Hobby Center & Raceway, 3601 Shepherd, Balch Springs, TX 75180, (214) 557-5290.

ACTION SPEEDWAY

Indian River's Facility

1/10 scale half mile clay oval & off-road. Two story covered drivers' stand, large pit area close to track, ample parking, classes for young and old, beginner's to expert's, and truck pulls. Coming soon - 1/10 scale super speedway and road course, night racing, full electric, and concessions. For further information call Trace or Chip Button (407) 231-9410 or Doug Upton (407) 569-8793.

THE INSIDE TRACK

Every Wednesday - 7 p.m. and Saturday 6 p.m. Classes: 2WD Stock and Modified, 4WD Stock and Modified and Monster Trucks. For more information call (312) 898-5649. 725 Hill Avenue, Aurora, IL 60505.

ABC R/C

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

TC'S R/C'S

Inside and outside race track and RC shop. 1537 Freeport Road, Natrona Heights, PA 15065, call 226-8802.

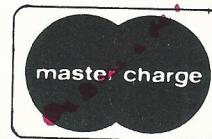
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5:30 to 7:30 Practice. Races start 7:30 p.m. 1217 Main st, Brockton, MA. For more information call Ruben (508) 588-9355.

SONOMA COUNTY RACEWAY

806 Brookwood Avenue, P. O. Box 9565, Santa Rosa, CA 95405 -1/10 Dirt Oval, 1/10 Off-Road, 1/10 & 1/12 Asphalt. Mark White (707) 571-7565, Schedule info (707) 571-8044, Competition Products (707) 571-8048.

ALL IN 1 RACEWAY

5612 S. 108th St. Hales Corners, WI. 1/10 scale indoor dirt track. High speed semi-oval and true off-road courses. Practice Tues, Thrus., and Fri. 6 - 9 p.m. Racing Wednesday nights at 6 p.m., Sat. & Sun. at 1 p.m. For more information call (414) 425-4060.

THE SQUARE ROUNDHOUSE SPEEDWAY

Saturdays - 3 Events per month -Off-Road, Monster Truck Pulls and Oval Race. Oval dirt track and Off-road track. 1468 Lander Avenue, Turlock, CA 95380, (209) 668-4454, Ask for Harold Lindquist.

COASTAL BEND SANDBLASTERS R/C CAR CLUB

Races first thru 3rd Sundays, 2 p.m. start. Bill Witt Park, Yorktown Road, Corpus Christi, TX, Call Pete Broadway (512) 992-4448.

CAJON R/C SPEEDWAY

1875 Joe Crosson, El Cajon, CA 92020. Fastest paved oval & road course in CA. 1/10 & 1/12 scale. Please call for off-road dates. Hot Line (619) 449-0788/Track info 449-9948.

RADIO CONTROLLED HOBBIES & RACEWAY

Indoor Off-Road racing every Tuesday & Thursday evening beginning at 7 p.m. and Saturdays at 5 p.m. Open 7 days a week. 2011 Placentia Ave., Costa Mesa, CA 92627. For more info call (714) 631-1555.

R/C RACEWAYS

1/10 indoor dirt oval. 100' straightaways. Wed. 6 p.m. oval. Friday 6:30 p.m. oval. Sunday 12 noon oval or off-road. For more information call (219) 747-6414. 2710 Nuttman, Ft. Wayne, IN 46804.

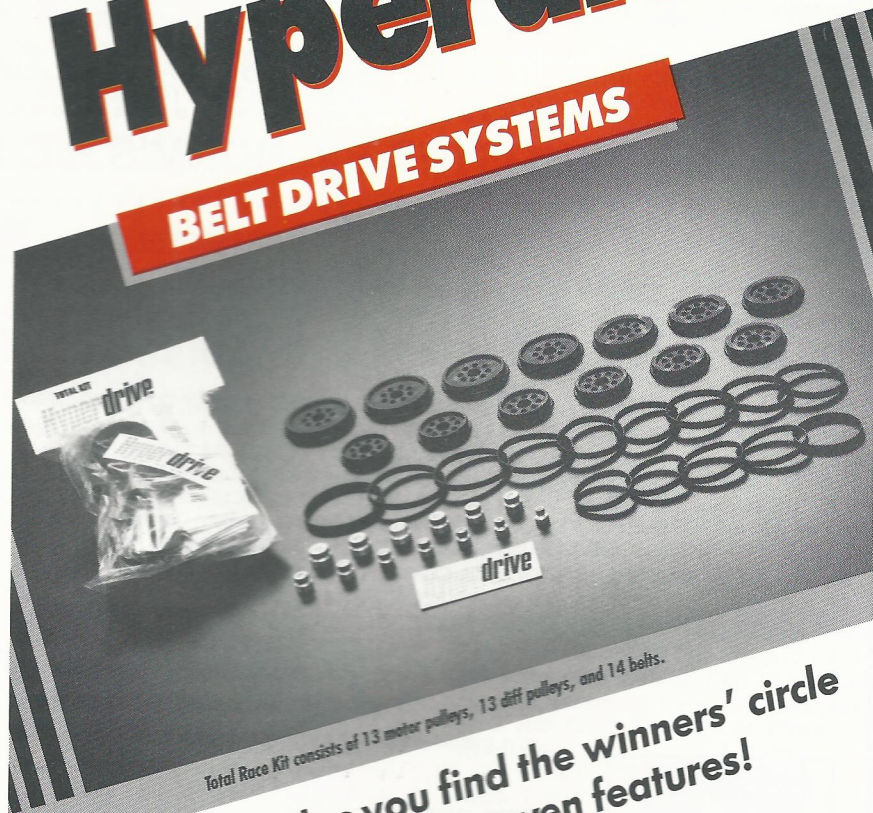
R/C PERFORMANCE CENTER

Indoor high banked carpet oval. 170' x 90' off-road dirt indoor track. Racing 4 Days a week; Tues., Thurs., Sat. & Sun. Open 10 a.m. - 10 p.m. 7 days a week. 4 Manley Street, West Bridgewater, MA 02379. Ask for John (508) 588-9666.

PARLOR HOBBIES

Short Track Stock Car Racing on Road Courses. 1/10 on Asphalt - Full bodies - Grand National or ASA bodies preferred. Truck class with 1/12 on-1/12

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Total Race Kit consists of 13 motor pulleys, 13 diff pulleys, and 14 belts.

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- Teflon impregnated diff pulleys - no diff lube necessary!
- 169 possible ratios with full race kit!
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NORRCA

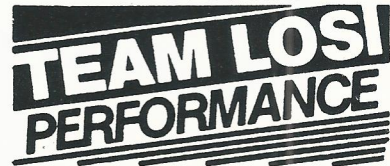
NATIONAL ORGANIZATION FOR RACING RADIO CONTROL AUTOS

1990 OFF-ROAD NATIONALS

JULY 6TH - 8TH DALLAS, TX

HOSTED BY NORM'S R/C HOBBIES

PRESENTED BY



NORRCA MEMBERSHIP IS REQUIRED * (MEMBERSHIP IS AVAILABLE AT TRACK OR THROUGH NORRCA) * NORRCA RULES APPLY * NORRCA OFFICIALS WILL BE PRESENT * SHIRTS FOR PRE-ENTRANTS ONLY * NORRCA T.Q. PINS & TROPHIES FOR TOP QUALIFIER IN EACH CLASS * TROPHIES 1st -10th IN ALL "A" MAINS * 1-3 ALL MAINS * CONCOURS TROPHIES 1st -3rd * TROPHY DASH FOR EACH CLASS * HOST HOTEL IS THE "DALLAS RADISON" 2330 W. N.W. HWY, DALLAS, TX 75220, 214-351-4477 * YOU MUST ASK FOR THE NORRCA RACE RATE * AIRPORT AND RESTAURANTS NEARBY * 3RD ANNUAL NORRCA TEAM CUP CHALLENGE -THE TEAM WITH THE HIGHEST OVERALL POINTS WILL BE AWARDED A GOLD CUP FOR "THE BEST OFF-ROAD TEAM" OF 1990 * ENTRIES LIMITED TO 400. PRE-ENTRIES CLOSE JULY 1ST * ENTRIES DAY OF RACE IF AVAILABLE \$50.00 * STOCK MOTORS WILL BE SUPPLIED BY TRINITY * ADDITIONAL MOTORS WILL BE \$15.00

SCHEDULE: JULY 5TH PRACTICE ALL CLASSES 10AM-6PM * 6TH 6AM -8AM CHECK-IN, 8:30 1ST HEAT, 2:00PM BEGINS 2ND ROUND, JULY 7TH 7:30AM CONCOURS, 8:00 AM 3RD ROUND, 2:00PM 4TH ROUND, JULY 8TH 8-9 AM TROPHY DASH, 9:30 START OF LOWER MAINS. ALL SCHEDULED TIMES ARE APPROXIMATE. SCHEDULE MAY VARY AND CAN BE ADJUSTED AT ANYTIME *



***** ASSOCIATE SPONSORS *****



LC Sidewinder



NORRCA OFFICIAL 1990 OFF-ROAD NATIONALS ENTRY FORM

NAME _____ EXPERT _____ SPORTSMAN _____ PHONE _____

ADDRESS _____

CLASS(ES): 2W STOCK _____ 2W OPEN _____ 4W STOCK _____ 4W OPEN _____ OPEN TRUCK _____
SUPER STOCK TRUCK _____

2W FREQUENCIES 1. _____ 2. _____ 3. _____ SPONSOR(S) _____

4W FREQUENCIES 1. _____ 2. _____ 3. _____ CAR _____ MOTOR _____ RADIO _____

ENTRY FEE: \$35.00 1ST CLASS., \$25 EA ADD'L CLASS. EACH STOCK ENTRY \$40.00 (INCLUDES 1 MOTOR) NO ENTRY REFUNDS. SEND ENTRY & CHECK PAYABLE TO:

NORRCA, 1530 W. 8TH ST #117, UPLAND, CA 91786 FOR ADD'L INFO. CALL NORM'S AT 214-357-3453 OR NORRCA AT 714-981-9641

NORRCA # _____

off-road & hill climb. May 6 - May 20 - June 10 - June 24 - July 1 - July 8 - July 15 - July 29 - Aug. 5 - Aug. 12 - Aug. 19 - Aug. 26 - Sept. 16 - Sept. 23 - Sept. 30 - Oct. 7 - Oct. 14 - Oct. 28 - Nov. 4 - Nov. 11 - Nov. 18. Rabbit Lane & 34 Broad St., Matawan, NJ 566-3158.

R/C SPEED CENTER R/C ADDICTION

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

BROTHER-IN-LAWS R/C RACING

1/10 scale dirt oval. Racing every Sunday. Signups 10 a.m. Open Practice 12-6 Tues. - Sat. pit tables, 110 volt power. Call Bob (619) 949-5252. 16175 Main Street, Hesperia, CA.

CORCAR - COLUMBUS, OHIO

1/10 off-road racing May thru Sept. every Sunday. Signups start at 10:30 a.m. Excellent dirt track, computer scoring and picnic area. For information call Ray Williams (614) 890-2983.

MACHESNEY PARK RACEWAY

1220 Shappert Dr., Machesney Park, IL. (815) 282-1311. Large asphalt oval, racing every Saturday and alternating Sundays, April thru October.

CENTRAL MARYLAND ELECTRIC RACING CLUB

(CMERC) Community R/C Speedway
Middletown Park, Middletown, Maryland. 100' x 50' dirt oval, 14' wide lanes, 2' banked turns, No electricity available. Every Saturday. Contact John Mauchamer, (301) 698-9545.

SCHENECTADY R/C SPEEDWAY

Indoor Oval Carpet Racing. 1/10 & 1/12 and Monster Trucks. 955 State St., Schenectady, NY, (518) 370-3747.

THE COCKEYSVILLE ASTRODOME

C.A.R. Cockeysville Astrodome Racers, Inc., 10854 York Rd. (Rear) Cockeysville, MD, (301) 666-1098. High Bank Oval racing on concrete (indoors). Benches, Power, Grandstands. 7 p.m. Mon. - Open Practice; 7 p.m. Tues. - Rookie & Stock Practice; 7 p.m. Wed. - Computer Organized Racing; 7 p.m. Thurs. - Modified & Ultra-lite Practice; 7 p.m. Fri. - Trucks & Buggies Practice; 5 p.m. Sat. - Computer Organized Racing; 1 p.m. Sun. - Computer Organized Racing. Art LaPole (301) 889-2070.

BOB'S R/C SUPPLY & RACEWAY

Indoor Carpet Racing! Tues. 1/10 Oval; Fri. 1/12 Road Course; Sat. Monster Trucks. Stock & Modified. Snack bar. Call Bob, Nancy or Kevin (319) 232-2235, 935 Sheerer Ave., Waterloo, IA 50701.

EBERSOLE HOBBY & R/C RACEWAY
Off-Road and Oval. Races Wed., Thurs., Sat., and alternate Sun. 11417 W. Highway 54, Wichita, KS 67209. Len Ebersole, (316) 722-8888.

METRO-FAST RACEWAY & HOBBIES

125' x 48' indoor carpet track, pitting for 140+, power, hobby shop, video entertainment, food bar. Oval - Fri., Kid's racing every Sat. morn and alternate Sun. on on-road & off-road. 950 W. Irving Park Rd., Hanover Park, IL 60103, (312) 213-3977.

MID-CAROLINA R/C SUPER

SPEEDWAY

The speedway is located on Flint Hill Rd. Off 1-77/Carowinds exit. So. of Charlotte, NC. 1/10 & 1/12 High-Speed Banked Quad-Oval and Road Course. 385 ft. plus 26 degrees banking in turns concrete track. Fred Penland (704) 373-2535 7:30 a.m. to 4:30 p.m.

BROWNIE'S HOBBIES

Off-Road Dirt Track, hobby shop. Wed. eves and Sat. afternoons for practice. Racing - Fri. eves. 4WD & 2WD. Track open April -November. 124 Bennett St., Staten Island, NY 10302, (718) 727-2194.

ROADRUNNER R/C CENTRAL

5620 Bellaire, Houston, TX 77081, (713) 661-7574. 1/12 Carpet Oval or Road Course Thurs. Nite. 1/10 Carpet Oval Tues. & Fri. nite & Sun. pm.

ROADRUNNER R/C NORTH

12760 Veterans Memorial, Houston, TX 77014, (713) 537-7758. 1/10 Dirt Oval Wed. Fri. nite. 1/10 Dirt Off-Road Sat. & Sun.

ROADRUNNER R/C SOUTH

12902 Player, Houston, TX 77014, (713) 728-2277. 1/10 Indoor Dirt Off-Road Wed., Fri., & Sat.

NORTHERN MINI-RACERS

NMR Raceway, P. O. Box 415, 3524 E. Burdick. Minot, North Dakota 58701. 1st & 3rd Sun. 1/10, 6 cell, NASCAR bodies, oval racing on carpet. Roger Lee, (701) 839-4731, 839-5294; Pat McWethy, (701) 839-8868, 852-6254.

ASHEVILLE HOBBY SPEEDWAY

Racing Wed. & Sat. - 7:30. 1/10 & 1/12 Asphalt Oval -Indoors. Hwy. 25, Naples, NC 28760, (704) 684-9814. Jack or Sharon Murdock.

HOBBY CENTER

High banked carpet oval track. Racing Fri. -7:30 p.m. 1/10 NASCAR, trucks, 2WD gearbox hot rod, 4WD wedge bodies, 1/12 scale. Any body ROAR stock motors all classes. Open practice during store hours. (502) 683-7611. 1233 Sweeney St., Owensboro, KY 42301.

R/C MOTORPLEX & HOBBY

Outside Tracks: One of Midwest's largest paved oval (160 x 115) with paved infield road course. Indoor Tracks: Dirt off-road & dirt oval. Carpet road course & oval. 1/12, 1/10 & 1/8. Snack bar, game room R/C hobby shop. 303 Herbert Rd., McHenry, IL 60050, (815) 385-1240. Bob Oaks or Jim Bostrom.

SACRAMENTO MINI-WHEELS RACEWAY

Indoor racing with 1/10 & 1/12 scale. Two tracks with off-road, dirt oval, and on-road. The on-road track is etched concrete. Racing Wednesday (off-road). Fri. (on-road). Every other Sat. (dirt oval). Sun. (off-road). 8711 Elder Creek Rd., Sacramento, CA 95826. Paul or Marge Schiager (916) 383-4011.

RAPID TRANSIT RACEWAY

2104 Broadway, Schenectady, NY 12306, (518) 372-0777. Summer Store Hours: Mon. - Fri. 4 p.m. - 10 p.m., Sat. 11 a.m. - 5 p.m.. Race Schedule: Mon, Tues, & Sat. Open for Practice. Wed. 7:30 p.m. Stock & Mod. Thurs. 7:30 p.m. Sprint Car. Fri. 7:30 p.m. Sportsman & Open Class.

NORTHERN ALBERTA SCALE

CAR AUTO RACING

1/12 and 1/10 On-Road Racing. 1/12, 4 cell indoors on carpet during winter. 1/

10, 6-cell outdoors during summer. Dean Simpson (403) 481-8634, 17319 69th Ave., Edmonton, Alberta, Canada T5T-3S7.

HOBBY CORNER RACEWAY

Sun. - alternating oval & off-road 1 p.m. Tues. - oval racing 7 p.m. Large indoor dirt oval track with 4 foot banks. 2195 E. Garfield, Decatur, IL 62526 (217) 429-4477.

PHILLY RADIO CONTROLLED RACERS R/C CAR CLUB

Announcing the opening of a paved race track for R/C 1/10 on-road. ROAR rules. Sun., April - November. 11 a.m.. 7790 Dungan Rd., N. E. Philadelphia. Jon (215) 224-4822 or Bernie (215) 831-1835.

ARVIN'S HOBBY CENTRE

1403 E. Spring St., New Albany, IN 47150, (812) 945-3745. We have a 2,600 sq. ft. carpet track which has moveable rails so that we can change the layout from oval to off-road. We run offroad and on-road cars on Saturday, Sunday, Wednesdays nights.

ISLAND HOBBIES & RACEWAY

Mon.: 2WD Monster Trucks - Stock, Monster Trucks 6-cell Mod.; Tuesday 1/10 Off-Road Stock, 1/10 Sprint Cars - Open; Wed. 1/10 On-Road, Stock NASCAR bodies, On-Road 6-cell Mod. GTP bodies; Thurs. 4WD Trucks - Open, 4WD Cars - Open, 1/12 On-Road Stock 6-cell. All racing starts at 7 p.m. Open practice Sat. & Sun. Contact Dave at (516) 234-7428.

D & T HOBBIES

Two tracks, off-road & high speed concrete oval. 1/10 & 1/12 Wed., Fri., Sat., and Sun. For specific, please call (219) 674-8533. 55575 Ash Rd., Osceola, IN 46561.

TEXAS R/C RACEWAY

Home of the Plano Outlaws

Tues. and Sat. - 1/10 On-Road; Fri. NASCAR nite; Sun. 1/12 On-Road. 75 Central Espressway at 15th St. Exit 29, Palisades Square Shopping Center, Plano, Texas. Call Jim (214) 517-7485 or Dean (214) 519-0324.

RACEWAY HOBBIES

Wed. 7 p.m. - 2WD & 4WD Off-Road; Sat. 1 p.m. - Off-Road & Oval. Lexington Shoppes, 6845 So. U.S. A, Port St. Lucie, FL 34952, (407) 468-4338.

TEAM R & R, INC.

Westminster, Maryland 21157. Indoor oval carpet racing, 1/10 & 1/12 scale. Racing every Sunday. For more info, phone (301) 848-2144 or (301) 876-2983.

SUMMIT SPEEDWAY

Indoor Dirt Oval - Every Friday Night 7 p.m. Sundays indoor or outdoor (weather permitting) off-road or oval at noon. Call (219) 489-RACE (7223). 1706 W. Till Rd., Fort Wayne, IN 46818.

K & M R/C SPEEDWAY & HOBBIES

735 Canal St., Stamford, CT 06902, (203) 967-7255. One of New England's Largest Indoor Tracks. Weekly Hours Mon.-Fri. 4 p.m.-10 p.m.; Sat. & Sun 12 p.m.-10 p.m. 7,000 sq. ft. complex, ample pit area with power, 110' x 35 sq. ft. track anti-static carpet, fully stocked hobby shop. Organized racing held on a weekly basis. Call for details.

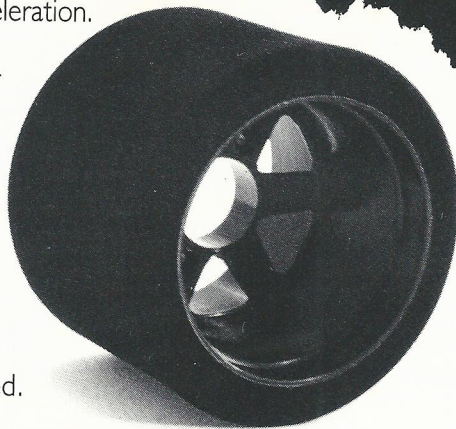
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Off-Road Fri. nights, 1/12 & 1/10 carpet Sundays, Closed Mondays. Hobby shop

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1/10 & 1/12 Scale Racing

Indoor Carpet racing

Contact Toy World R/C, (301) 424-0430.

R.C.A.R. of TULSA

Indoor Racing. 10404 E. 55th Place, Unit A, Tulsa, OK. March 3, 10, 17. Track Opens 6 p.m. Qualifying begins 7 p.m. For more info call Dave Cole (918) 745-9898.

HOBBIES ETC. RACEWAY

Medford High School, Winthrop St., Medford, MA. Every Sunday. Doors

open at 12 noon. Racing at 1 p.m. Indoor on-road carpet course for 1/10 and 1/12 scale. Computer lap counting, trophy and gift certificate awards. Ample parking, AC power, technical aid, hobby shop and concession stand on sight. For more info call (617) 389-3331.

AMERICAN ANGLER TACKLE & R/C HOBBY CENTER'S "AA RACEWAY"

1617 Toomey Rd., Austin, TX 78704, (512) 474-8277. Two dirt tracks, Oval & Off-Road. Races every Sunday, 1 p.m. Tracks Alternated. Races Every Saturday 11 a.m. Oval. Hobby shop on site.

REMOTE HOBBY'S INDOOR RACING

Shop (803) 736-9446, Track (803) 699-0528. 9005 C Two Notch Rd., Columbia, SC 29223. Fri. nites - Oval 1/10 Pan/Trans. Sat. nites - Road Course 1/10 Pan/Trans/Trucks. Pits for 40+, Parts, Power and Refreshments.

MacKAY RACEWAYS

1/10 Electric Off-Road Sundays. 1044 West 14th Street, North Vancouver, BC Canada. 150' straights/5'banks/moguls & jumps. Operated by the Western Canada R/C Club. For info call Dana Shaw (604) 980-4504.

ANTIOCH RACEWAY

1/10 dirt oval racing every Fri. 7 p.m. 1/10 off-road every Wed. 7 p.m. All Classes. Sat. & Sun. 1/10 dirt oval and off-road 10:30 a.m. Also night racing. Pit Tables, Power, open 7 days a week. 5631 Lone Tree Way, Antioch, CA 94509. Call (415) 754-5700 Jack Hanson.

CLEVELAND RADIO RACEWAY

3209 Lorain Avenue
Cleveland, OH 44113

For more info contact Troy Singer (Owner) (216) 741-1649 or Rick Moore (Race Coordinator) (216) 255-5429 Fri. 7-Midnight Oval or Off-Road; Sat. Noon - 6 p.m. Practice; Sun. 10 a.m. - 6 p.m. Oval or Off-Road. Classes: 2WD Stock & Modified; 4WD Modified & Monster Trucks.

SWEET UNION R/C RACEWAY

1/10 Dirt Oval & Off-Road. 388D Quarry Rd., Monroe, NC 28110. 300' 4 Turn Oval, 520' 19 Turn Off-Road (Shortest Line Measurement). "TrackMate" Lap Counting & MGT System. Racing Sat. & Sun. 1st & 3rd Weekends. Covered Driver's Stand, Trophies & Door Prizes Each Race Day, For more info Call (704) 289-3621.

NORTHSTAR RACEWAY

Featuring Minnesota's first indoor & outdoor clay oval and off-road surfaces. Fully stocked, specialized hobby shop. 10751 University Ave., Blaine, MN 55433, (612) 757-0374. Tues. - 7 p.m. off-road; Thur. - 7 p.m. oval racing; Sat. - 11 a.m. off-road racing. Send S.A.S.E. or call for complete schedule.

SIDEWAYS CITY

22,000 sq. ft. Building, racing every Tues. & Fri. nite and Sun. afternoon. Hobby shop, hot food concession, video game room, and kiddy land. The track is a super speedway cement oval. Dirt track open May thru September. Call (616) 792-2004 for further info. Located in Wayland, MI. Take US 131 to the Wayland Exit, turn East to light, turn North 1/12 mile.

RIVER CITIES R/C RACEWAY

Ashland, Kentucky 41101
Racing at 5:30 Saturday evenings under

a light area. Radio impound, concession booth, IBM Computer, Brimstar Management System, and AMB Lap Counter and P/A system. The track is a semi-hard dirt oval, 90' straight with 12' lanes and 60' across. Corners are banked approximately 15 degrees with 14' lanes, ample room for passing. Call Randy Aust (606) 836-4273 or Jason Graham (606) 836-2613.

SMR/CRC

First Sunday of Each Month at G.I.A. 1660 Stewart Street, Santa Monica, CA. Sign-up 8:30 a.m., Practice 9:15 a.m., Qualifying 10 a.m. For more information call Glenn Williams (213) 734-7888, Chris Chan (213) 393-3735, Tom Wong (213) 821-5472.

TARCAR - TOLEDO AREA

New black clay tri-oval. 1/10 oval and off-road. Sunday late April thru Mid-October. For more info call Dave Scanes, (419) 893-1916.

ACTION R/C RACEWAY

New Hampshire's finest indoor carpet high banked oval. AMB scoring, hobby shop, snack bar, rentals. 1/10 scale all classes including monster truck pulling. Family Fun Hobbies, 201 Washington St., Claremont, NH. Convenient to I-91 & I-89. 2 Hours from Boston & Hartford. Open 7 Days. (603) 543-1022.

WESTSIDE HOBBIES

Asphalt racing every Sunday. Sign-ups start at 9 a.m. Races start at 11 a.m. Alternating oval & road course. 1/12 & 1/10 on-road, 1/10 off-road cars and trucks, all classes. Full line hobby shop. For further info call Tom, Mark or Tim Minster. (915) 585-1864. 7214-A N. Mesa, El Paso, TX 79912.

R.R.O.L.

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

R.C. CITY RACEWAY & HOBBIES

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

— 1/12 Scale —

FLORIDA STATE SERIES

May 5 & 6 - Fort Lauderdale
July 14 & 15 - Rockledge
Sept. 15 & 16 - Orlando
October 13 & 14 - Pinellas Park

November 10 & 11 - Naples

GLASS CITY RADIO CONTROL

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

S.T.A.R.C.

Wed. Night - S.T.A.R.C. Club Series. Rockton, Ontario, Canada. Sam Burke (519) 621-5424.

TEAM RACE R/C CAR CLUB

Fri. 6:30 p.m. indoor track, 505 Spring Ridge Rd., Clinton, MS. (601) 924-0722.

NORTHERN MINI-RACERS

NMR Raceway, P. O. Box 415, 3524 East Burdick, Minot, ND 58701. 1st & 3rd Sat., 1/12, 4-cell, Can-Am/GTP bodies, road racing on carpet. Roger Lee, (701) 839-4731 or 839-5294. Pat McWethy, (701) 839-8868 or 852-6254.

KOUNTRY KLIN HOBBY

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

USA RACEWAYS

6083 Dixie Highway, Bridgeport, Michigan 48722, (517) 777-7USA
Tue. Nite On-Road; Sat. Nite On-Road;
Every Other Sat. Eve. Stock On-Road

THE RANCH PIT SHOP

1655 E. Mission Blvd., Pomona, CA 91766. (714) 623-1506. Every 4th Sun. 1/12 & 1/10 On-Road Combined Program.

OMAHA NEBRASKA RADIO OPERATED AUTO DRIVERS

Very active racing schedule. Carpet and Pavement racing in 1/10 and 1/12 scales. All classes - Oval and road course. ROAR rules. (402) 331-2907.

S.O.R.C.R.C.C.

Southern Ontario Radio Control Race Car Club in Toronto, Ontario, Canada. Racing Alternating Sun. nites October - April. 6 p.m. to 10 p.m. Scott Reynolds 298-4941 or Gary Joi 421-9061.

CENTRAL MARYLAND ELECTRIC RACING CLUB

Middletown Park, Middletown, Maryland. 100' x 50' dirt oval, 14' wide lanes, 2' banked turns, drivers stand, no electricity available, open to the public. Mark Coats (301) 694-7420.

HOBBIES PLUS & R/C RACEWAY

1/10 & 1/12 scale indoor carpet racing. Tri-Oval & on-road, 60+ pit areas w/ electric, hobby shop, 7 days, open practice. Also Sun. A.M. 1/10 off-road dirt (150 x 70) and 1/8 gas off-road. 650 Amherst Street, Nashua, NH 03063, (603) 882-9200.

CARPETBURNERS R/C CLUB

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

CAPITOL DISTRICT R/C OUTLAWS

4 Cell Carpet Cars. NASCAR bodies,

Oval and Road Course. Every Friday Night at 7:30 p.m. October to the End of April. For further info contact Capitol District R/C Outlaws, 223 Fourth St., Scotta, NY 12302, or Sam Roberts (518) 374-3801.

JAY'S R/C

5018 14th Street West, Bradenton, FL 34702, (813) 756-6393, 758-2565, 746-8649. AMB Computerized lap counting. Indoor carpet oval and road course.

— SPECIAL EVENTS —

ROAR NATIONALS SUPER TOUR

Dirt Oval

May 10-13 - Euless, TX
Tom Mix (817) 595-1189

Paved Oval

May 24-27 - Snellville, GA
Roy Kelley - (404) 985-1448

1/10 & 1/12 On-Road

June 14-24 - Plano, TX
Dean Densmore - (214) 519-0324

1/10 Off-Road

July 19-29 - Livermore, CA
Tom Welding, Jr. - (415) 443-5828

1/8 Gas

Aug. 30-Sept. 3 - Dallas, TX
Joe Sullivan (214) 238-0929

NORRCA NATIONALS

1/10 Off-Road

July 6-8 - Dallas, TX
Norm's R/C Hobbies
(214) 357-3453 or
(714) 981-9641

Pavement Road Course

June 1-3rd - Bakersfield, CA
Racers Haven
(805) 835-0441 or
(714) 981-9641

SPEEDWORKS 1990 SPORTSMAN TRIAD CUP SERIES

SEMROCC

July 6, 7, & 8
Sterling Heights, MI
(313) 644-0669

RANCH PIT SHOP

October 5, 6 & 7
Pomona, CA
(714) 623-1506

□CP

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THE ORIGINAL & MOST PRESTIGIOUS DIRT OVAL RACE IN AMERICA!**

JUNE 7-10, 1990

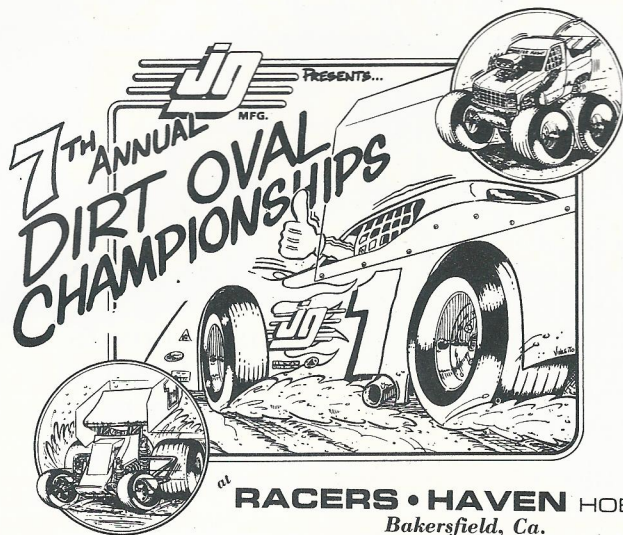
**At Racer's Haven
Bakersfield, CA**

**1/10 Scale Oval FULL BODIES, Outlaw Sprint Cars &
2WD & 4WD Modified Trucks**

Thursday Practice - Friday 3 Rounds of Qualifying
Saturday Concours, Qualifying 3 Rounds, Best Engineered
Sunday Trophy Dash, TQ Run, Mains
ROAR Membership Required

2WD Mod. - 4WD Mod. - Outlaw Sprint Car
2WD Mod. Monster Truck - 4WD Mod. Monster Truck

- Everyone runs in a main - 1st, 2nd, 3rd place trophies
- Running Concours - 1st place trophies - Sprint Car/Full Bodies/Trucks
- Trophy Dash - Fastest four/two minutes - 1st place trophy
- TQ Run - TQ's in each class will run against each other, with handicap start - 4 minutes - 1st place trophy
- Best Engineered - 1st place trophies - Sprint Car/Full Bodies/Trucks
- All A Main drivers will trophy
- Custom Jackets for A Main Winners - Custom hat pins to all entries.
- Overnight Camping at track NO CHARGE
- Total computerized scoring
- Host Hotel: TravelLodge South, 3620 Wible, Racer Discount, (805) 833-1000.



RACERS • HAVEN HOBBIES
Bakersfield, Ca.

ROAR SANCTION # 1-90-3

OVAL RULES

1. American cars only. Outlaw Stock ASA - NDRA Grand National Bodies Only. Handmade or Prototype okay. Spoilers and side dams no limit.
2. 4 minute heats - 6 heats per class
3. All A Mains are twin (2) 4 minute mains to determine winner.
4. Sprint Car Class - 2WD modified motors. 7 cell, wings, guts! Top wing 6" x 6" max. Sides 4 1/2" x 6 1/2" max:
5. Sprint car minimum weight 3 1/2 lbs. steel or aluminum cage, nerfs, rear bumper, headers may be lexan, top wing mandatory, front wing optional.
6. 2WD Modified minimum weight 3 1/4 lbs. and 4WD Modified minimum 3 1/2 lbs.
7. Maximum wheel width all classes 9 7/8".
8. 2WD and 4WD Modified cars, no CanAm or Off-Road type wings.
9. 2WD and 4WD Modified cars, rear spoiler must be attached to extreme rear of car BODY. Side dams no limit.

MODIFIED 2WD & 4WD MONSTER TRUCK CLASS RULES

1. Wheels: Minimum diameter of 2.2" Width minimum 2". Maximum Total Truck Width of 13".
2. Tires: Minimum diamter of 3 1/2".
3. Shocks: No limitation.
4. Speed Control: Any speed control may be used.
5. Body & Chassis: any chassis may be used. Truck Bodies Only.
6. Steering: No limits.
7. Weight: Minimum 4 lbs.
8. Batteries: Sub "C" type with 7 cells maximum.
9. Motor: Modified class as designated in "Modified Class" rules.
10. Side Fins & Wing: Wings are not allowed. Side dams max. height 2 1/2" from rear of cab back, extending no more than 2 1/2" behind bed.
11. Spoiler: A spoiler may be used off the rear of the body with a maximum height of 2 1/2".
12. Drive Train: 2WD rear wheel drive only. 4WD class must be 4WD.

PRIZES! PRIZES! PRIZES! - Out of State - Longest Haul - Prize - Dremel Tool Kit

Race Prizes donated by the following: MIP, McAllister, Speed/Sport, Associated, BoLink, RPS Dist., Parma, Cox, Radio Controlled Hobbies, Novak, ProLine, RevTech, Reedy Modifieds, Team Checkpoint, MRP, JG Mfg., RacePrep, Premier Designs, Twister, Robinson Racing Products, Custom Works R/C, Dan's R/C

RACE TO BE HELD AT: RACERS HAVEN - 7401 White Lane - Bakersfield, CA 93309 - 1-805-835-0443 - 1-805-835-0441

- Limit First 300 Entry Entries (Add \$5 per class for late entries after deadline)
- Qualifying Heats start at 9 a.m. Fri., June 8, 1990
- Sunday, June 10, 1990 - All main events 10 a.m. • Cars will be teched • Concours & Best Engineered, Saturday, June 9, 1990 9 a.m.

**FREE T-SHIRT WITH ENTRY - ENTRY FEE \$25.00 - EACH ADDITIONAL CLASS \$15.00 - Make Check Payable to: JG MFG - Deadline for Entries June 1, 1990
YOU CAN ENTER THREE CLASSES ONLY - ABSOLUTELY NO ENTRY FEE REFUNDS**

Name _____

Address _____

City, State/Country, Zip _____

Class: Outlaw Sprint Car _____ 2WD Modified _____ 4WD Modified _____ 2WD Mod. Monster Truck _____ 4WD Mod. Monster Truck _____

Frequencies: (Color) 1. _____ 2. _____ 3. _____ Radio: _____

Type of Car: (Make) _____ Motor: _____ Sponsor(s) _____

Mail to: JG MFG., P. O. BOX 6014, WHITTIER, CA 90609-6014

For more information call Racers Haven (805) 835-0443, (805) 835-0441 or JG Mfg. (213) 947-1206

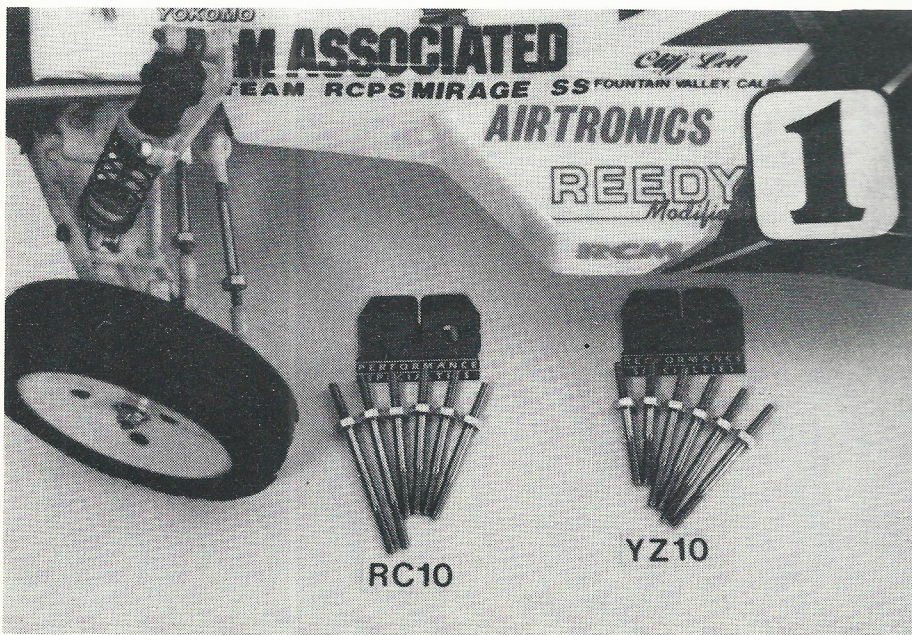
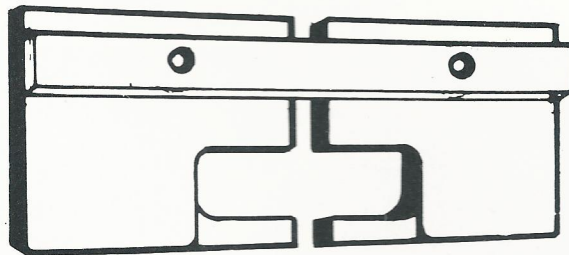
Lowest qualifiers must be able to change bands.

NEW PRODUCTS

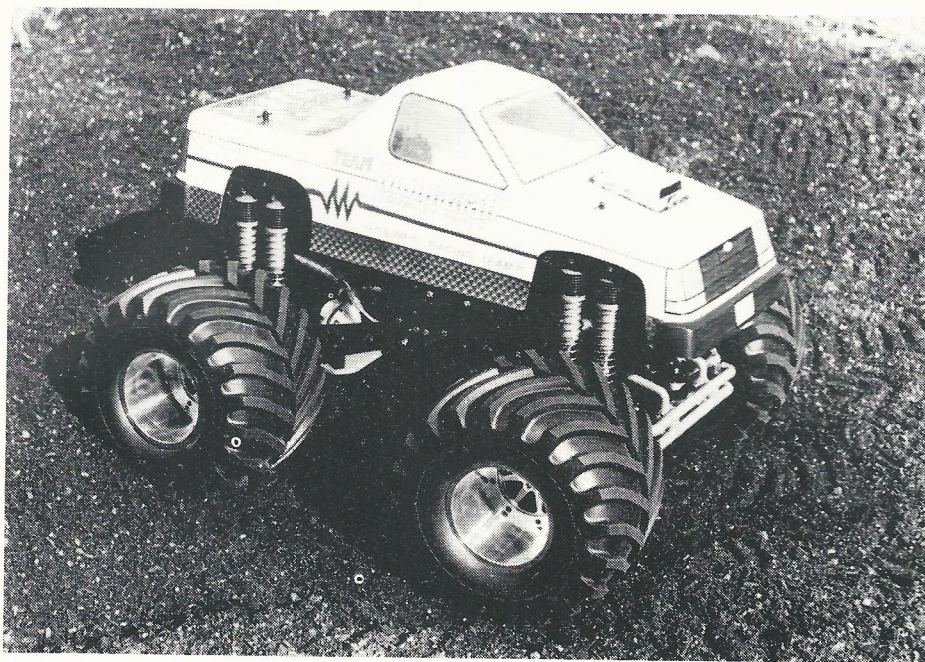


#9002 Team Trinity Shirt. This attractive and colorful T-Shirt is something you must have. You will bring attention to yourself when wearing Trinity. S, M, L, XL, XXL, XXXL. \$12.50 - #0420 Speedworks T-Shirt. This fluorescent colored shirt is the colors of the 90s. The two-sided t-shirt is something everyone would love to have! S, M, L, XL, XXL, XXXL. \$12.50. Trinity Products, 1901 East Linden Ave., NJ 07036, (201) 862-1705-08, FAX: (201) 862-6875.

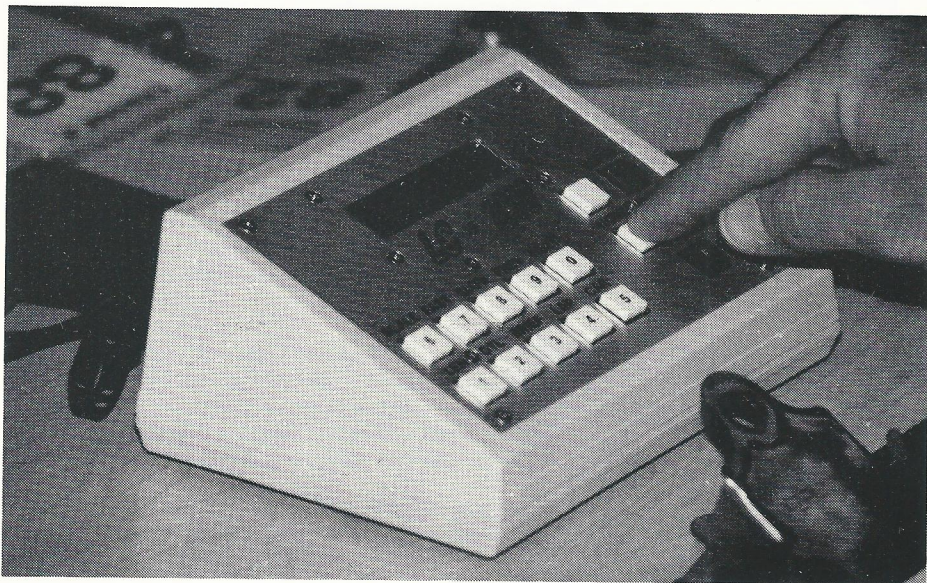
NOW!!! Get the same brush alignment on your stock motors that modified racers have enjoyed for years. The "Brush Hood Alignment Tool" lets you "Blue Print" the alignment of your stock motors brush hoods to exactly 180 degree apart. For the first time you can adjust your stock motors and bring them into the same specs that the engineers designed them to run. \$39.95. Fast Racing Products, 4320 Puddelock Rd., Prince George, VA 23875, (804) 732-1210.



RC10 and YZ10 Titanium Turnbuckle Sets - These turnbuckles are made of the strongest and lightest titanium available. Increase the reliability of your car while shedding some weight in the process. Part #710 (RC10) and #750 (YZ10). RC Performance Specialties, 18312 Gifford St., Fountain Valley, CA 92708, Phone (714) 962-6928, Fax (714) 962-4089.



The TUFF-E-NUFF Ford Ranger Racing Truck Body (#D190 Retail \$19.98). The TUFF-E-NUFF lexan body is designed to fit most 1/10 scale monster trucks, off-road cars and on-road cars. The TUFF-E-NUFF racing truck body is shown on the Clodbuster 1/10 scale monster truck. TUFF-E-NUFF features a swept back front end, supercharger with scoop, sleek cab and narrow body. The TUFF-E-NUFF is painted white with blue LASERFIRE (D200) side panels and bed cover. Red STARFIRE (D260) shockwaves, Sky Blue INSTANT TINT (D811) tinted windows, black bumpers and grill and a silver supercharger and scoop. Dahm's Racing Bodies, P. O. Box 360, Cotati, CA 94931-0360. (707) 792-1316.



The future is here with the new LC-1000 Race Management System. The race to develop the finest lap counting system available at an affordable price for both clubs and competition racing is over and Neron Associates has won hands down!!! Over three years ago Neron Associates introduced the concept of individual hand held lap count actuators interfaced with an inexpensive computer system to provide accurate racing results. You know that system as the RACE DIRECTOR and since its introduction our systems have been purchased by tracks and clubs around the country and in Canada. Based on our knowledge of R/C car racing, software and hardware designs and information obtained by speaking with so many of you, Neron is pleased to introduce the next generation in R/C car lap counting, the LC-1000. Contact Neron Associates, P. O. Box 348, Germantown, MD 20875, (301) 972-0397.

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Tony Neisinger wins the 1989 Futaba Grand Prix with Magnum.

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

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

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

MOVE INTO THE WINNERS CIRCLE

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



2PB/Sport

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



2PBKA/Junior



2PD/AM

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



3PB/PCM1024



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.

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

THE ULTIMATE MAGNUM

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

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

MAGNUM
Futaba

Futaba Corporation of America
Four Studebaker, Irvine, CA 92718

3 Steps to a great body

Parma International is the undisputed world leader in vacuum-formed lexan bodies, and for good reason. We work very hard to give demanding R/C enthusiasts like yourself what they ask for; **nothing but the best!**

For over 16 years, racers and hobbyists have trusted the quality and integrity of Parma's world class lexan car and truck bodies. Our "classic" body designs are unsurpassed in detail and clarity. Our On-Road, Off-Road, and new Pro Series wind tunnel tested racing shells are proven winners.

1 A body shell begins in Parma's R&D Department where technicians monitor new trends in real car automotive design and technology. We go to great lengths to collect data and reference materials on the very latest designs. Often, this means traveling to races, car shows, and museums to gather photographs of prototypes and classics. Then, skilled draftsmen use computerized design tools to translate the real car photos into accurate, scale reproductions. Next, the drawings are discussed and critiqued to make certain that the reproduction has maintained the integrity and "presence" of the original. If changes must be made, the drawings are resubmitted for another review. This kind of critical comparison should be expected from a company who stakes their reputation on producing the **best lexan bodies in the world.**

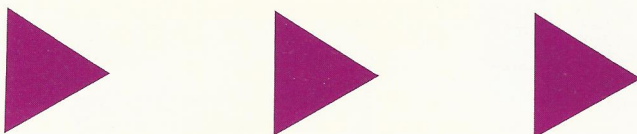
2 Once the drawings have met our specs, they go into the Mold Department for the most important step. This is where qualified master carvers using space age materials, turn the drawings into a 3-dimensional mold. Once the carving is complete, it too is evaluated for shape and detail. Occasionally minor corrections are necessary to be certain the detail will not be lost in the vacuum-forming process.

Before the mold is cast, the Parma Pro Series racing bodies are wind tunnel tested. Often radical changes may be made to these very special bodies to give today's competitive racer the advantage of maximum aerodynamics.

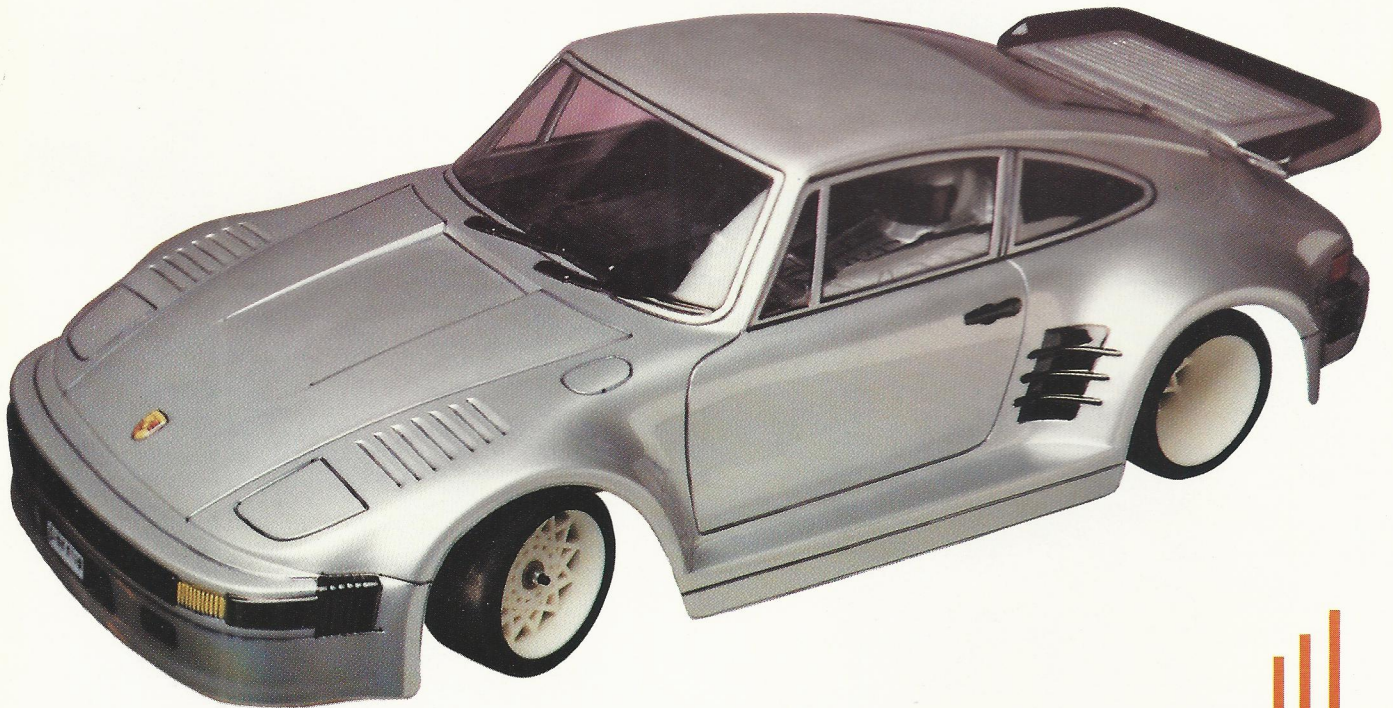
3 Once the carving meets our strict guidelines, it goes through a secret three step process. The result is a final copy of the mold for production purposes. But the approval process does not end here. Now

sample bodies are pulled and inspected for clarity and detail. If the detail is not reproducing well, the mold goes back for additional changes. Only when the mold is perfect can it go into production. But you would expect that from the **world's best lexan body manufacturer.**

What does all this mean to you? It means that when you get to the track for serious racing or concours competition, you can trust Parma bodies to perform and look great. Next time you pick up a body, choose Parma and see for yourself. When we say we make the best vacuum-formed, lexan bodies in the world . . . **We're not just sucking air.**



When We Say We Make The Best Vacuum-Formed Bodies In The World ...We're Not "Just Sucking Air"



#10307 \$19.00

A brand new addition to Parma's extensive line of lexan body shells is the Porsche 911 Slant Nose. Molded in crystal clear lexan, this 1/10 scale reproduction has beautiful detail and comes complete with wing.



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Steer clear

The Clod Buster. The monster 4-wheel drive, 4-WHEEL STEERING R/C pickup from MRC-Tamiya.

The first thing that catches your eye are those mammoth tires. Any R/C truck that sits on tires nearly 6½" high will attract your attention.

But the second thing...the most exciting thing to hit R/C yet...is the steering system. Four wheel steering. And only Tamiya has the guts and foresight to bring this technology to you now.

Now, 4 x 4 x 4. 4-wheel drive...and 4-wheel steering

Never before could you get so many advanced features in one package. Like dual motors for turf-tearing power. Motors that can be switched to run in parallel for power climbing...or in a series for endurance driving. These motors are no babies, either. Our 540 type motors alone set records for speed and torque. So imagine harnessing two of these brutes together! Each motor powers a set of wheels shod with huge, crusher tires. So now you can run over even the largest obstacles, or crush

them in your dust. Add new excitement to your driving. Almost nothing will stand in your way.

4-wheel steering...a new direction in R/C

You might expect a huge truck like this to be a little clumsy in the tight spots, right? Wrong! The all new four wheel steering lets the Clod Buster navigate the narrowest ditches, squeeze around fallen trees, maneuver on just about any terrain... wet or dry.

Heavy duty suspension

We've complemented this sophisticated new steering system with a rugged link-style single trailing arm suspension, with rigid

axles both in front and rear. Then we damped it with not four but eight heavy duty coil spring shock units. If you like, upgrade them later to oil-filled units.

The Clod Buster's engineering uprights are also super heavy duty, measuring more than a full 1½" in diameter. Now that's tough.

See the 4-Wheel Steering Clod Buster at your hobby shop, now... and let the competition steer clear.



Model Rectifier Corporation
2500 Woodbridge Avenue
Edison, NJ 08817

(This is no illusion. It's an actual photo of the Clod Buster climbing over 1/10 scale off-road cars. Note the size difference.)

