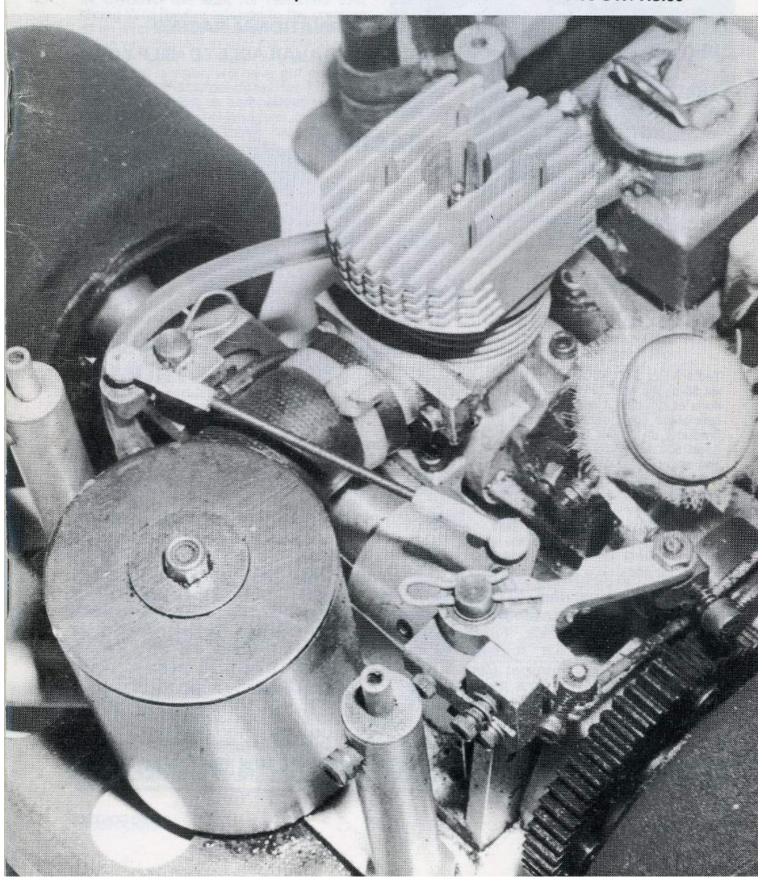
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## MODEL CARS

Editor: "Dickie"
Laidlaw-Dickson

### THE ELITIST SOCIETY

IN URGING the case for restricted cost racing Wes Raynor referred to the creation of an elitist group amongst r/c drivers of those with the skill to win, the time to race, and the cash to make it possible. Of course, he is right, we have got an elitist group, and thank goodness for it! As in every other sport or competitive activity, there are some who lead and some who follow. Without this group progress with new ideas, development of better products, and any hope of providing a valuable export would be hampered. It works all along the line too; down in Havant PB are producing more and more cars to feed an avid world market: in Hertford AMPS are snowed under with orders for differentials, plus many of the other parts they make, including bits and pieces for numerous foreign kit makers who have come where they know that the latest techniques will be followed in supplying their needs. In Leicester the two electric car producers Mardave and Lectricar are working all out to provide their kits, and yet both companies have spent time and effort in developing new and better products. Watch out for announcements from both these firms.

The word is certainly getting round that British is Best! I started this mag with a picture of me waving the flag now nearly two years ago, and I intend to go on waving it even though it may be getting an old-fashioned way of starting races.

### **ELECTRIC STOCK CARS?**

Over a year ago I was shown a very hush-hush prototype for a 1/12th scale electric stock car and sworn to secrecy. I am still so sworn as to who and what, but can publish a second car built independently by Airedale Models who are so intimately connected with the Keighley Club, the big stock car group in the North.



"Little Brother" Bob Horrell's 1/12th scale electric stock car posed beside larger %th stock car . . . Next phase?

Bob Horrell who sent me the picture posed by the side of a standard size stocker, gives no details of performance and ability to stand hard knocks, but there it is looking very pretty, and perhaps another good idea for the indoor racing season.

#### RESTRICTED COST RACING

As a BRCA sponsored race form restricted cost racing has not been accepted by members this year. At Newbridge this class has been consistently raced, but with a falling off in the least expensive group, so that numbers make it hardly worth while to run. Everyone is going up into the middle or even more into the unrestricted range. This perhaps is because not enough publicity is given to events in this restricted range. Yet, we have some heartcrys in our Letters this issue urging encouragement to it lest rising costs of racing drive people away from the hobby, or to Stox where cost restrictions have always obtained. Others, I find, are embracing electric r/c racing as the less costly alternative, where, against all expectations, a good driver with a standard car seems as likely to win as anyone with a super best in the world - or most expensive anyway - outfit, I should

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Smiling Tom Martin presents trophies to 500 Mile Record Holders Steve White and Paul Padgin which were given by the Wombwell Sporting Association in appreciation of their effort

know, my Jerobee goes beautifully at home on a nice asphalt surface, but, bless me, I can never get it anywhere when I make a public appearance. Meanwhile, at Pontins for example, out of the box Mardaves win from ditto Lectricars, . . so once again aren't British cars wonderful!

### BRCA NEWS LETTER AND MATTERS RELATING

New Circuit News Editor Brian De Boo has certainly got off to a good start with his first number, appropriately No. 50. It will naturally concentrate on matters dear to the heart of the BRCA racing membership with plenty of nice pictures of people and results to a degree that Radio Control Model Cars cannot promise to emulate because of its wider, world-wider I might say, coverage. If it continues in this new vein, then happily my columns will be freer to devote to the things so many people ask for such as more technical articles, more on making starters, more on events far away, more on electrics. I would love to go monthly and this must continue to be the aim . . . What do readers think about it?

### THE WORLD ENDURANCE RECORD

One of Brian De Boo's pictures that was squeezed out of last issue was a picture of

Paul Padgin and Steve White receiving awards from Tom Martin in respect of their 500 mile and 24-hour record efforts. I hear that other attempts may be made during 1979 so that this may well become a regular part of our r/c car activities. There is also a rumour of a twenty-four hour team race to be run in New Year.

#### THE COVER PICTURE

This is the first time we have devoted our cover to a single car detail. I wonder how many readers have spotted the difference straight away? Have they noticed a curious addition? Yes, there it is a second disc brake linked to the first. This should overcome the tendency which has been noticed for uneven braking when running with a differential. Car is Robin Ellis's and thus equipped it ran in a quite modest little club race at Leyton Raceway on a very wet occasion. Robin is one of the AMPS engineers and this is the sort of thing that happens nearly every month with someone or other trying out something new. Some of the ideas work: some do not, perhaps because they are unworkable, perhaps because they are before their time and will be of use as other technologies develop. After all ballet dancers had tights long before the general public could buy them in the market for 20p a pair thanks to a new technique.

#### NURNBERG TOY FAIR

I shall be going to the German Toy Fair, where last year r/c cars stole the show. I do not know what is in store yet for 1979, but there will certainly be some 'new boys' on parade. First reports will be in our next issue with pictures and descriptions.

## **CLUB & TRACK REVIEW**

British Radio Electric Car Assn. Secretary: Tony Devenport 200 Windmill Road, Coventry. CV6 7BE.

FORMATION of a new 1/12th scale Electric Association must be the news feature of the issue. In principle the new group will seek affiliation with the British Radio Car Association, and may well follow the general spirit of ROAR adopted rules with such reservations as they may fancy. Meanwhile BRCA has duly changed its constitution (if not its spots) to take electric racing under a somewhat paternalistic wing. I feel rather like the author of "1066 and All That" who said of the jury system "Barons will be tried by Barons who would understand." (see page 15).

Yorkshire R/C Model Car Racing Club

The club are organising an ambitious 1/12th electric championship meeting on Sunday March 11th at the prestigious Richard Dunn Sports Centre, Bradford. Practice will be Saturday afternoon March 10th (1 - 7pm) and Sunday morning (9 -10am). Open to individual and team entries to maximum number of 72 (first come first served). Entry Fee £1.50 individual, £4.50 team (3 members). Three finals for Expert, Amateur and Novice with awards for all finalists, plus Concours award and team award. Special appeal must be for a family outing with the Richard Dunn offering all sorts of attractions from a six-bed solarium through to a lagoon shaped indoor swimming pool, plus table tennis, food, drink. Good luck. Organising official: C. Senior, 23 Norman Avenue, Eccleshill, Bradford, West Yorks. BD2 2LY.

Wirral Model Car Club Secretary: Mike Rimmer 11 Norton Road West Kirby, Merseyside

Secretary writes: Contrary to rumours circulating in the Merseyside area our club is still operative at our West Kirby track, next to the West Kirby FC field. The track is 176 yds long, surfaced in tarmac. We have access to toilets and showers on site. Interest is mainly in Formula and GT, types ranging from Mardave to PB International. It is proposed to begin racing 1/12th scale if enough people are found to make it a worthwhile proposition. Anyone interested in 1/12th or 1/8th scale should contact me at the above address or come along to the circuit on Sunday afternoons.

Boston Radio Car Club Secretary: M. Green 59 Brand End Road Butterwick Nr Boston, Lincs.

Formerly Boston Modelling Club (Car Section) this is now operating as a wholly car club and interested would-be members are invited to contact secretary as above. Sunday sees them racing on the car park behind the Bus Station, with a current membership of over twenty burning with a desire to build their own track.

Clyde Model Car Club Secretary: N. D. Whitfield 69 Strathblane Road Milngavie. (Tel. 041-956-1786) Glasgow. G62 8HH

Not quite a new club, but a reformed exslot car club from a decade ago. The four founding members of the new club are a long way back in the slot car days. Now concentrating on 1/12th electric. Racing takes place in the Games Hall of Clydebank High School on Tuesday evenings from 7.30 to 10.00pm and they would be pleased to welcome new members.

Derby R/C Model Car Club Secretary: G. M. Lowndes 358 Sinfin Lane (Tel. 26741) Sinfin Moor Est Derby, DE2 9LT

Please note change of secretary. The club is now in its second year and is affiliated to the Derby Sports Centre on whose disused car park the club circuit is situated. Meetings take place very Saturday afternoon. Arrangements have been made to run at Medows public car park at Notts Road Industrial Estate, Derby, for Sunday and evening. The club is now running 1/12th scale electric cars at a room inside the Sports Centre every last Friday of the month. New members very welcome and should contact secretary.

Midland Electric Radio Car Club Secretary: George Godfrey 174 Cedar Road Earl Shilton Leicester, LE9 7HG

The one hundred member Midland ERCC had its first AGM recently and elected a five man committee to organise future activities. Committee comprises Les Pipe, George Godfrey, Alan Blakeman, Chas Hickman and Ken Cornish. First evidence of their activities, apart from the

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continuing Monday and Thursday meetings at Countesthorpe College and Barwell Liberal Club respectively, is planned for Sunday 18th February at Hinckley Leisure Centre, when a Leicestershire Scale Day will be held. There will be day long 1/12th electric car racing from midday to 10pm plus a Concours d'Elegance for 1/8th scale static cars and 1/12th static and racing cars with trophies for the best three. Racing is strictly pre-entry via Les Pipe 38 Torridon Way Hinckley. There will be prizes for all six drivers who reach the final. Public will be charged 20p entry (10p children) and this will also entitle spectators to visit the scale boat regatta taking place at the same time on the centre's three swimming pools.

Meanwhile the MERCC winter championships continue with the second round on 23rd November attracting no less than 54 cars racing. Twenty-seven six-car heats were run giving everyone three four minute runs. In a closely run event a final was run off to decide the winner from the six top drivers, when Les Pipe came first. followed by Tony Davenport, Chris Taylor, Dave Andrews, Key Leatherland and Alan Blakeman, with seventh man Bill Maisev.

Liverpool Tigers MCC Chairman: P. M. Noone 18 Radstock Road Elm Park Liverpool 6

In a very full season Chairman Pat Noone has sent pictures of the club winners for 1978 together with some of the officials. This must be about the most experienced mixture of members in any club fullsize wise! Pat is ex-formula Ford Driver; Dave Hastings ex-rally driver; Frank Fazackerley ex-motor cycle road racer. Charles Williams ex-trials bike star - he was quite good so Pat says (he was indeed, Ed.!) So competitive is the club spirit that even the wives got into the mood. though not really a race, three of them are set on producing their own miniatures in the next few months!

Northavon Model Auto Club

Mark Burrell, who is the electric maestro and organiser of that section of the club has sent a very detailed round by round account of the club championship starting in May and ending on 22nd October. After a slow start young Mark had a ding-dong struggle with Pete Farrant for the lead. Round points were awarded fullsize fashion with 1st getting 9, then dropping down to 6, 4, 3, 2, 1 for the rest of the match. In the end Pete and Mike tied with 30 points each taking their best four rounds, and it was necessary to use a fifth round score as a tie-breaker.

East Devon Radio Control Club Comp. Secretary: Giles Jackson 78 Exeter Road Exmouth. Devon

Nice bouquet from Giles: "I must congratulate you on being the first paid-up member of the new electric car association. I think that the Leicester meeting proved once and for all that Issue No. 7 was right and T. Martin and the BRCA who surely have been dragging their feet were wrong. Certainly everyone I spoke to at the meeting felt this to be the case." Thanks; people coming up from as far away as Exeter must surely have felt the need. More important is the announcement that the club will be presenting a National Open Meeting in Exeter on Sunday, 4th February for 1/12th electric cars with individual, team and Concours entries. Rules to modified ROAR '77 as agreed at Leicester. Venue St Georges Hall, Fore Street, Exeter - a modern, spacious and well-lit ballroom. Refreshments from 10am, licensed bar 12-2; 200 car park directly behind the hall. Sports/GT or Saloon, bodies: four five minute heats, best three to count. Fastest two go into final, next twelve go into two semi-finals with fastest two from each into final. Teams of three with best overall results (3 heats) to win. Entry Fee £1.50 individual, £4.50 team. Note: Bristol 11/2 hours: Birmingham 21/2 hrs: Leicester 31/4 hrs: London ditto: Oxford 21/4 hrs: maniacs get there faster.

North East (Radio Control) Car Club Secretary: J. W. Clark 19 Oswald Terrace Gateshead. (Tel. Gateshead 771132) Tyne & Wear, NE8 1XU

The club was founded in December 1977 with six members and has now completed its first year with a tally of thirty-three members. At present racing takes place on a local school yard (playground to southerners) with a marked out track which includes a forty yard straight. A series of six Sports/GT meetings have been run for a trophy presented by Bill Gordon Models. Overall winner was Dennis Trowbridge from Middlesbrough who will hold the trophy for a year, Approaches have been made to the local sports council for a grant with a view to the construction of a permanent track.

more on page 12

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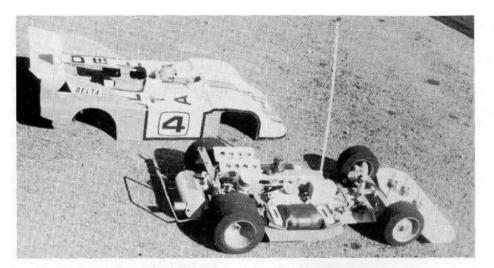
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# **DELTA**SUPER J

This is the World Record Delta Super J (see page 48). Note latest Delta silencer and new paper airfilter; also "side bumpers" and third body post at front.

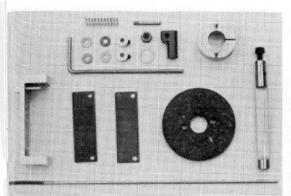
THE Delta Super J is a connoisseur's car; don't make any mistake about that. Ideally, the builder should have done his homework on the earlier car now designated the Panther (as I have) when the subtle improvements would be more readily noticed. However, since this is an unlikely state for most of us I will try to emphasise just those special points.

Starting with the hard bit first, as I thought, I tackled the installation of the disc brake gear. In common with most manufacturers now on both side of the Atlantic Delta have gone for a fibre disc with steel brake plates instead of the earlier steel disc and fibre plates. Initially the fitting sheet looked formidable - with drill this and drill that all over the place. But my clutch hanger was already drilled to receive the brake housing. Only fitting requirement was that the holes were countersunk but were intended to receive caphead screws. Instruction says drill out one-eighth deep; what is required is a 5/16 in endmill to counterbore the holes, or regrind a drill to do the job. I also followed the instruction to re-locate the pod space rod though I still can't see why it was necessary.

Before doing this job I had actually read all the building instructions through and spent quite a bit of time on the exploded views provided. First useful tip was to use Scotchbrite abrasive pad for polishing the aluminium parts. Our local supermarket actually sells it at two pads for 25p and I can highly recommend it. Nearly all the other tools listed I already possess or had obtained for the earlier Delta. All chassis screws are flush fitting aircraft type and require the special HTD788 bit since the slot is curved in depth and sweeps out in plan like an ice-skate blade. Any ¼ in square driver handle will fit (mine is exlawnmower tool). These enable the underside of chassis to be absolutely smooth — a great advantage when riding over the car in front!

Next comes the bit that rather shocked me before. Cut down the crankshaft of your engine, in my case the rather nice K & B recently tested which has been kindly "breathed upon" a little by a skilled friend. When trimmed it offers up only a couple of threads, but never mind, nothing is going to be screwed on it; the flywheel is an interference fit on the crankshaft. It is forced open by backing the clamp screw against the clampscrew safety pin. This all takes up several drawings and lots of words but is the easiest thing to put together.

New to the Delta is the provision of normal type engine blocks. But they go a step further by providing an engine adjust plate on which the engine blocks are first mounted. The engine is then attached and capscrews installed with Loctite. Next the



adjust plate is removed since it fits under the chassis. Note that the engine blocks may have to be threaded right through (mine stopped several threads short of the screw length) since the flush screws are not intended to go right through. Object of the exercise is to prevent preloading of the engine lugs and possible breakage since the flush screws are extremely positive and will always strive to centre themselves in their countersinks.

Moving forward next new item is the plastic chassis stiffener which is self-tapped to chassis and forms forward mount for radio plate. Servo saver is the well tried Delta design and common pattern these days for most of them. Front suspension assembly again contains changes. Steering blocks are no longer machined from the solid but are now very well finished castings though to the same pattern. Kingpin bushings are no longer required — kingpins go straight in. Stub

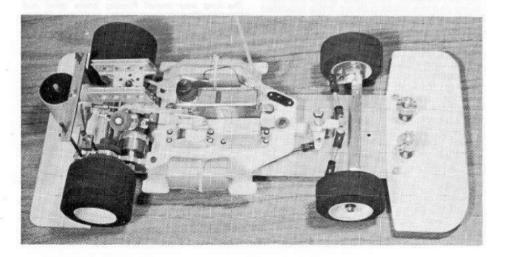
Component parts of the robust Delta disc brake outfit.

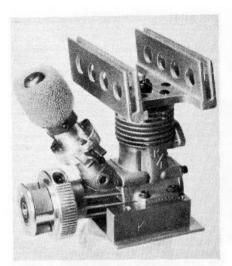
axles no longer need be ground back to avoid protruding when locknut screwed home — they are just the right length. Standard fitting for wheel hubs are nylon bearings — a pair for each hub. This is really adequate, wheels spin sweetly. There is the option of ballbearings for those who consider them desirable but try the nylon bearing first and then decide. The steering assembly connects up with ball joints and drag links. These housings can be snapped on and off the balls without damage (instructions have omitted the "out" part!)

Back to the engine. Clutch has the latest rulon flyweights — three in number. Assembly is simple; just tap the pins through the thick side, trapping the flyweights and taking care not to put pressure unduly on the thin part receiving the pins. I have three extra pins in case I lost any on the floor — thank you Bill Campbell! These flyweights (shoes) can be worked upon to provide settings for high medium or low traction. The en-

high medium or low traction. The enthusiast will have a spare set or two to fit as need arises since the breakdown of the set-up is ridiculously easy and quick (those extra pins will come in useful). Pinion gear is secured in place with a setscrew and can be changed in a flash. Even allowing for a bit of adhesion with a "soft" Loctite change could be made in less than a minute.

Delta Super J duly put together. Neat "radio bags" in red vinyl make a neat job. Rear bumper as shown is temporary — an ally plate with wire bumper is the intention.





K & B with Delta slide carb and filter fitted plus the Delta heatsink bolted down on machined original head. Neat interference clutch/flywheel with the three rulon shoes.

This time with a genuine Delta slide valve carb and the new everywhere" Delta fuel tank assembly is very satisfactory. I also have the peculiar Delta heatsink. Just like a bit of Dexion I thought until I really looked it over. I am converted and will never - well, hardly ever - use any other. It overcomes all the shortcomings of press over the top heatsinks and seems more robust than machined "bigheads". An additional fitting is required to replace the original finned head. For the K & B it is a tiny little thing and the holding down bolts provided go outside it. I did what anyone with the facility will doubtless do, I machined off the fins on the K & B head in less than ten minutes. Just chuck in the three-jaw, fair speed, and very nearly any tool will take off the fins in double quick time. The bolts now go through the cut down head. No stronger or better I suppose but more pleasing to me. I also save the cost of the extra bit and have more to spend on glow plugs or what have you . . .

No platform type rear bumper is provided, though there is provision for fitting a stout wire bumper which can also serve as a lifting handle for marshals instead of grabbing the wing. But with an intention of fitting a dustbin silencer I need a platform to put it on, so an ally extension is a must. This can be fitted without spoiling the flat nature of the underside of chassis. Note here that engine adjust plate

is the only obstruction here so it is worth while to chamfer the edges of this bit to give the slipperiest possible underside.

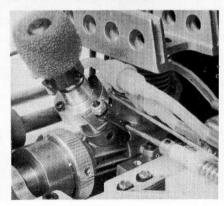
Pictured here is the very very latest Super J fresh from its triumphs in Florida with a new 24-hour record to show for its pains. This has the latest prototype 80db muffler (silencer) fitted as will be needed this season as well as a new paper-type air filter prototype. Silencer fits between the rear hangers and may well be the best reason for changing location of strengthening rod noted above. The record car is also fitted with radio plate bumpers offered as an optional extra. Note too, that an additional front body retaining bolt has been fitted using the hole provided on the chassis plate.

In fitting body advice is given that front bumper should be shaped exactly to receive body, in my case the ever popular Porsche 30KL. This goes snugly round and should have a longer than usual life. The record car had the front end doubled up with an extra thickness of body nose.

What else should we say about the Super J? There are the stout heavy duty servo arms (wheels they call them) and I particularly like the little red vinyl covers that go over receiver and battery before lashing them on the radio plate. So much better than the plastic bags the kit came in! Then there is the Delta antenna with nylon tube and bolt. Pricey, but worth it—it does its job. I may never do justice to this outfit but, by gum, this season I'm going to have a go, old age and all!

This write-up has been cut a bit to allow room for report of the new Delta World Record Run at Miami on pages 48/49.

The long way round! Routing brake servo rod between filter and crankcase enables a longer fulcrum arm to be employed — but don't press the fuel leads onto the hot crankcase!



RADIO CONTROL



#### **BRCA ANNUAL GENERAL MEETING**

SOME ninety members sat down to lunch at the delightful Blunsdon House Hotel near Swindon on December 3rd for the BRCA AGM, and very nearly as many more made up the attendance for the meeting in the hall. With a very extensive agenda, chairman Keith Plested worked swiftly through the routine affairs, including apologies for absence (where Fred Livesey proved an absentee through mechanical failure en route, so we still do not know what a saloon car is!) This being his task to so define for racing purposes during the year, as "matters arising" from last year's meeting established.

### Constitutional Changes,

It was quickly agreed that constitution be altered to enable the association to promote all forms of radio controlled model car racing; to appoint an assistant, secretary to cater for 1/12th scale electric car racing; to appoint a similar assistant to cover 1/8th scale, to appoint a Vice Chairman, to appoint a National Handicapper, to require a two-thirds majority at the AGM for any future changes in the constitution or construction rules.

### Reports and Elections

Chairman's report was notable for the information that all European GPs had been attended with the exception of Sweden (this too would doubtless have been visited if a ship booking could have been arranged) and that British cars, and in most cases British drivers too, had gained places at all of them, frequently top places, plus extras like the World Cup at Monaco. British racing prestige was therefore very high all over Europe. Secretary/Treasurers report was brief and merely presented the balance sheet, which was in a very healthy state since Keith Plested had managed to produce the annual Members' Handbook at no cost to the association thanks to trade advertisement support, and money allocated to this end was unspent.

Election of officers confirmed Keith Plested as Chairman and Tom Martin as Secretary. New officers were Vice Chairman Paul Padgin; Assistant Secretary 1/12th scale electric, Mike Newman, Yorkshire R/C Car Club: Assistant Secretary 1/8 scale Tom Martin (Yes! Tom Martin who will be assisting himself in this dual role like Mrs May in a "A Sister to Assist her"); National Handicapper, Jeff Lindstrom, Yorkshire R/C Car Club; The regional committee was re-elected en bloc, plus a provision also passed to enlarge the committee, which enables additional area members to be brought in. This means that Keith Plested will also be responsible. for the South in addition to Ted Longshaw catering for London and S.E. Richard Beckett of Woodspring and the Mendip Circuit will cater for the South West which has a growing need for such coverage. Another new executive member was also elected to be Editor of Circuit Chatter in the shape of Brian De Boo. Brian had produced Issue No. 50 from his hospital bed and copies were distributed at the meeting. This is a splendid little production with lots of good "local newspaper" pictures (not surprising as Editor is a professional newspaper photographer) of people which should delight members. This brings Circuit Chatter well into the same league as some of the best continental association productions. Good luck Brian! Some re-arrangement of committee men's areas has been made, basically to extend the three northern reps' areas northwards so that each has a share of Scotland, still, alas, somewhat thin on the ground with clubs and members.

### Trophies & Toilets

Minimum standards and safety standards at open meetings produced some discussion and it was agreed that: (i) Two handicap finals and an open final be run in each class raced, (ii) At least six trophies be awarded in each final, (iii) Adequate toilet facilities for competitors and visitors be provided (no one really defined adequate!), (iv) adequate provision to be made for camping and caravanning (adequate defined as ideally on site, but

adjacent acceptable), (v) appropriate refreshment facilities be provided, (vi) safety arrangements for spectators, drivers, pit personnel to be agreed with BRCA sub-committee appointed for the purpose (Keith Plested, Dave Preston, Paul Padgin).

A motion that only purpose built circuits be considered for major national meetings was defeated. A limit to open meetings proposed was withdrawn but left on the table for future consideration. A very spirited plea for the official recognition of restricted cost racing was put forward by Mardave's Wes Raynor, who had an offer of sponsorship for a low-cost series, but was defeated on the vote, since it was felt that handicap events met the needs of the less experienced drivers.

#### Tibshelf for Nats.

Drivers for World Champs in Geneva in July would be decided on points position in GT/Sports on driver's scores (best eight to count) between 1st May 1978 and 1st May 1979 (closing date for entries).

Applications were then presented for British National Meeting by Northavon, Bournemouth, Mendip, Wrexham and Tibshelf (R/C Model Cars had stated that Wombwell were also having a second go, but this was not so as their former Chairman somewhat irascibly informed me. Sorry Wombwell! Sackcloth and ashes!) In the vote Tibshelf skated home first by a huge majority. Their already extensive facilities will be further improved by additional toilets and a control tower: everything else, including covered pit area is already top class as those who have been there or seen the club's three-dimensional scale model of the circuit will know. There is also that excellent tavern "The Shoulder of Mutton" where 1977 AGM was held a couple of stones' throws up the road.

Wombwell did, however, put in for the British Grand Prix and got the fixture from Bournemouth and Mendip who were also in the running. What a good sign it is that clubs are willing to take on the very onerous tasks of running big open meetings.

### Lilford Opt Out

On this subject, Tom Martin and Dave Martin put forward the motion that to allow adequate (that word again!) racing time each class of the British National Championships be run over two days on successive weekends. This motion was lost. Tom Martin then had to advise the

meeting that since Lilford Park was not available on any of the public holiday weekends in 1979 they would not be putting in for any open meeting dates since they felt unable to cope with the anticipated entires of one hundred drivers. This will be a great loss to the racing community but should have the advantage of enabling local club meetings there to bring on new drivers, and help other up and coming clubs to develop open meeting reputations.

Other open meetings throughout the season will be allocated during the next few weeks as clubs make their wishes known to the committee.

### No change in subs

To finish the meeting on a really cheerful note Secretary/Treasurer Tom Martin was able to announce that subscriptions for 1979 would remain unchanged at £4.00 full membership; £2.00 Associate Membership and £2.00 Junior (under 16 membership).

### CLUB & TRACK REVIEW . . .

The Paddock Electric Car Club Secretary: Pete Bull

12 Knights Court,

Little Billing, (Tel: Northampton 406569).

Northampton

Mike Boardman of Stagg Models is Chairman of this new club. Meetings take place at The Paddock — a pub with a ballroom allowing for a good size track to be laid — on Tuesdays at 7.30 pm. Pub is only two miles from the M1 on the A45 road to Northampton. Membership already stands at twentyfive and is rapidly growing. Would-be members contact secretary or Mike at the shop (Northampton 35718).

Walcherse Modelauto Club (WAMAC) Secretary: R. P. Nonnekes Statenlaan 118

4336 CL Middleburg Netherlands

Our correspondent claims WAMAC as Holland's third largest club, and with its regular club magazine (my copy gives an interesting circuit for a glowplug board plus club stickers. Members are keen Associated drivers with most of them running RC 100s, plus an RC200 or two, a few PBs and a single SG. Technical staff member of the club called "Dutch Tuning" does as his title suggests, for members. Bodies are all Lexan from Parma or Associated. The club has its own circuit on a big asphalt parking place of a hypermarket.



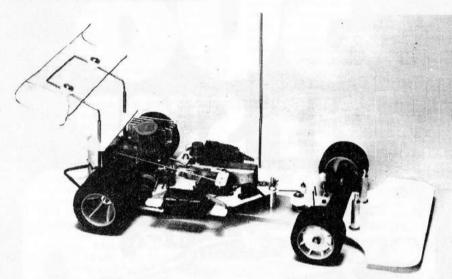
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# **BRITISH RADIO ELECTRIC** CAR ASSOCIATION...

OVER a hundred electric car enthusiasts from as far away as Yorkshire and Teesside in the North and Bristol, London and Exeter from the south and west filled the conference room at the Leicester Post House on November 26th to consider the formation of an electric car association to control 1/12th scale r/c electric car racing.

From the outset it was clear that the feelings of the enthusiasts were that, despite some misgivings as to the status of electric r/c, it would be desirable that any new association should be closely allied to BRCA. It was however emphasised that a degree of autonomy was essential since the existing BRCA outlook was geared exclusively to 1/8th scale outdoor racing. Whilst many adherents might take part in both classes of racing, the major intake would undoubtedly be amongst newcomers to the hobby, mainly young people not very well off who would not be able to pay very much for their cars and equipment and unwilling to pay as much as the current £4 subscription to BRCA.

After a vote establishing the need for the new association, the next major decision was to decide that the committee when formed should fix a top annual sub of £2 adult member, and £1 for junior membership. A junior would be anyone still at school. How much could be given to members in addition to mandatory 3rd party insurance would be left to the committee to decide and report back. A regular news letter would be welcome and if this could be provided monthly, perhaps with the help of trade advertisements in it.

so much the better.

Some discussion was devoted to eligibility of trade members on the committee, but a vote to exclude them was heavily defeated. A committee was then elected: Richard Gammon, Ally Pally and Tulse Hill Clubs, of I & D Electronics Co (Smoothtronic and Spectron) as Chairman; Roger Wilding, Midland Electric Car Association and Modelcraft, Vice Chairman; Tony Devenport, Midland ECA, Secretary; his wife Hilary as Treasurer. Regional Committee members Ridley Nicol. Tee-side MC Club (North) Norman Keat, Northavon (West) and John Bicknell (South). Richard Gammon would also double the duties as an additional London and South rep with Tony Devenport doing

the same for the Midlands.

With the newly elected committee at the table, and Mike Booth who had chaired the initial proceedings retiring, the meeting then considered constructional rules. (No one thought to thank Mike for occupying the hot seat - so please take this as belated thanks. Mike). The EFRA decision to adopt ROAR rules with the exception of Rule 7 which defined 4 cells power for indoor racing were generally acceptable. At the meeting it was believed that the 1977 ROAR rules would be the basis of racing in 1979. Richard Gammon did, however, read out salient points from ROAR 1979 rules to be followed later, with special reference to the three tier levels of racing. This met with general approval for future racing.

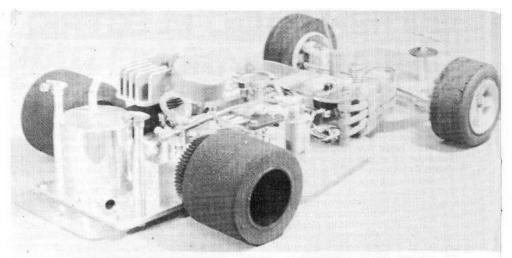
The meeting closed with a firm mandate to the committee to make immediate approaches to BRCA with a view to affiliation. No name was decided upon at this stage since it was felt that a choice could well be dependent on the welcome or otherwise given to the group by BRCA.

As the heading shows there has now been a name chosen which has the happy acronym of BRECA. Following the BRCA Annual General Meeting an approach was immediately made with a view to affiliation but this was met with less than a cordial reception which more than confirms the views already expressed that electric enthusiasts will fare much better with a specialist organisation that understands their needs and works for their benefit as a primary, rather than secondary, object. Membership cards, racing rules and application forms are already in hand, and moderate advantageous insurance rates are being negotiated with a wellknown company, whilst a get together of club secretaries to agree a national programme with a Nationals Meeting later in the year, probably in the Birmingham area, as nearly central as possible is being arranged.

Secretary: Tony Devonport, 200 Windmill Road, Coventry, CV6 7BE to whom enquiries and applications should be addressed. Treasurer glad to receive subscriptions is Hilary Devonport of the

same address.

RADIO CONTROL



### "HALO"

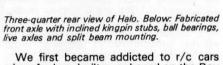
### % SCRATCHBUILT BY JOHN HALE

THE 'Halo' has been designed and developed through the season of 1978 to not only provide a reasonably competitive machine for Andrew, my eldest son, to race, but to satisfy an urge, shared by many, I am sure, to incorporate a few original ideas rather than copy faithfully a commercial design.

There is also of course, an element of satisfaction in producing something at a fraction of the price of the popular kit cars so far as raw materials are concerned, because in labours of love the time factor does not have to be costed.

We first became addicted to r/c cars when Andrew built a car based on the Roy Moody RCM & E design including his crankcase fitted clutch during 1976-77. He used an OS 20 but it became quickly obvious when the local Mendip circuit was opened, that to be competitive required something more potent.

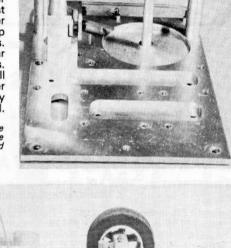
With the purchase of a Super Tigre X21 a new car was required and thus was born the 'Halo'. When originally built we ran the car with a live rear axle but the sight of the differentials on the Keith Plested and Phil Booth cars suggested an interesting line of development. A study of Muffett's catalogue decided the size of the unit and although the first set of gears lost their

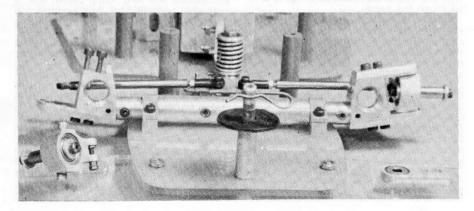


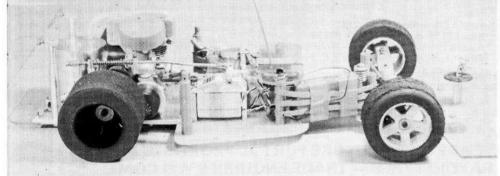


Top: The differential assembly. Right: Engine plate showing silencer counterbore and disc brake caliper. Below: Side view showing radio posts and servo locations.

teeth due to too deep a case during







The ring gear centre is also of alloy, whilst the paxolin brake disc is clamped against a stainless steel fixed pad by a x cam operated plunger made from silver steel.

The engine is mounted on a one piece engine mount with a separate split front bearing. Steady. The spigot which may be seen on the rear of the engine backplate has been provided to form the basis of a future suspension experiment.

The alloy silencer is sunk into a large counterbore in the engine plate which in turn is fitted to a glassfibre chassis plate. The fuel tank, which is of brass, is fitted with a sump and a quick-fill top, which is held down against pressure by a simple rubber band. The servo mounts are alloy whilst the servo saver is fabricated in brass using silver solder.

The alloy front axle, using a tubular beam can be rotated through its split mounting blocks to provide variable caster. Each end fork is made of three pieces of alloy with ball races sunk into blind holes in the top and bottom plates to provide longlasting pivots for the kingpins. The steering assemblies provided an interesting range of machining problems and are in one piece providing not only the housing for the twin ball races for the live axles, the inclined kingpin stubs which

provide negative camber and also the various arms which are forked to receive the joint track rods ends. The live axles are of silver steel, which like the half-shafts. are tapped to receive cap head screws which retain the PB wheels.

Other features are the alloy front body fixing post, the rear alloy mounts with hexagon headed bolts to lock the wing mounting wires, and the poly carbonate front and rear bumper plates.

Naturally, the use of alloy in the front axle asembly does produce a slight weight disadvantage over the usual commercial nylon components, but in its favour is the knowledge that a very substantial shunt is required before any serious damage is done. However, when time permits, there is still a fair amount of metal which can be removed, especially in the differential. assembly without affecting the strength unduly.

Just how much weight could be removed is shown by comparison with weights of the PB International: Front axle assembly (Halo) 215.90 gm; (PB) 157.36. Diff. (inc. bearings, pedestals, ring gear centre, brake disc) Halo: 373.15 gm. (PB) 269.80 gm.



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# JIM DAVIS R/C RACING



### MARK FOR MARCONI

Dear Mr. Laidlaw-Dickson,

I was especially interested to read in your Issue No. 8 on page 30 'Euro-Champs at Lilford' of Jeff Lindstrom and his radio monitoring equipment. Your photograph caption talks of him demonstrating his 'super-efficient Thorn monitoring equipment' which, in itself is not untrue since the equipment belongs to Thorn.

However, the spectrum analyser he is using is made by Marconi Instruments and it is my job at this company to do all of the final calibration of this complex equipment which includes over 3,000 components!

Since I am a radio controlled car enthusiast my work gives me rather a special advantage in that I am able to check out radio emission from my equipment on the spectrum analyser which, as you so rightly say, costs around £8,000 — so I guess I have no excuse for having 'noisy' radio gear on my car.

The enclosed picture shows me working away at the bench calibrating yet another spectrum analyser. I doubt though very much that this one will be destined to check radio controlled cars (except mine!) The instruments are used mainly by electronics design laboratories and production lines, in government departments, broadcasting authorities and on telephone networks throughout the world.

Barry Webster, Production Engineer.

Marconi Instruments Ltd, St. Albans.

P.S. — The spectrum analyser won us this year's Queen's Award for Technology!

### LETTERS..

### GET MORE TECHNICAL PLEA

Dear Ed.

I am a newcomer to r/c cars although I have read quite a bit to learn about them. I have had one attempt at scratch building a car which was fairly successful, but, as the saying goes, we learn by our mistakes. I have a "Mark II" on the build at the moment using a 14 gauge Ally chassis, Ke'ion wheels (doubled up on the rear) Mardave tyres and front steering unit (nylon) all propelled by an HB20 engine with Mardave clutch and Ke'jon belt drive. This gives a ratio of approx 4:1 which gives good performance for me as a beginner. I use Fleet 2-channel radio which I have upgraded with their new superfast servos. I must commend their service and help in general while I was setting up my equipment.

I am obviously pleased with the mag, as it is informative with race meets and kits on the market. Unfortunately I find the kit reviews and specialist articles, such as the steering review a little 'untechnical'. I feel that most people who are into model racing cars are also interested in the more technical ideas involved in car engineering, such as steering angles, and also the finer points of design in kit reviews. This would help the scratch builders such as myself and also people who would like to modify the cheaper kits to more expensive standards (e.g., making and fitting disc brakes, etc.)

But I do realise that the mag is yet still young and I therefore thank you for taking the initiative to start up this mag to fill that big gap left for a specialist car magazine.

Yours sincerely.

David R. Howarth.

21

Four Marks, Hants.

### LIMITED COST RACING

Dear Editor,

Having been aeromodelling for many years now and also once a slot car maniac, I suddenly find myself addicted to r/c car racing. Always keen on competitive sports and having a love and understanding of engines, I found myself unable to resist the temptation and am now a complete i/c car nut! I run an OPS powered PB International (what else?) and am gaining as much competitive experience as possible. Hopefully when/if I find myself reasonably competitive I will enjoy the challenge of reworking my

motors in the search for improvements. I watch with enthusiasm car developments and will always remain keen regardless of how sophisticated car design becomes. I do, however, feel that as this happens, and let's not fool ourselves, it will, many people will be put off by the high cost of such engineering masterpieces! Whatever the sport, if its competitive and has an 'open' specification, development will continue as long as the sport exists. It won't be long before we will have full suspension, hydraulically braked, tuned piped cars - in fact F/1 in miniature! Now is the time to introduce an additional simplified class. For instance: -

(a) Non-ABC motors—to be changed if current trend changes. Standard engines

no alterations.

(b) Fixed rear axles.(c) No suspension.

(d) Standard fuel (simple to carry out -

nitro spot check).

This would still allow fast racing at a practical fixed cost. There are now many good ringed 21 motors available (how about a BRITISH class using Irvine 20's?) In the aero world Club 20 pylon racing has been a great success and yet has not affected 40 pylon racing significantly which still continues to develop.

It would be unforgivable to hold back development, but let's have another class for those who are not so addicted and

fanatical as the rest of us.

Yours sincerely, David G. Farndale.

Southampton,

### LOWER COST RACING IN USA

Dear R/C Car Racers,

I can see it all now, in 1979 or early 1980, the hot setup will probably be an inline engine, driving through a differential to fully independent suspended rear wheels. Brakes will be proportional electronic disc brakes, a three or four channel radio will be used in order to control boost or mixture to the heavily tweaked Rossi 21. Front suspension will be fully independent, everything will be in ball bearings, and tyres will be semi-pneumatic. Each of us diehard racers will have two of these fine racing machines because the cost will only be \$1,195 per car.

1/8th scale R/C car racing is at or maybe beyond the point where I quit racing slot cars, go-carts, and an H-production Sprite. We have to have a competitive class of R/C car racing that does not get overly expensive every year. I'm sure many of you feel that you already

spend too much money on R/C cars, only to find out at the next race that so-and-so has the newer trick carburettor, newer trick brake, newer trick graphite chassis, etc., etc., etc.,

I for one am getting a little tired of it all, and I want to be able to work on my car a little, and race and fellowship with fellow racers a lot. I know it's too late to change the rules for 1979, so I'm starting early to propose some rule changes in 1980. I am hopeful that we will try some of these in the H of A Super Stock Class in 1979.

Open Class should probably continue to be an Open Class, although I think some effort should be made to prevent the example in the first paragraph of this

article.

The Super Stock Class offers the potential to be a lower cost class, but I believe our rules need to go further to keep it that way. I would suggest that the following additional items be considered for at least the Super Stock Class:

1 A 1/10" maximum bore carburettor. This is easily done on Delta, Thorp and Perry carbs. The engines run good and will last a full season.

2 A 5/16" maximum (no-go) or smaller muffler hole. (A 1/10" bore carburettor and a standard Thorp pipe with a 5-16" restricter will meet the new proposed 80 db muffler rule!!!).

3 Prohibit differentials (Sorry John, but your Thorp car works pretty good without a differential, too.)

4 Prohibit independent suspension systems.

5 Restrict radios to two channel.6 Restrict engines to commercially available .21.

7 Only sidewinder engine — drive train configurations allowed.

8 Restrict brakes to mechanically actuated.

9 Prohibit semi-pneumatic or pneumatic tyres.

That's probably not all the things that are needed to keep the racing low cost and competitive, but I think it is a good start. These rules would still leave lots of room for experimenting and improvement coupled with the existing general ROAR rules. Some tweaking of the engines could be done, but you wouldn't have to worry about buying a special crankshaft or rod to handle the increased power, as the stock equipment would stand the strain.

I personally think some of these suggestions could apply to the Open Class, such as only two channel radios, mechanical actuated brakes, and even

carb size and mufflers, but I'll leave that to others for the present time. There should be an outlet for those who want to do or spend whatever is necessary to go fast, or those who like to dream and experiment. I would suggest that the factory teams and only a very few independents will have the time or bucks to compete in Open Class unless some parameters are drawn pretty soon.

If you share my concerns, please talk to people about these proposed additional S.S. restrictions, put a 1/10" plug in your carburettor and try it, and let's see if there is some support for this type racing.

Let me hear from you!

Larry Flatt,

Overland Park, Kansas, USA.

#### PLEA FROM TASMANIA

Dear Sir.

We have gathered a small group of enthusiasts and are presently scratch building r/c cars here in Northern Tasmania. We are extremely remote from centres of car racing activity, parts, supplies, information about car construction, etc. Your magazine would seem to be the answer to our information problems. We are exceedingly sorry to have missed the earlier back issues. Would it be possible to place an advertisement in your magazine for second hand back issues of Nos. 2, 3, 4 and 5 for which we would gladly pay full price; or is there any other possible source of back issues?

Yours sincerely, G. R. McFarlane.

Main Road, Beaconsfield, Tasmania 7251, Australia.

(Ed: Any kind readers willing to send on unwanted early copies? We have also some local readers in need — so send to me and I will find good homes for them 2, 3, 4, 5 only. Thanks).

#### FIRST SEASON REPORT

Dear Dickie.

Here is news of a family group's first season. He had been a good lad and passed his exams so for Christmas (77) bought him an r/c racing car. Thinking don't play around we started at the top with a PB International and a K & B 21. We, son Stephen (13) and I built it, tried it out on the local car park and as we gained experience and confidence joined BRCA and subscribed to your mag.

Next decision was to enter BRCA race meetings, so green as grass we went along, after all what did we buy the car for if not to compete. So we entered the first Wombwell meeting, and arrived a day early for "practice". After all we had never seen a race or a track before! Of course, it wouldn't start and we soon had bits strewn all round our makeshift bench.

And then fortune intervened in the shape of Ken Wheldon and his lovely wife. Under his guidance we were started and on the track — well some of it anyway, it was a great feeling, our car performing in its proper setting. Ken had put Dad to rights in the pits and now he advised Junior on the rostrum. When we finally took a breather it was our turn to see how it should be done.

"Look at that Dad!" said Junior—seeing how it should be done, and all the time Mrs. W. chatted amiably sharing her coffee. We came away from that practice realising we had plenty to do but **not** crestfallen. Thanks to Mr. and Mrs. Ken.

And so we attended our first race meeting that weekend, after re-working our car of course. We made every mistake in the book, felt very inadequate, but our inadequacies went apparently unnoticed.

Thanks, lads and lasses!

My advice to any beginner who is nervous about entering a BRCA meeting is: Don't be: enter. You will advance your skill and knowledge at the only place you really can - on the track. From other members you will receive kindness, understanding and real assistance. Soon you will mount the rostrum, as Stephen now does, fearing nobody, rollicking his mechanic (Dad) with all the vehemence of an expert driver . . . No allowances are made for middleaged overweight out of breath myopic Dads at the 'off' I'm afraid. Yes, it's been great fun, and very exciting. We have learned a lot and ten laps in five minutes at Wombwell is no problem now. So watch it, fellas.

Daughter Colette (15) is now an enthusiastic member of the team, her speciality is painting the bodies and she goes white but not silent when Stephen crunches at top speed into an immovable

object . . .

As for me the biggest revelation has been the helpfulness and friendliness of everybody we have met so far. It would be impossible to meet a nicer group of people in a sporting hobby. So thanks again everybody — you have all been great.

Yours aye, Chadderton, Lancs. Kevin Byrne.

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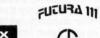
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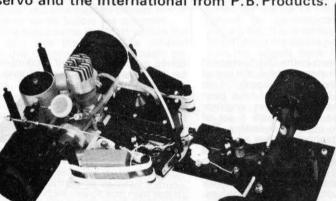




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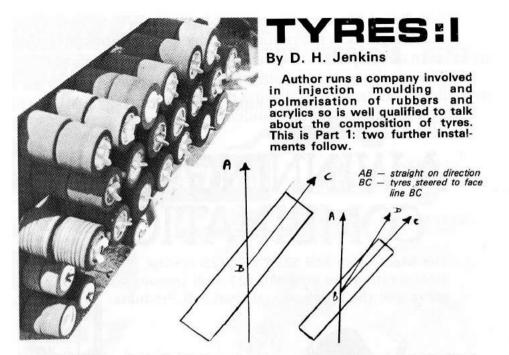
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SOMEWHERE deep in the Old Testament lies a verse which states: "Jehu, the son of Nimshi, behold, he driveth furiously." I am sure the son of Nimshi would have been pleased if some Biblical tyre engineer could have fitted him up with a set of super stickies, to cure his oversteer. The science of tyre technology has advanced somewhat since those days, although the problems of oversteer and understeer are still with us and still plague the budding Jehus of today. Perhaps what follows may help to cure; I trust that it will not confuse.

For those of you who can look at a model car under braking and know that it needs geometric front roll understeer, do not read on; for the majority of us a few basic considerations might help. In those far off days when your radio-controlled car was new and shiny and clean it sat there unmoving on its new tyres, ready for its first run, it was then in a state of maximum stability. Once the wheels started to turn it entered a potentially unstable state (and also incidentally, started to get dirty). Whilst stationary the car rests on its tyres, and the area where the rubber touches the floor is called the contact patch. It is interesting that all the sophistication of our radio controlled cars — disc brakes, Ackermann steering, differentials, etc., etc., has to be effected through those four contact patches. No matter how good the

26

driver, or the car, the end product will not be the average performance figures of all the parts, but will be limited by the weakest component.

It is a chain situation, the weakest link dictates when the chain breaks, and if we expect to get the best out of our pressurised fuel systems, our special carbs, and our breathed-on engines by sticking on the wheels four bits of old sponge, then we will believe anything. The contact patches of all four tyres amount to less than one square inch and they have to work well.

Let me get the message across, the contact patch is important and deserves at least as much attention as the other components of the car — if not more.

Whilst the car is moving in a straight line it is relatively stable, approaching corners is when the fun starts. As the car approaches the bend, if nothing happens, it will ignore the bend and go straight on (Newton: Laws of Motion, etc., etc.). If the wheels are turned then the car will still attempt to go straight on but a compromise will be reached and the car will change direction as a result of friction through the contact patch. If the mathematics are correct, the car will emerge from the corner and carry on in its straight line. If the centrifugal force is greater than the frictional grip generated by the tyres

then adhesion will be lost and the car will slide and not follow the direction of the wheels. If the loss of adhesion occurs first at the front end, the car will not get round the corner as planned and will make larger and larger turns. This is called understeer.

If the loss of adhesion occurs first at the rear, the back end will break away whilst the front end is still anchored down; it will go towards the outside of the turn and

spin. This is oversteer.

Now the difficult part of the exercise is to get the car entering the turn at the correct speed and direction so that both front and rear lose adhesion at the same time. This is called 'drift'. This on the limit driving or just beneath this adhesion limit for all four wheels is desirable in theory, although in practise a slight understeer is preferable as the inevitable corrections are easier to execute in practise. Backing off the throttle will correct understeer, whilst oversteer correction is time consuming.

Bear with me if we belabour the basics for a little longer. We have pointed out those terrible twins 'understeer' and 'oversteer' and now have to discuss one or two other terms before we progress.

As the servo turns the front wheels the tyres turn into the curve. As detailed before, the chassis tries to go straight on. Now the angle between the line of the tyres and the chassis axis is called the steering angle. Fig. 1. The angle ABC is the steering angle.

Due to a combination of factors yet to be discussed the car does not follow the tyre directly. It follows eventually a path in between the points A and C. The tyre slips across the surface slightly and the car follows path AD.

The angle DBC is called the slip angle. Radio control cars slip a little earlier than real cars. The slip angles are a measure of the tyre, track, surface, speed, and chassis.

As the car begins to slip, it then generates side force, and it is this side-force which counteracts the centrifugal force and lets the car get round the corner. The car has to slip to let the car generate the side force; the slip distorts the rubber of the tyre which produces a force perpendicular to the plane of the tyre called the cornering force.

Let us take this one stage farther.

Sideways distortion of the rubber of the contact patch increases steadily from front to rear and thus the line of action of the cornering force must lie behind the point immediately below the centre of the wheel (see Fig 2). The actual distance behind the geometrical centre of the wheel

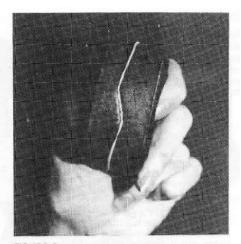


FIGURE 2

The contact patch photographed through glass to show the distortion of the rubber as the tyre slips

depends on the slip angle. This point is called the centre of effort. This point is behind the geometrical centre of the contact patch and generates a moment (a force) about the centre point which tries to turn the wheels back into the straight ahead position thus reducing the slip angle. This phenomenon is called the self aligning torque'. Expressing the relationship between slip angles and cornering force graphically can be misleading, self aligning torque against cornering force represents a more accurate picture. The distance behind the wheel centre where the force acts is called the pneumatic tract. Given a knowledge of all these factors then mathematically the cornering characteristics of a given car should be

If you decide then to take the matter of tyres further at least you now have heard the terms out which the endless bullets of discussion and controversy are made. We shall leave the complex terminology behind and now discuss some basics about rubber.

### RUBBER

Rubber has many uses from cleaning up dirty marks on paper, to making dirty marks on starting grids. Rubber can be soft or it can be hard; as Alan Jones once put it: "We have compounds available ranging from the consistency of heavy engine oil through to wood." This embarrassment of choice is mercifully not available to the R/C driver. There is some choice, however (Fig 3).

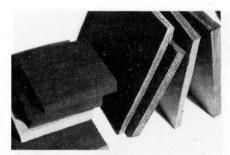


FIGURE 3 Different types of rubber

1. Neoprene - or, to give it is 'posh' name of polychloroprene, resembles natural rubber in many of its properties but there are a couple of drawbacks for the R/C driver as it is expensive to make and it is dense. The first drawback is obvious, the second not so obvious. Let me explain. It is dense, it therefore bounces and vibrates. A radio control tyre must grip the road and spend as little time in the air as possible. If the tyre hits a bump and bounces once and then continues not much time is lost. Neoprene, however, will continue to vibrate and bounce and lose vou time.

When a normal car tyre will vibrate 27 times per second under speed, a radio controlled car tyre will vibrate 100 times per second. The more vibration, the worse it is. This phenomenon is termed hysteresis. A high hysteresis compound at a temperature of 50 degrees centigrade has a rebound resilience appreciably less than 50%. The R/C driver wants a lazy rubber, one that will absorb the energy and not give it back, it has to be less springy, and less resilient, and so stick to the road, in the absence of a suspension system and damping a high hysteresis compound tyre is important.

2. S.B.R. Styrene butadiene. Now I am talking the language of the modeller, for S.B.R. is cheaper to produce, and also has very good wearing characteristics. But those of you who paid attention to Neoprene will be wanting to know what the hysteresis character is like. It has a high dynamic hysteresis and a high level of energy absorption, and this keeps it in contact with the track. All however is not rosy. A high hysteresis compound as we have stated absorbs the energy and flows across obstacles and surface, but it also absorbs energy from the engine. It has a higher rolling resistance due to its energy absorbing characteristics. In Formula

terms this could mean as much as a loss of 300 revolutions per minute at the end of the straight. The car with the high hysteresis compound will get into the corner deeper, get through quicker, but will be down at the end of the straight due entirely not to the grip of the tyres but their rolling resistance.

S.B.R. then has good grip qualities, but tears and cuts easily.

3. Natural rubber - has good qualities for R/C work, reasonable grip and good wear characteristics where lunatic driving is of the order. It is an over-simplification to state that the natural rubbers provide the wear, and the synthetics provide the grip. The combination of qualities can be combined but as explained later there are gross problems.

4. S.B.R. — can be modified by the addition of oil to provide extra grip. This is especially good in the wet, and is called oil extended S.B.R., S.B.R. 1712.

5. Polybentadiene P.B./B.R. – has

some desirable tyre properties.
6. Ethylene Propylene Co Polymer with added Diene. E.P.D.M. - has been basically rejected by the big boys but represents good R/C tyres. Good abrasion resistance, good grip, not too good in the wet, but for the hardy racer it is good on ice. (The two conditions are very different).

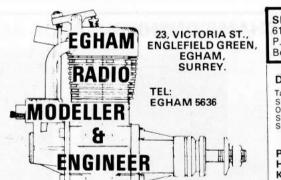
7. Chlor Butyl rubber or Butyl 11R offers the racer fantastic tractions. Experiments have produced braking capabilities of over two g. with butyl 11R tyres. It is of course, a high hysteresis compound, and can be quite 'dead'. It is light, but too hard in R/C terms unless compounded with other rubbers.

8. Sponge rubber - is not very suitable for R/C tyres for the sponge tyres deflect excessively under severe cornering loads which reduces friction and the cornering force: all important.

### **RADIO CONTROLLED** MODEL CARS MANUAL

The promised book based on some of our earlier issues is on the way. Some 136 pages have now been set up for printing and it is hoped the book in paper back form with a pretty cover will be available early in the New Year . . . indeed it might even be coming out by the time you read this. Size will be A5, same as the mag, price yet to be fixed. Publishers: ARGUS BOOKS LTD, 14 St. James Road Watford, Herts, to whom both trade and single copy requests should be addressed.





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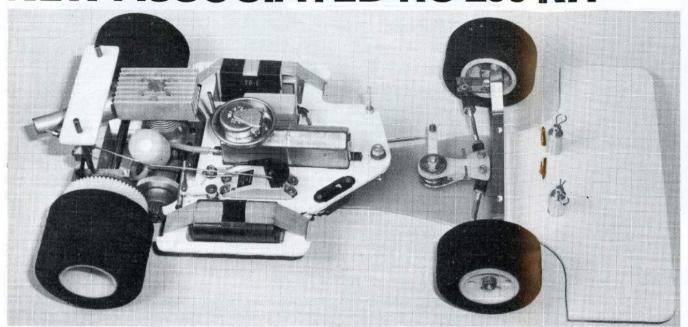
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# CONTEST ROUND-UP

A SPATE of late season contest reports has built up, some seeming very very far behind datewise. However, so as not to disappoint people who have done well and deserve mention, and hardworking organisers, we are doing a somewhat condensed summary of those which missed the last issue.

#### ST. ANNES THREE HOUR

This event took place at St Annes-on-Sea on September 3rd on a huge Corporation Car Park. The organisation and arrangements were carried out by Mike Booth and the event was run by members of the Blackpool and Fylde R/C Models Society. Designed to prove just what could be expected of 1/12th scale electric r/c cars the race turned out to be a roaring success. This was mainly due to the very high order of keenness and sportsmanship shown by the thirteen competing teams. The idea was ambitious enough in the first place to require a good deal of selling to everyone concerned, and many nice touches were appreciated such as the entry kit of scale drawing of the pit area. self adhesive numbers, frequency allocation, silk screened armbands, rally type route maps to the circuit.

St. Annes Winners: Mardave Team (left to right) Steve Busby, Geoff Labet, Wes Raynor. Photo: Blackpool Gazette.

Thirteen teams were entered, being: 1. Mardave Owners, 2 Mardave Works, 3 Team Tronic, 4 Aylesbury MCC, 5 Jim Davis Models, 6 Lectricar Owners, 7 Stonall MCC, 8 Lectricar Works, 9 MERCC Modelcraft, 10 Ipswich RCMC, 11 Ally Pally, 12 Manchester MC and 13 Ted Longshaw Works. Mike and his fantastic righthand men Jack Lumley and Keith Day had the task of getting the scrutineering done before the start at 1.30 - the fact that we did this in 45 minutes pays further tribute to the competitors and the way they all stuck to the spirit of the rules.

All cars left the scrutineering table straight to the Concours judging by Gordon Clarke, Tony Downs and Mike Quarrie, who were amazed at the superb finish and detail which had been put into the competing cars which were all about to sustain three hours of highly competitive racing. The Ally Pally team deservedly won their trophy with their three Corvettes with an easy to see spangled paint job and full cockpit detail.

After the fullsize style five minute and one minute warning horns the race was started by the bleeps of an electronic timing unit provided and operated by our commentator John Bridge and we were treated to the spectacle of thirteen cars tearing out of the pits and heading at full speed for the possible disaster at the first

corner. Only one car went wild and with the rest already stringing out a little they crossed the timing time and back to the

pits straight.

The race settled down to steady but not fast lapping for about fifteen minutes when we found that Mardave Owners Club and Stonall MCC were experiencing radio troubles. We just had to stop the race and with the very welcome help of Jim Davis went right through a full frequency check. As a result of this Stonall had to retire completely. The sporting spirit of these lads from a new club in Birmingham was so strong that they accepted the unavoidable situation with a grin and immediately offered their services. as marshals to help keep the race running smoothly.

At 4.30 His Worship the Mayor of Lytham St Annes arrived to watch the racing and present the prizes and commented that we could have invited him at the start as he would have liked to watch the whole event. The Mayor, Councillor Jack Braithwaite with the Lady Mayoress then presented the prizes. First: Mardave Works Team (467 laps), 2nd Lectricar Works Team (439 laps), 3rd MERCC Modelcraft (435 laps), Concours d'Elegance Ally Pally, T/S Hard Luck Trophy: Stonall MCC Ladies Prize Wendy Bork.

Mike Booth and the organisers would like to express special thanks to Lytham St Annes Borough Council, to their club mates of Blackpool and Fylde RCMS, to Pandoro Ltd for the covered trailer for the drivers' rostrum via their Mr Hasty, and particularly to the stars of the show - the

competitors.

#### WOMBWELL AUGUST 19/20th 1978

For the third time this year the 1/4 th scale Radio Car Circus came to Wombwell and were greeted by the now traditional sunny weather. Race organiser Eric White, with able assistance from the now familiar band of diefards, showed that this apprenticeship is now over and he is well able to run a meeting with entries in excess of 60 per class.

Racing was even faster than at the Nationals and the cry heard early in the season of "It's impossible to drive round this track" was not heard at all (well hardly ever) - drivers seem to appreciate that different types of circuits are the life-blood of the sport and probably one of the main reasons for British success internationally this year. The rostrum pruning which was carried out at the Nats seems to have done the trick and the number of cries of

"Interference" were minimal and certainly no more than at most other meetings this year. The club again followed the split handicaps system with finals for drivers in the 0 to 15% bracket and the 20% and over boys. This seems very popular and certainly gives the middle of the road enthusiast some encouragement - also some very exciting racing results from this system with evenly matched drivers fighting it out every inch of the way. Trophies were presented to all finalists, a total of 36 in all, and the club officers tell me that they sill made a profit!! It is difficult to understand how some organisers can justify £1.50 entry fee and only six trophies per class in all!!!

The track surface appeared to have roughed up a little since the Nats, but only slightly, and a continued programme of rerolling promises to produce a pancake like surface for next year. (I wonder what the traction will be like? - is treacle allowed as a tyre additive?) The event produced 3 star drivers with each winning first on both days (despite some quite heavy rain on Sunday) and to John Parker, Pat Angelini and Phil Greeno congratulations, but the hard luck stories continue: - David Martin cannot seem to beat his Wombwell jinx leading both finals before being sidelined by mechanical or Radio problems, and Ron Bates F.T.D. on Sunday only to have his OPS break in the most expensive way during the final - bad luck Ron (it happened to him at the Nats as well).

In summary an exciting meeting well run - and much enjoyed with many drivers taking home a well earned pot.

Paul Padgin

### **TIBSHELF**

AUGUST Bank Holiday brought an unusually fine weekend - a welcome

change in 1978.

Saturday was a day for practice and last minute preparation. Chairman Ray Heffer made the finishing touches to an already well-prepared circuit and the stage was set for some good racing. Unfortunately Ray was taken ill, but Jeff Lindstrom, Tom Martin and Malc Draycott kindly offered to assist and the breach was ably filled.

Sunday provided some closely competitive racing in the Formula class and drivers were stretched to the limit to find a place in the final. Phil Greeno did it and finally led the way home, with Phil Booth right behind only one lap down.

Sports GT on Monday was equally exciting and provided a spectacular battle between Dave and Debbie for first place in the open final. Debbie took the laurels -

but dad was right behind and finished on the same lap.

Handicap finals on both days gave a glimpse of drivers with enormous potential — and without doubt names which will appear again and again.

Results (OPEN)

110 laps
109 laps
103 laps
102 laps
101 laps
69 laps
3.

FORMULA (HANDICAP)

<ol> <li>Malc Draycott</li> </ol>	55 laps
2. M. Perry	52 laps
3. R. Morrison	44 laps
<ol><li>Wayne Jepson</li></ol>	41 laps
5. J. F. Anderson	39 laps
<ol><li>Mitch Stevens</li></ol>	28 laps
(OPEN)	SPORTS GT
1 Dobbio Proston	110 lone

(OF LIV)	or on to di
Debbie Preston	110 laps
Dave Preston	110 laps
Phil Greeno	109 laps
Dave Martin	105 laps
Bob Errington	96 laps
	88 laps
	Debbie Preston Dave Preston Phil Greeno Dave Martin Bob Errington Walt Bailey

GT (HANDICAP)

Wayne Jepson
 Mitch Stevens
 Malc Draycott
 Graham Wildgoose

5. Pete Silcocks

6. John Elliott

(FTD Dave Preston 18/459.6)

### SCALEDOWN 78 ROTHERHAM Saturday

The day began at 10 a.m. with three rounds of the Driving Test competition with an entry of 10. This was the first time an open competitive Driving Test had been held and was very popular with both drivers and spectators.

### Results (2 best scores out of 3)

1. Tony Devonport, Coventry, Mardave Special; 2. Les Pipe, Hinckley, Mardave Special; 3. Dave Foster, Coventry, Jerobee Special.

Racing heats followed and it was clear after the first heat that Les Pipe was the man to beat, his Mardave Special completing 24 laps. This was never beaten during the rest of the days racing. Each driver had seven races and the total lap score was as follows:

Total laps 7 races:

1. Les Pipe, Mardave, 156, Hinckley; 2. Dave Foster, Jerobee, 149, Coventry; 3. Tony Devonport, Mardave, 142, Coventry; 4. Alan Blakeman, Scratchbuilt Special, 139, Leicester; 5. John Russel, Scratchbuilt Special, 103, Bradford; 6. Dave Cotton, Mardave, 100, Wombwell.

Sunday
The day started with the driving test (13 entries including 3 ladies). The lady drivers were Muriel Russel, Christine Newman and Liz Lindstrom. As on Saturday the competition was won by Tony Devonport with an excellent score of 79 penalties (1 min. 11 secs. + 8 penalties).

Results (best score out of 2 rounds to count):

1. Tony Devonport, 79, Coventry; 2. Dave Foster, 82, Coventry; 3. K. Leatherland, 86, Leicester; 4. J. Leatherland, 88, Leicester; 5. Andrew McFadyan, 91, Bradford; 6. John Russel, 91, Bradford; 7. Mick Newman, 94, Bradford; 8. Jeff Lindstrom, 108, Bradford; 9. Peter Townsend, 118, Bradford; 10. Christine Newman, 165, Bradford.

Once again the racing was a very close affair, the faster drivers being seeded in the first two heats. This proved very satisfactory as the novices, many of whom had never raced competitively before were racing against each other and not holding up the faster drivers on the restricted track (5' wide, 50 yds long). After 3 rounds of heats Dave Foster and Tony Devonport (both with differentials) were tving on 92 laps with J. Leatherland close behind on 89. Throughout the day the racing was very close between the first three. The fastest time of the day being set by Tony Devonport in Round 2 with 26 laps in 5 min. 13 secs.

Results (after 7 races):

1. Dave Foster, Total laps 161; 2. J. Leatherland, 160; 3. Tony Devonport, 154; 4. K. Leatherland, 146; 5. Andrew Mc-Fadyan, 140; 6. Mick Newman, 132; 7. John Wells, 110; 8. Ken Hilton, 108; 9. John Russel, 107; 10. Jeff Lindstrom, 103.

The leading lady driver was Muriel Russel with 94 laps and it was encouraging to see a local youngster John Wells doing so well in his first competitive race meeting, a name to watch out for in the future.

Special Trophies for the overall winners of each event sponsored by *The Rotherham Star* were presented to Tony Devonport (Driving Test) and Dave Foster (Racing) and there were six trophies each day for racing and three for the Driving Test.

### PONTINS CHAMPIONSHIP

WITH a full entry of sixty the Pontins 1/12th Electric event started on the right lines with a need to turn away would-be late comers and began practise on Saturday before an interested crowd. We should add that the camp itself was booked up solid! Ballroom venue proved ideal, with the stage as drivers' rostrum, well up in the air, but looking down the narrow section of the circuit. This was arranged to give a good full length straight after a series of in and outs making full use of the area, which was indeed adequate for the event, being a happy medium between the very large and the very small. Surface was surprisingly adhesive, even after a night's dancing, so that the drivers with well-siliconed tyres were finding a degree of tramp to indicate super-traction.

Some very fine team entries lined up for the start, including very elegant Mardave Team with John Lotus Player cars in black and gold, Roger Wilding's Rojair team sporting new Datsun bodies and a very attractive paint job. Then the new Spectron, making its first public appearance since the release of its kitting news, showed a pleasing all yellow front on one of their Can-Am style bodies. Other teams from Ally Pally, plus a strong Yorkshire contingent, and indeed, cars from every known club, plus a plethora of unknowns making, in some cases, their first venture into competitive car racing.

This soon became evident when serious racing started. There were a great many hold-ups for radio interference, with some culprits impinging on as many as three wavebands! Ironically, Jeff Hindstrom in the Yorkshire team was a major victim! Reshuffling of cars helped the immediate situation but postponed the problems until later. Some new drivers proved obstructive, quite unable to see anything but their own car, and backing into following cars with wild abandon. It says much for the more skilled entrants that the ultimate result reflected a very fair picture of form.

With a closure at 6pm, it became necessary to cancel one of the four rounds, so that only three rounds of heats were achieved. The final proved well worth waiting for with four drivers hotly contesting the lead and staying on the same lap for most of the race. Eventually Tony Whitehorn made the flag, followed in third place by the other Tony — Tony Devonport, who had also been running the meeting, which could have been a full time job in itself. Les Pipe was the second man, separating them, and also a member of the Rojair Team with winner Tony Whitehorn.



Pontin's Brean Sands Ballroom laid out for racing. Stage is rostrum.

### MENDIP 4-HOUR BULMERS STRONGBOW TEAM RACE

It was very pleasing to find a nine team entry for this annual team race sponsored by Bulmers Cider Company. Word had obviously got round that the Mendip had a re-surfaced main straight without any bumps now! The starting grid was set up using a 3-2-3-1 layout, grid positions being determined by two ten lap heats one hour before the start. London A secured pole position and were joined by Aldershot and Bournemonth B on the front row. Second row was filled by Bournemouth A and Exmouth. Third row was taken by the GB Models Mendip team, the Model Air-Port team from Bristol and London B. Last minute entrants London C backed the arid.

From the start Bournemouth A went into an eight lap lead at the quarter hour mark which they were never to lose. The race itself really centred around second, third and fourth places, for most of the four hours between the GB Models team and London A and London B. Had it not been for mechanical problems on two Mendip cars, Pete Young could probably have driven the local team into second place. He drove for two hours and eventually flattened his Tx deac. This event was first time in a Team Race for Exmouth, Aldershot and Model Air-Port teams, and in fact, first time in a race for some drivers so that their performance was all the more creditable. Final placings

1 Bournemouth A (591 laps), 2 London A (526 laps), 3 GB Models Mendip (515 laps), 4 London B (502 laps), 5 Exmouth (445 laps), Model Air-Port (Bristol) (432 laps), Bournemouth B (423 laps), Aldershot (422 laps), London C (281 laps).

The Bournemouth A team were presented with the Strongbow Cup by Colin Teague, Area Sales Manager of



Bulmers. London A and GB Models teams received silver tankards for 2nd and 3rd places, and all drivers in the first three teams medallions. Bottles of the sponsoring brew were also distributed to test the tankards! Bulmers, our sponsors, were delighted with the support at the meeting and with only two radio problems in four hours I look forward to next year's race.

Richard Beckett.

### BOURNEMOUTH OPEN MEETING 23rd/24th SEPTEMBER. FORMULA/SPORTS/G.T.

The organisers were expecting a smaller entry than they eventually received, there being 57 drivers in the Formula event, and 63 in Sports.

Heats started a little late on Saturday and with a new system for Handicap Finals, devised by Bournemouth's secretary Bob Errington, the day's racing took a little longer than planned, with the final finishing in twilight. For all this the new system seemed to be popular, with the drivers having a much clearer idea of who they had to beat.

After three rounds of heats, in bright sunny weather, the 0% to 15% finalists were 1 Roy Bowden, 2 Adrian Cox, 3 John Robinson, 4 John Elliot, 5 J. Munday, 6 B. Webster. Other drivers just missing out where, Alan Sturgess, Mark Bartlett, only 13 years old, B. Lawrence, Keith Dumbleton, and J. Bossons.

The over 15% finalists were 1 H. Mason, 2 J. Turnbull, 3 D. Clifton, 4 B. Palmer, 5 J. Moon, 6 J. Darrington, finishing in that order. The positions for the semi were close as usual, Bob Rosser, Paul Ekins, John Everett, Dave Rogers, Robin Ellis, Walt Bailey. They finished in that order. Bob Rosser and Walt Bailey were the 5th and 6th fastest qualifers, with Jim Harrop just missing out of the top ten by a few hundredths of a second.

So, the final, Errington, White, Debbie

Not the winners — but the smartest: Bristol Model Air-Port team cars and drivers.



Colin Teague, Bulmer's Area Sales Manager making the awards. Bob Rosser (London A 2nd) is at the receiving end.

Preston, Dave Preston, Rosser and Ekins coming through from the semi. Bob Errington and Debbie, just hanging back from the inital scramble for road space at Bournemouth's tight chicane, after the start. After several laps with Debbie in the lead and Bob in close attendance, Debbie made a small mistake and Bob was through and started to build up a commanding lead. Just as well, at the third fuel stop, Bob's tyres were down to the ring gear, and with the new P.B. diff fitted, it was decided by the pit crew that a ring gear change and two new rear tyres would take too long, and with the lead Bob had at this stage, instructions were given to coast it to the finish. It was very close. Steve White, by now recovered from the start scramble, was going very well and had passed Debbie and was gaining on Bob, just over 2 seconds separated them at the line, with Bob just hanging on to win his first Open Final. He was also fastest qualifier both days. Debbie Preston held on to third, Bob Rosser, fourth, Paul Ekins fifth, and Dave Preston with a string of problems, sixth.

0-15%	20% and over
1. M. Shaw	1. J. Moon
<ol><li>B. Webster</li></ol>	2. B. Palmer
3. Bartlett	3. B. Rosser
4. A. Sturgess	4. D. Blair
5. T. Bridle	5. D. Jones
6. R. Bowden	6. R. Lemin.

Competition was again very close for these places, with several drivers missing out by fractions of seconds.

Everyone seemed to get at least one good heat time during the day, but many drivers had problems. Poor Dave Preston, had his car all prepared for the final, one

minute before the start it decided to demolish the gear carrier, brake and ring gear, effectively stopping him competing in the final. Walt Bailey and Debbie Preston were through from the semi, Debbie winning, with Dave Rogers, Doug Blair, Colin Englefield and Steve White not quite making it, though it was close again. Fred Martin was just outside the top ten, missing the cut by two hundredths of a second. The four drivers straight into the final were Bob Errington, Dave Preston, Bob Denton, Pete Hutton.

The final was staged amid large crowds lining the circuit seven and eight deep in places. The battle was very close up to the first fuel stop, then that man Errington, (it's getting monotonous)! started to pull away again. But Debbie was lying second and was about to get her revenge for the day before. Bob, "just to make it interesting" was having trouble with his front tyres, in the panic to change one a very much larger diameter tyre was put on. one one side, and in the words of the apostle, things aren't what they used to be, or in Bob's case it didn't handle too well! Debbie got past to win. Pete Hutton and Bob Denton, fourth and fifth, stripped brake servo gear, and Bob had numerous problems, and Dave Preston sixth.

### 

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THE 4th International GP of Geneva took place at the end of July using the same venue and circuit layout that will be the scene of the 2nd World Championship next July. Ted Longshaw and Keith Plested took the opportunity of trying out the track with no little success. Keith won the Formula event with Ted in fourth place. Local champion Udo Franke won the Prototype with Keith second and Ted third. Basically, apart from the pleasure of welcoming visitors, even if they did take the lion's share of the cups, this was a rehearsal for next year's show.

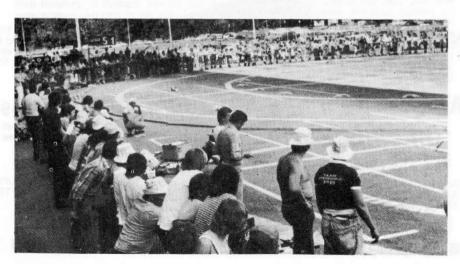
At the level of lap counting and chronometrage the results were encouraging with eleven rounds in Formula and thirteen in Proto giving complete satisfaction. This was the last occasion when Rex Watson was to brandish his outsize flag bearing the arms of Geneva: it

# GENEVA SCENE

Photos: J. C. RUMBELI

was ceremoniously presented to him after racing. For the future a computerised lap counting and timing system takes over (Rex even sent me a letter from it in fluent Printoutese to show its paces!) The circuit has something for everybody with its joys and its hazards evenly shared by all. The Botts dots — actually Fiat provided — proved efficient preventing liberties without damaging cars; on the other hand the drivers' rostrum needs to be twice as high next year. There were also some breaks in the barriers which could be dangerous if a car left the track and spectator protection must be improved. Protective barriers will have to be placed all round, involving several hundred metres of metal. The most pressing problem was personnel for the two days of racing. It will be necessary to engage security staff to deal with the paying public - on whose support a great deal rests. Meanwhile a "head of Staff" in charge of the whole organisation will be chosen to deal with all these problems.

EFRA at its AGM fixed the number of entries permitted from Europe with GB, West Germany and Italy 10 each, Switzerland 9 plus 2 more for being the host country, Sweden 9, France 8, Holland 8,







Belgium 8, Austria 6, Monaco 6, Spain 4. Finland, Yugoslavia, Luxembourg, Liechtenstein and Ireland 2 each making 100. Up to 100 non-European entries will be accepted. Countries will choose their own representatives.

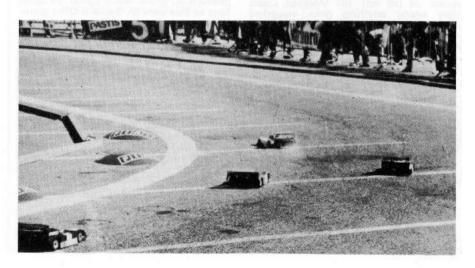
Training will start on Sunday, 1st July and continue through Monday and Tuesday daily 8.30 — 12 and 13.30 — 18.00. Qualifying starts on Wednesday 4th, and continues through Thursday and Friday. Then on Saturday there will be the consolation competition for drivers placed 65 — 128 with consolation prizes. The big day, Sunday sees the final qualifying rounds with the four best drivers going into the final and with two semifinals from which the best three in each group go forward into the final, making a total lineup of ten cars, for a 45 minute event.

Left: Part of the circuit and spectators. Below: Close-up of cars and some of the Fiat "Botts Dots" to keep cars on the track.

Left: Smiling Keith Plested receives his trophy. (Coming events . . .?) Right: Another track view with Rex flagging in a winner.

Some details of accommodation have also been released. There will be a certain amount of dormitory accommodation (20 beds in a dormitory) which will be free. Three hotels have been listed with prices ranging from 45 Swiss Francs single to 90 Swiss Francs double room, including bath and breakfast (in sterling, as of now, this is about £13.50 up to £26 or rather less than a good London hotel).

Final note for would-be entrants and national bodies. The entry forms have to be completed and returned by May 15th to 2e Championat du Monde de voiture R/C. Case Postale 55, 1211 Geneve 1 Switzerland. Entry fee Swiss Frs 50, payable only through postal transfer to Geneva Account No. 12-15338. No cheques!





TED LONGSHAW reported some of the EFRA AGM highlights to the BRCA AGM. First of all Ted serves a further year as President and is joined by Peter Bervoets and Denis Tassaux to make a "committee of three" who will make any necessary day-to-day decisions. One of the committee retires each year so that continuity of action is assured.

ROAR rules for 1/12th were accepted, including the latest modifications, just approved. These are basically to divide the cars into three classes: (i) Production Class (unmodified) eligible to cars available to general public at least 90 days before the race. Motors must be out of the box unchanged (as per accepted list) but some latitude allowed in choice of wheels, tyres, axles, speed control. Ballbearings would only be permitted if part of the standard 90-day available car. (ii) Stock Class: anything ROAR legal in dimension and construction terms permitted, which means that scratch built cars accepted. Restriction: must be powered by approved motor (as per list). (iii) Modified Class: Very nearly anything goes, reworked motors, epoxied, bushes, bearings, etc.,

President (1979): **TED LONGSHAW** Beech Tree House. West Hill, Downe, Orpington, Kent.

but stock armatures and can must be used. Details will shortly be available of these classes in more precise form, in-

these classes in more precise form, in-cluding list of "approved" motors for Europe which may well differ at least in trade names from those agreed by ROAR. Existing silencer rule will be reinforced by the addition of words 'under any conditions.' Thus not possible to blame local echoes etc., for infringement. Wise drivers will therefore aim for 78db under normal conditions.

Minimum tyre sizes return to Front 60mm and rear 65mm.

Representation at Euro Meetings with an agreed maximum of one hundred entries to be within the range of maximum ten and minimum two on a proportional system with host country getting an extra two places.

Ireland was accepted as a separate member country, covering the whole island, with an allocation of two international places for Euro Champs.

World Championship entry will be limited to 200 with 100 coming from the 15 EFRA member countries. A strong US contingent is expected plus Japanese racers and others from all over the world.

US Winter Nationals will be held in Florida on February 8/11th and European entrants will be welcomed.

The Belgian Federation have offered to produce an EFRA News Letter on same lines as their own (in English!) Offer gratefully accepted.

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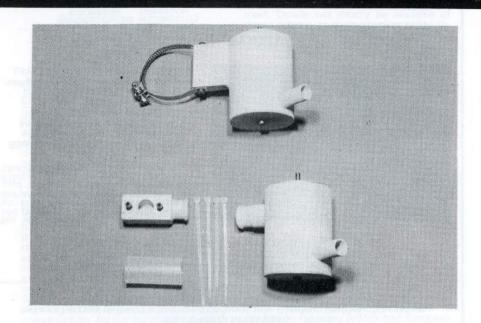
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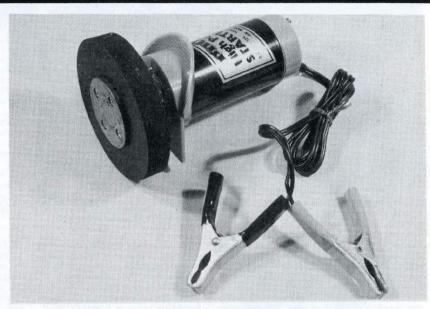


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RC-CAR STARTER DISC for above Starter DM 44.— for Sullivan-Starter DM 43.——

# **Modell-Car-Vertrieb**

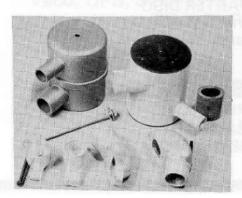
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### SHOPPING AROUND



SPENT some time this last week or two in a real r/c car man's Aladdin's cave of goodies photographing Ted Longshaw's specials for his new catalogue — asking "What's this" and this and that. Some that specially appealed are here, if you want some more you must get Ted's latest 56-pager still at 50p and "printed proper" now. Another very different visit was to Hertford where AMPS hold sway in the old Station House of the pre-grouping railway days. Activity here is terrific with vast numbers of machines and all the space is working area with no frills . . . if the seven dwarfs came in they would be in their element producing rare jewels all the

Mixed bag of silencers and manifolds from Ted's new catalogue. Serpent and PB at the back, manifolds include K & B, Super Tigre and OPS.



A new Mardave chassis lurks under this attractive Ferrari 312 T3 chassis soon to come from the new and enlarged Mardave factory.

time. One very special jewel may well be released by the time this appears — a new mini-differential. This is just a little bit smaller than the current production model and should be a trouble free fit in some of those layouts where getting it in with everything else is a real problem. I saw it installed on Cromberg's Serpent which they had there to work on.

Closer to hand, however, is the range of three differential oils in 50cc bottles for dry, damp or wet conditions. The viscosity of the oil differs and suits the specified weather state. Capacity is only a very few cc so a set of bottles ought to last very nearly a season unless several changes a day are being made. (You change oil by pumping it out — easy! with a blast of air) AMPS also have some low-priced servo arms — real heavy duty gear. Other items include radio posts, heavy duty ball jointed track rods and adaptors to use Thorp or HRE wheels on PB etc.

Airedale Models of Keighley have entered the market with an attractive heatsink in a matt black finish with plenty of metal to justify the claim "a heatsink that works." This is a casting, jig bored for accurate fitting in a registered design with a price that reflects on its production method at £4.99 (including postage).

Nat Polk was over here recently seeing what Europe and England has to offer for

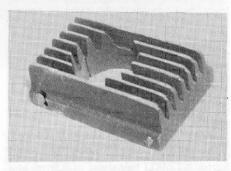
his New York shop and told me how the 1/12th electric side of r/c cars is taking off over there though some of the new paycircuits are finding that their landlords want to be in on the profits so that their take is not quite what they had expected. However, he did unearth at least one new item which he passed on to me. I have a sample of Model Flight Accessories Olympus belt drive reduction unit which sells at £10.99 complete or unit without motor £7.95. Replacement belts cost 68p. Since I have just had details of 1/12th scale stock cars this seems ideal to make "little brother" just like big brother in 1/8th. I hope to have a car running with it by next issue. Meanwhile MFA also make a useful little servo saver at 59p, which I see some of the smarter electric people are already using. It comes with two strengths of spring - you take your choice.

Per Gustafsson has sent details of his Minicars Challenger Mk II which follows very much the pattern promised at last year's Nuremberg Toy Fair. It is, of course, the ideal way to develop a practical kit car to make minor changes as experience proves desirable rather than radical new models simply to provide "this year's model." In its simple form it has normal drum brake (the more expert model has the excellent Minicars disc system) and a very neat throttle linkage that is as near foolproof as any. Another current release is the Dutch Serpent Mk III which is being

distributed by AMPS of Hertford as mentioned last issue.

Mardave too are producing a new car but — surprise, surprise! — will sell at current price of £23.75. The range will be confined to the Ferrari shown plus the







Top to bottom: AMPS diff oil in three grades; new heatsink by Airedale; Model Flight's belt drive for electrics and bottom Latest Mincars Challenger.



 $McCoy\ cranks\ for\ K&B\ -\ on\ offer\ via\ Ted's\ catalogue.$ 

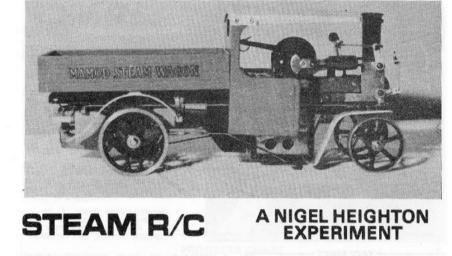
Capri Saloon. Underneath the attractive body lies a completely new chassis design, details of which should be released by the end of January, by which time Wes Raynor hopes to be in his new enlarged factory premises where he will be able to find room for some more workers... and as he puts it, "even find time to do some 1/8th racing again." This should cheer up a lot of people who have found supplies a bit hard to come by over the past few

Scratch builders may like to profit by a stock of magnesium reported to me. John Gray of 136 London Road, Kingston, Surrey KT2 6QJ has sheet of 6.6mm and ½in. thickness and bar of 1¼in diameter. Magnesium is a delightful non-ferrous metal to work as older readers who

salvaged ex-incendiary bomb cases during the war will well remember.

Some of the numerous 1/12th electric clubs starting up may like to obtain supplies of self-adhesive racing numbers 1-6 at £2.50 per six hundred stickers. Numbers 1-8 are also available. These are obtainable through Midland Electric Racing Car Association and contact should be made to George Godfrey, 174 Cedar Road, Earl Shilton, Leicester, LE9 7HG. Cheques and POs payable to MERCC.

A goods in use breakdown from the latest Bournemouth meeting will be of interest. Peter Hutton and Bob Errington report: "Diffs in evidence in quite large numbers, mainly AMPS but some preproduction PBs. OPS engines to the forefront, lower handicappers running SuperTigres. Tyres, fronts seemed to run all through the range, but Associated 832 favoured, with PB372 and 371 also prominent. Rears were mainly Assd. 2402, Ufra specials, Delta 340A, 340B, a few PB371. Futaba radio still has strong hold, but MacGregor becoming quite popular."



INTRODUCTION of the Mamod Steam Wagon made the notion of an r/c steam vehicle a more practical proposition since receiver and servos could be hiden under a dummy load on the platform. Heat transference from firebox to chassis was found to be negligible, but platform was hinged to gain access to boiler, so a quick release would be needed and this led to a re-think. It was decided to mount radio gear above rear axle but below main chassis. Brackets were made to support a polypropylene plate and servos were mounted on this plus an on/off switch. Rx went on platform with battery suspended beneath it.

Linkages and steering came next.

Wagon has forward and reverse. Steering works from a central pivot and also embodies suspension. Eventually an L-shaped lever attached to bottom of firebox, with a forked end to engage an extension of the central pivot, was made. Speed lever was located inaccessibly so that a series of links were needed to get to it, and an adapter plate attached to the front chassis section.

Garage tests in winter proved that the set-up was workable; with better weather the wagon's performance improved. Next stage must surely be the more difficult task of doing a similar job on the Mamod Steam Car which would truly be a delightful sight belting round the circuit



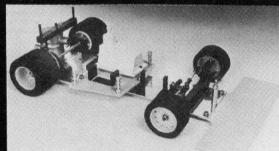


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Record-winning team: I. to r. standing Gary Campbell, Larry Flatt, Will Petty. L to r. front Bill Campbell Sanders, Sim Picheloup.

### FACT SHEET WORLD RECORD 24 HOURS MIAMI — FLORIDA

Start: 2.00 pm Saturday, December 2,

Finish: 2.00 p.m. Sunday, December 3,

Location: South Florida R/C Car Club Track, Tropical Park, Miami, Florida.

Track: Asphalt Surface. Inside dimension 700'. Outside dimension 900' est. Centreline dimension 833'. Ten Turns. Sandy

conditions. 15' wide track. Weather: Warm (80 deg - 90 deg) and

humid.

Drivers and Crew: Bill Campbell/Gary Campbell. Steve Sanders/Will Petty. Sim Pichelaup/Larry Flatt. (Each drove 4 hours).

Chassis: Delta Super "J" - Stock con-dition except for prototype hardened

kingpins and axles.

Tyres: Fronts — Delta 321 Medium Hards.
Rears — Delta 4 and B. (5 sets used).

Engine: O.P.S. 21. Delta "80" Slide Valve

Carburettor. Prototype Delta Paper Air Filter. Prototype Delta 80 dba muffler. K & B glow plugs (3 used). Delta Heat sink and head.

Radio: Futaba Receiver with S-7 servos. Delta 5 cell receiver battery packs. Futaba and Delta transmitters used.

Body: Associated Lexan Porsche 917 30 KL (front ½ was doubled with silicone sandwich).

Fuel: Delta Red - 15% nitro synthetic oil (5¾ gallons used).

Achievements: 12 hours — 268.04 miles. 24 hours — 539.56 miles. Average Speed — 22.48 mph. Laps Completed — 3,420. Pit Stops — 206 (11 unscheduled). Shortest Pit Stop — 3.8 seconds for fuel. Longest Pit Stop — 6 min 30 seconds to change servo.
Race Directors: Steve De Vito. Doug

McNeeley.

A DELTA factory team consisting of Bill Campbell, owner of Delta Race Cars Inc, Sim Picheloup, Chief of Carburettor Development for Delta, Gary Campbell, Iowa Series Champion, Will Petty, Southwest Series Champ, Steve Sanders, former Southwest Series Champ, and Larry Flatt, Heart of America Champ set a new 24 hour enduro record of 539.56 miles at Miami. Florida on December 2nd and 3rd. 1978.

Five teams raced for 24 hours at this event which was the first of its kind. Teams from Indianapolis, Indiana, Orlando Florida, Ft. Myers, Florida, Miami, Florida and the Delta team based out of Lorimor, lowa competed.

The Delta team used their race proven Delta Super J, powered by an O.P.S. 21 engine, with Futaba radio. The Delta Super J has now won the U.S. Winter Nationals, U.S. Indy 500, U.S. ROAR Nationals, U.S. Mid-America Formula 1, and now the world 24 hour record.

The Delta Super J was in stock condition except for prototype hardened Kingpins and axles. This race was run under the new 80 dba muffler rule, and Bill Campbell installed the prototype Delta muffler. Only tyres and battery packs were changed and the O.P.S. engine was actually actually and the order to the control of the control o tually running stronger at the end of the race than at the start. Bill Campbell advised me that an examination of the engine after the race showed only minimal



PROGRESS CHART Time Team										
	Delta	Ft. Myers	Miami	Orlando	Midwes					
2.00 p.m. 6.00 p.m. 10.00 p.m. 2.00 a.m. 6.00 a.m. 10.00 a.m. 2.00 p.m.	0 594 1143 1699 2289 2858 3420	0 579 1107 1687 2261 2808 3395	0 566 1112 1501 1994 2413 2895	0 529 909 1354 1609 1950 2311	0 394 682 942 1102 1277 1488					
Miles -	539.56	535.61	456.73	364.59	234.75					

wear, and it was his opinion that the engine would run 50 hours more!

The Delta team had no major problems except a crash at about 1.30p.m. (30 minutes from the end) which stripped gears in the steering servo.

With five teams racing on the same track at the same time this event was quite exciting. There is lots of talk now about having more team racing enduro type events, with numerous cars.

The record attempts were sponsored by the South Florida RC Car Club and Steve De Vito and Doug McNeeley monitored the rules and race to ensure that the rules governing the Hawaii and Wombwell attempts were followed.

We're betting that it won't be long before someone goes 600 miles in 24 hours. All you die hard racers better start truing tyres.

LARRY FLATT.





### STOX "WORLD" CHAMPS 1978

A slightly overcast day welcomed some 55 members of the organising RSCA to the British version of the Stock Car World Championship. which for the fourth year was held at the small Mencap Circuit in Leicester.

Prominent amongst the entrants were the defending 1977 World Champion Dave Wragg with his Kavan/Veco 19 powered Mardave No. 306, and twice ex-World Champion in 1975 and 76 Steve Talbot, No. 8, and the current National Championship Points Leader Roger Bye, No. 258 who had travelled up from his South London home the previous afternoon.

Practice began at 11 o'clock, with drivers facing the usual problem of finding the right combination of tyres to suit the damp but drying track, mindful no doubt that with the large entry, the surface would soon become slippery with exhaust oil. However, practice was soon completed, and the cars were called to the track centre for scrutineering. Most were extremely well turned out, but as ever some left much to be desired.

#### THE QUALIFYING HEATS

At a little after 1 o'clock the first of 27 events making up the 3 Heats began, and the dubious honour of being the first casualty of the day quickly fell to Martin Robertson, No. 254, who hit the outer track barrier very hard and lost his bodyshell. In fact many drivers seemed to take a fair while to settle down, and few were fortunate not to get tangled on the bends. Particularly unlucky in these 'close encounters' were Steve Talbot who lost a wheel, and National Leader Roger Bye who shattered a wheel, resulting in him completing only 17 laps, and with only 12 drivers qualifying for the Semi-Finals, virtually eliminating him from the honours in his first

Chris Price, driving his Perry/Veco powered Stox was one of several white roof novice drivers taking part, and his first event was plaqued with the only proven case of radio interference on his yellow frequency. It later transpired that Stew Busby, Chairman of the RSCA, had purchased new green crystals the day previously, and a defective crystal in his transmitter was swamping the yellow spot as well. The outcome was that the score Chris achieved in his second heat was doubled, so eliminating the difficulties of holding a re-run. Finalists in the "World" Stockcar Event: Stewart Busby (3rd) Brian Sylvester (5th) Steve Richardson (4th) Dave Wragg (1st) Steve Talbot (2nd) and John Simmons (6th)

### HEAT 2

Heat 2 saw, generally, a better standard of driving and racing, and with competitors having had a taste of things to come they were more settled with lap totals improved on the previous heat. Steve Richardson No. 55 was driving consistently well, and notched up his second of three 32 lap heats of the day. Steve Talbot at last had luck and a return of form on his side, and answered Dave Wragç's opening account with a best score of the day 36 laps, equalled only by Clubmate Bob Clayfield. Dave then followed in the next event, and his face was clearly indicating the pressure of the meeting. However, all seemed set fair when disaster struck as he lost a front wheel. Any lesser driver would have pulled off, but Dave carried on, for most of the time carefully balancing his car but now and then showers of sparks could be seen beneath the car as the front axle bottomed on the ground. Nevertheless he achieved a further 28 laps on his three wheels and despite losing the overall leadership

kept alive his semi-final qualifying hopes.
Andy Clay No. 34: Dave Bran, No. 188: John Orton, No. 208: Terry Murphy, No. 320: and Keith Parkin, No. 391 all improved with 31 laps apiece. and at the end of the second heat were nicely placed in the top 12 behind new race leader Bob Clayfield, who had scored a massive 70 laps.

#### HEAT 3

By the start of Heat 3, a clear pattern of probable finalists was emerging. Included amongst these was lan Spiller, No. 14, who had driven two very controlled heats and was handily placed in 10th place overall. Heat 3 saw lan put in his big effort, and with around a minute left of his race, was well clear of the other drivers. Ian then tangled with a back marker, breaking the front offside stub axle and costing him a further 10 laps - just enough to exclude him from qualifying for the Semi-Final.

Once more good runs were put in by Dave Wragg, Steve Talbot and Stew Busby, while Haywards Heath member Terry Crawford completed 32 laps and secured a place in the Semis.

Following the Heats a run off took place between tied finalists Dave Woods, No. 9 and Keith Parkin, No. 391. The contrast in style of driving was most noticeable, with Dave fast but wide and Keith slower but tight. However, Dave eventually took the race, and after a short break for crystal changes and general repairs, joined the others for the 2 semifinale

#### No. 1 THE SEMI-FINALS

With the draw complete for the Semi-Finals, the cars for the first event were called out onto the

cars for the first event were called out onto the track and lined up as follows:

Steve Talbot (8) (90 laps); Bob Clayfield (64) (101 laps); Stew Busby (85) (96 laps); John Simmons (128) (90 laps); Terry Crawford (172) (91 laps); John Orton (208) (93 laps).

With the first 3 from each Semi-Final through into the Grand Final, the first event got under way and can only be best described as fast rather than accurate. Most cars tangled at some time, and the sound for the end was greeted with relief by Steve, Stew and John Simmons who had all qualified.

#### No. 2

The second Semi saw defending Champion Dave Wragg, No. 306 out on the grid with the following: Dave Woods (9) (87 laps); Steve Richardson (55) (96 laps); Andy Clay (34) (94 laps); Brian Sylvester (428) (95 laps); Dave Bran (188) (93 laps).

This event also started very fast, and again several cars rolled on the first bend. Run off finalist Dave Woods was experiencing chronic handling problems, and this robbed him of any chance of reaching the Final Once more though, it was Dave Wragg who took the honours with Steve Richardson and Brian Sylvester making up the 6 required for the Final.

#### CHAMPIONSHIP FINAL

Unlike the Heats and Semi Finals, the Final was a single 5 minute event, and on this occasion was to

have a single file rolling start.
As the competitors came onto the track, a sense of real excitement and expectation gripped spectators and drivers alike. Here were Steve Talbot and Dave Wragg, who had won the Championship 3 times between them in the last 3 years, and Dave also the 1977 National Champion and placed 3rd in the Dutch event last year. Stew Busby and Steve Richardson, both highly successful drivers were tied near the top of the 1978 National Championship, while John Simmons, the only non Leicester member to make the Final was also tied with Brian Sylvester in the same Championship.

After what seemed an eternity, the hooter blew for the start. Everybody was a little over anxious to win, and rolls were happening thick and fast. Steve Richardson, who had driven magnificently all day was hitting the bends a fraction fast, and undoubtedly lost valuable time and distance in the process. Steve Talbot was adopting his usual trackside stance, and if anything was swaying, turning AND chewing even faster than ever, and in the middle of the race whilst battling with Dave Wragg tried just too hard and had what must have been the most expensive roll-over of his racing life, losing what proved to be a vital lap to the race leader.

John Simmons, the Chessington Clubs' big hope did not of course have any friends on the track to offer him some protection, yet until about half race time was progressing very well - then his engine started to slow, and he was faced with the agonising decision whether to bring the car in for adjustment or to continue and hope for the best. He chose the latter and subsequently must have wondered if he had made the right choice.

However, it was obviously a very closely fought race, and when the finish came nobody was quite certain who had won.

Soon word came from Race Control that only 5 lans separated the first 5 drivers, and that for the second year running the World Champion was Dave Wragg with a marvellous 44 laps. Steve Talbot came second with 43 laps, and both drivers have now won the Championship twice - who dares to miss the event next year with so much at stake?

The full result is detailed below:

1st Dave Wragg — Leicester, No. 306, 44 laps. 2nd Steve Talbot — Leicester, No. 8, 43 laps. 3rd Stew Busby — Leicester, No. 85, 42 laps. 4th Steve Richardson — Leicester, No. 55, 41 laps.
5th Brian Sylvester — Leicester, No. 428, 40 laps.
6th John Simmons — Chessington, No. 128, 35

### THE DUTCH ENTRY: A COMMENT BY THE EDITOR

TWENTY-SIX entries were received from Holland, but, for administrative reasons it was not possible to accept them in view of the not possible to accept them in view of the large British entry already enrolled. A token acceptance of six only was offered, though a suggestion that the 26 should qualify at Newbridge was made with the six best to run. This the Dutch declined. A great pity! But it is impossible not to see their view that a "World" championship so heavily loaded against them would have been a farce.

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# **CLUB & TRACK REVIEW (Contd.)**

Rotherham Electric Car Club Secretary: Phil Maxfield, 40 The Brow, BRECKS Rotherham, S. Yorks. (Tel: Wickersley 5055).

The club hold meetings every Monday, 7 — 10pm for 1/12th scale electric cars. Current membership of fifteen. New members welcome, contact secretary as above for details.

Southern Radio-Car Club

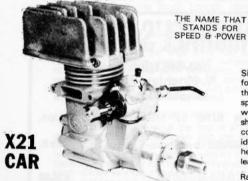
Tod Toombs,
"Clovermead", Lyons Road,
Slinfold, HORSHAM,
West Sussex.
(Tel: Slinford 790342).

Emboldened by the successful Fiesta Stockcar Meeting last summer, Southern Radio-Car Club are planning to organise an International Meeting next summer. Tod Toombs their Vice-Chairman has asked us to make an announcement on these lines:

Stock Car Club Secretaries: All U.K. and European Clubs interested in competing in a sponsored International stock car competition, please contact: Peter Wooldridge, Sec. Southern Radio-Car Club, 6 Patricia Avenue, Worthing, West Sussex, England (Tel. Worthing 49934).

Horam Model R/C Auto Club Secretary: Harry Wells 9 Tudor Walk, Framfield, Sussex. (Tel. Framfield 618)

The country clubs all seem to do better with accommodation than more urban locations; perhaps because life in the country — or am I wrong? — is still much more friendly than in town. The Horam club is based on that small town and races in a disused warehouse every Sunday morning from 10am to 1 o'clock and, hopefully, on Wednesday evenings also. Interests are 1/12th scale electric and 1/8th stock cars. This makes another Sussex based stock car group, so that stock club spacing is getting closer together.



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### STOCK CAR NOTES

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### CHANGING OF THE DRIVE BELT MADE EASIER

WHEN it comes to changing the drive belt, a lot of time is spent loosening the engine so as to allow enough clearance to remove and replace the drive belt, not all cars have this problem but for cars where the clutch drum is held in place by the chassis then this modification may come in handy.

Firstly the engine must be moved back away from the chassis leaving a gap of ½" between the chassis and the clutch drum, if the engine cannot be moved back away from the chassis then a lathe will be required to remove an ½" from the rear of the flywheel so as to leave a recess, see Fig. 1. A retaining plate will now have to be made to hold the clutch drum in place, this can be made from a piece of aluminium angle.

The angle is first cut to size, a piece 1½" long is required, a hole is then drilled at each end, the angle is then placed in position and with a smaller drill two holes are drilled in the chassis. The plate can now be held in position with two self tapping screws, counter sunk if available, see Fig. 2.

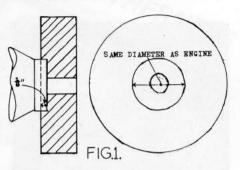
The body shell will require a little work on it due to the angle strip on the chassis. The angle strip could in fact be fitted under the chassis but care must be taken so that the strip will not foul the trailing arm.

#### METAL CLUTCH DRUM

Continuing from the last issue, this clutch drum is standing up to the rough treatment which it has been subjected to, and by the looks of it the only thing that will wear will be the drive cog, but I have been in contact with Avi Craft and they have stated that they will supply replacement drive cogs which look rather easy to replace without too much trouble, I do believe these will prove good value for money.

### **INFLATABLE TYRES**

Continuing from the last issue, these tyres have now been modified but there is still the trouble of the tyre compound. This tends to bubble and the tread seems to rub off. The only solution to this problem is to use an all rubber compound, but I feel that these tyres could prove rather costly because of the collisions that the stock





cars are likely to take when they hit the outer barrier, as some barriers have a rough area fitted to them and this could lead to a lot of torn tyre walls and so a rather costly item to replace.

# NEW OFFICERS FOR RADIO STOCK CAR ASSOCIATION

Following the AGM on December 10th RSCA elected new officers as under:

Chairman: Mark Bye, 63 Heathfield South, Twickenham, Middx (Tel: 01-892-6634)

Secretary: Mike Varley, 10 Briarwood Avenue, Riddlesden, Keighley, Yorks. Press Officer: Linda Woodger, 1 Newton Close, Langley, Nr. Slough, Berks.

It was decided at the meeting that the association should endeavour to embrace a wider outlook as a truly national body. To that end it was agreed that a local club would be encouraged in the Leicester area to make use of their excellent local facilities; that the RSCA should not run meetings as such but devote more time to widening its scope and developing not only a better understanding nationally, but also to co-operate with the big Dutch group for exchange meetings and a real annual championship.

### R/C CARS: WHERE TO NOW?

A PERSONAL MESSAGE FROM TED LONGSHAW



This must be a thought in many minds. Readers are invited to express their views. Most European countries follow a club rather than an individual member system and can claim to speak for a higher proportion of followers. Active top-line racers must be in a minority, let us do more for the mainstay of the hobby/sport the ordinary club-man. Editor

First let me assure you that the following remarks are PERSONAL thoughts, and are not necessarily the views of anyone else, either in the B.R.-C.A. or EFRA. They are to set YOU thinking, and perhaps even DOING something. Why ask the question even, when r/c cars during the past year have enjoyed their biggest growth ever? Some will say, I am sure, all must be well. I think not.

Let us take the B.R.C.A. first. I have been a member since its inception, voted on its present constitution and rules, etc. etc. (so, if there is any implied criticism in my remarks they are directed equally at myself!) and I have nothing but the highest praise for the prodigious amount of work put into running it by Tom Martin. BUT!! Is it right that the two hundred or so of its 450 members who turn up to its A.G.M. should decide how all r/c car racing is run? It is obviously in everyone's interest that we all use the same set of rules, so logically we should all have a say in what they are.

Why are there comparatively so few members of B.R.C.A.? You probably have your own answer but the reason I hear most is cost. There is no doubt that given the present system the fees are NOT excessive. BUT is it time to change the system? Perhaps allow individual membership if you want your own personal newsletter etc., but also create "Club Membership" similar to Boats and Planes, with members of a club becoming Associate Members of the B.R.C.A. as a condition of membership, at perhaps a third of today's fees. This would still give the much vaunted Insurance cover that we all need, and allow A.G.M.s with proportional representation, or something like it. Another advantage is that it would give us strength in numbers when talking to "authority" about our hobby. Think about it.

Another very worrying factor is the cost of equipment needed today to keep up with the "lucky" sponsored drivers in open competitions. Of course most enthusiasts like to compete occasionally against the Greenos, Booths and Prestons, etc. but because the majority are neither sponsored nor rich their chances are diminished through not always having the latest "thingie". So we have a handicap system, which works well, FOR MEMBERS OF THE B.R.C.A., but what if you are not a member?

Continually, at the A.G.M., the question of another "class" of racing is raised and always voted down. Why? Personally, I believe it's because the main sponsors are proposing rules that favour one make of car. But this new class is necessary. The same problem exists in America where they are experimenting with restrictions on carb bore .1in. and allowing any 19-21 engine. The idea being that without too much power there is no need for too much sophistication everywhere else. WHAT ARE YOUR IDEAS?

There are eleven more months to the next B.R.C.A. A.G.M. Plenty of time for YOU to think about it, and as I said before, perhaps even DO something. R/C car racing, both i.c. and electric, is a tremendous hobby, remember Slot Racing, do not be complaisant.

Ted Longshaw





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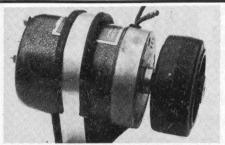
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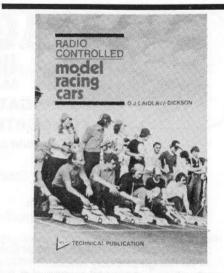
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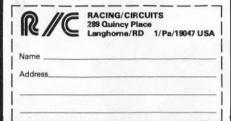
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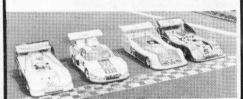
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