



MODEL PUBLICATION

Model Cars Monthly

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SLOT CAR RACING
-the 1984
National
Championships

PROGRESS REPORT
-latest Kyosho
1/10th Off-Roader
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PLUS
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Model Cars Monthly

December 1984
Volume 4 Number 11

Publisher TONY DOWDESWELL
EDITOR BILL BURKINSHAW
Assistant Editor LEWIS ECKETT
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Graphics JENNY HINE

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Manager** Simon Harrison

Publishing Director JOHN FOSTER
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Chief Executive** JIM CONNELL

Cover
In the jungle this month with the Marui 'Hunter' the subject of an in-depth Track Test on page 28. Once again our thanks go to the boys in the darkroom, Manny and Neil for getting in amongst the foliage of our office reception area to provide us with front page.

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Model Cars (ISSN 0260-762X) is published monthly by Model & Allied Publications, P.O. Box 35, Wolsey House, Wolsey Road, Hemel Hempstead, Herts. HP2 4SS, England. Tel: Hemel Hempstead (0442) 41221. Distribution to North American hobby and craft stores, museums and bookshops by Bill Dean Books Ltd., 166-41 Powells Cove Blvd., Post Office Box 69, White-stone, N.Y. 11357, USA. Tel: 1-212-767-6632.

Advertisement Offices: P.O. Box 35, Wolsey House, Wolsey Road, Hemel Hempstead, Hert-fordshire HP2 4SS. Tel: 0442 41221.

Subscription: UK Sterling £16.00. Overseas £17.00. US\$22.50. Airmail £34.00.

Subscription agents: Infonet Ltd., 10-13 Times House, 179 Marlowes House, Hemel Hempstead, Herts., HP1 1BB, England. Tel. 0442 48434.

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Model Cars is printed in Great Britain by Loxley Brothers Ltd., Aizlewood Road, Sheffield S8 0YS. Mono Origination by Multiform Photosetting Ltd., Cardiff, for the Proprietors and Publishers, Model & Allied Publications (a member of the Argus Press Group). Trade sales by Argus Press Sales & Dis-tribution Ltd., 12-18 Paul Street, London EC2A 4JS.

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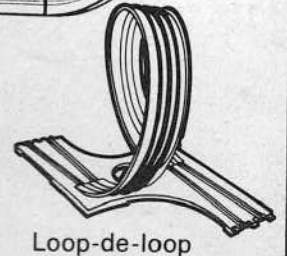
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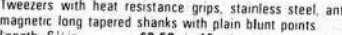
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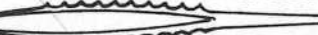
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Seen & Heard

Racing at the Model Engineer Exhibition Wembley Conference Centre

The dates for the various race meetings have now been set as follows.

1/12th Electric Stockcars — January 1st (bank holiday)

1/12th Electric Circuit — January 4th

1/10th Electric Off-Road — January 5/6th

All the above events will take place in the main auditorium of the conference centre. Entries for the 1/12th Stockcar racing are being dealt with by Chris Loughran, 36 Glenhills Boulevard, E.M.E. Leicester, E2 8UA. Entry forms for the other two events are printed on page 9.

Slotcar racing will also be taking place under the organisation of the British Slot Car Racing Association (BSCRA) who will be displaying all types of Slot Cars as well as holding races for the public. For further details contact Dave Harvey, 52 Hawbeck Rd., Gillingham, Kent ME8 8TP.

Newsletters

Many Model Car racing clubs produce newsletters for their members and many of these find their way onto the 'Model Cars' desktop. Although club newsletters specifically relate to a small band of people, their interest to us is high. Particularly, if examples are well produced, erudite and above all, funny. Thankfully, most are.

To pick out specific examples is difficult, but following the reasoning that the best deserves recognition then here goes . . .



Right; two examples of the newsletter art, 'wheelspin' from Southampton and the Bristol ORMC publication.

Southampton Radio Control Model Car Club newsletter produced by Les Strange. 'Wheelspin' really makes an effort to inform, aid and most definitely amuse with its irreverent 'Driver Profiles'.

Other newsletters that arrive like clockwork are those from Mendip and Yorkshire (both extremely good reads). Basingstoke, London and Medway. Keep them coming in please we really do appreciate it.

Club Chat

Still on the subject of clubs we

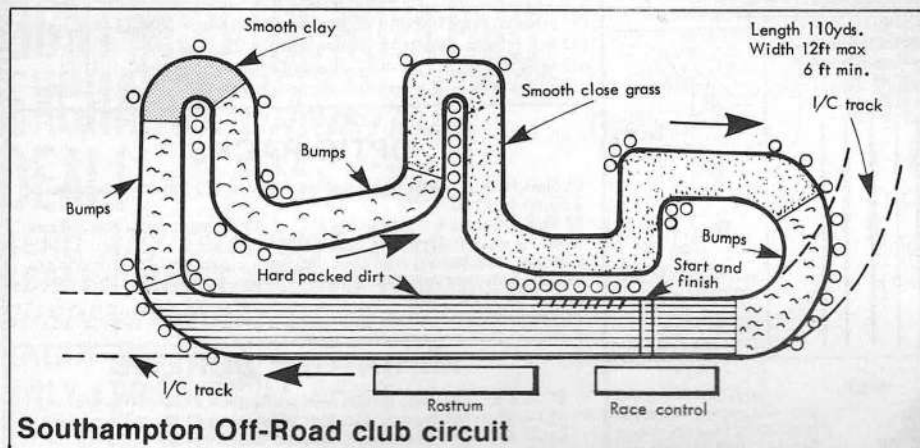
report a membership of 35, racing I.C. and electric buggies. They race every other Sunday at Boughton Monchelsea Primary School, Church Hill, Boughton Monchelsea, Nr. Maidstone, Kent. The council has allocated a space for the club at Allington Open Space, Castle Road, Allington, which will be developed into a permanent I.C. and electric Off-Road track. For more information contact Andy Everett, 23 Silverdale, Maidstone, Kent. Tel: (0622) 29432.

Southampton Off-Road Club was originally part of the successful and enterprising Southampton Radio Control Club (hosts of the recent Ever-Ready sponsored British Grand Prix) have branched off on their own not so long ago. This was because of the strong enthusiastic membership and a venue with plenty of potential for future developments aided by the local council. Active participation by club members in improving standards throughout has paid dividends with the club having a healthy respect in the area.

A newly designed electric track has recently been laid out after a period of trial and error and it incorporates features discussed during club meetings so that maximum driver experience could be utilised in the design.

The surface offers a combination of a fast hard straight with an infield of hard clay, bumpy sections and close-cut grass over packed dirt. A chicane was recently added to encourage better driver skills.

Unfortunately, that seems to be it for club chat this month: (thinks . . . perhaps we should employ a psychic).



Bristol Off-Road Model Club produce a regular newsletter on a par with the best of them. It takes the form of an A5 booklet and usually includes good reproduction of photographs on the cover and inside. Jeff Gearing produces it and manages to include relevant club information details for potential members, adverts and items introducing new products. Well done! 'Wheelspin' is the title given to the

come to the **Blackwater Valley Car Club** located at Homestead Farm, Wanborough near Guildford, Surrey. The club has been formed to cater for I.C. and electric buggies racing on Sunday afternoons from 2.00pm onwards. Full details including directions and fees can be obtained from Paul Grant on Farnborough 544428 after 6.00pm.

The Maidstone Model Racing Club have now established themselves and



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IFMAR NEWS (International Federation of Model Auto Racing)

1/8th Scale World Champs 1985 — Japan

There is difficulty in extending the time beyond the above dates due to the normal Japanese practice of only one weeks holiday, thus making it difficult to find officials and marshalls.

Location

The *Honda* circuit at Susuka (400Kms from Tokyo) is available, but will only be used if the current search for a site in Tokyo itself is unsuccessful. Wherever it is, FEMCA stressed that *all* International flights come into Tokyo. Actual race site will be confirmed by the end of November latest. Before then Mr. Tomita will also have details of package deals available through Japanese Tourist Agency which will include flights, probably by JAL and hotel accommodation. The total cost of a 7-day stop in Tokyo including flight, plus 7 days in Singapore, Hong Kong or somewhere, looks like being in the region of 1,700 - 2,000 U.S. Dollars. A 7-day Tokyo only trip including food looks around 1,000 - 1,300 U.S. Dollars.

Other things like security, spectators, controls, etc., all seem as though they can be satisfactorily organised, and the organisers have copies of the regulations of the best organised large scale race so far (Geneva '79) to help them plan.

Organisation

The Far East Model Car Association (**FEMCA**) agreed to the appointment of a nominated race Director, and the IFMAR suggestion of Mike Reedy was accepted. Mike for his part offered to be on site one week before the event to ensure everything goes well. Regarding any disputes or protests that may occur, there will be one named representative from each IFMAR block (**EFRA**, **ROAR** & **FEMCA**) plus the Race Director. The Race Director whilst taking part in the deliberations will not have a vote. This jury will be able to call on any evidence they wish from Referees, Time Keepers, or whoever to help them reach their decision. The IFMAR President may also take part in these discussions, but will not have a vote. The three blocks are requested to start considering now, who their representative for this important job will be.

Lap Counting & Timing

IFMAR reiterates its determination to ensure that at this event any dispute or protest will be subject to IFMAR jurisdiction.

This is the 'IFMAR World Championships' being held in Japan. To try and eliminate the main cause of concern for all competitors, the Automatic lap counting system developed in Holland and tested and approved throughout '84 in EFRA competitions **will be used**. There will be a back-up system in operation the whole time, and the plan is to have Fons Bervoets (the designer and manufacturer) on site to ensure all is well.

Allocations

The allocation for each block already agreed is, **EFRA 50**, **FEMCA 40**, **ROAR 30**. It is necessary that

Drivers taking part *must* be notified to IFMAR and organisers *not later than* end of APRIL, 1985. This is the minimum time to allow re-allocation. The U.K. allocation is at present six drivers.

The IFMAR 1/12 Electric World Championship

This event in Herning, Denmark was really well organised in a superb new building that really was purpose-built for the event.

An informal IFMAR Committee meeting took place, and several changes to future 1/12th Scale rules were put forward.

Once again the automatic lap counting system proved its worth in many ways, not least in the low amount of physical labour required.

A discussion also took place on control of Off-Road Racing, rules, etc. It was agreed by everyone at the meeting that in order for an event to retain a credible title of 'World Championship' the only organisation able to co-ordinate this would be IFMAR. Whilst not everyone is going to agree that this is so, there was much influential support for this point at the meeting. To help this along IFMAR have asked Mike Tobey, 8903 Jaylee Drive, San Gabriel, California 91775 U.S.A. Telex 215, 406T8, and Elvind Loyd Petterson, P.O. Box 609, 1601 Fredrikstad, Norway. Phone Day: Norway 3297044, Home: Norway 3240897, to act as co-ordinators, with a view to holding an IFMAR 1/8th & 1/10th Off-Road World championship in 1986.

Both ROAR and EFRA have offered to host the event and it will be up to organisers, etc. to submit applications and talk to these two gentlemen.

Gearbox

New Tamiya kits

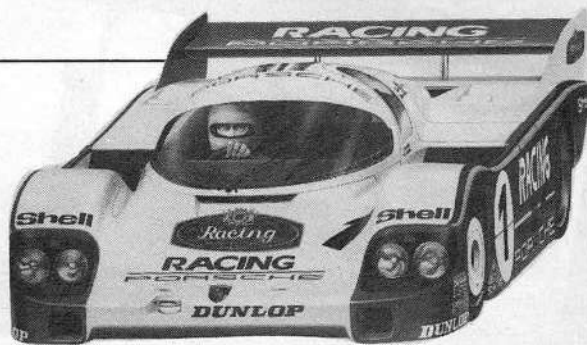
The two latest *Tamiya* creations for Radio Control electric car racing are now available in this country from model shops and toy stores.

The 'Pajero' is basically a dual purpose Off-Road and fun machine in 1/10th scale. Many of the components found in the construction of the *Tamiya* 'Grasshopper' are used here to produce a very easy to build machine. In fact the only real difference between the two kits is the main chassis box, in this case the 'bathtub' chassis houses the R/C gear, speed controller and Ni-Cad battery pack. Two positions for the Ni-Cads are moulded into the chassis to convert the 'Pajero' from a conventional Off-Roader to a 'wheelie' car. By using the weight of the battery pack to produce different handling

effects a lot of fun can be had with this car.

The 'Porsche 956' is the *Tamiya* answer to competition 1/12th scale circuit racing. Obviously a lot of design thought has gone into this in an effort to put the 'Porsche' on a par with current state-of-the-art 1/12th scale racers whilst still maintaining the *Tamiya* style of packaging, presentation and ease of assembly. The 'Porsche' features a glass fibre chassis and shaker plate, geared differential, adjustable castor front-end, ball races, endurance motor and of course 'Porsche 956' clear polycarbonate bodyshell and decals.

We will be bringing you Track Tests on both of these products. *Tamiya* kits are distributed in this country by Richard Kohnstam Ltd.



Improved specification for Serpent Kits

Walt Bailey of *Elite Models*, *Serpent* R/C car kit importers and distributors rang to tell us about the exciting new specifications on *Serpent* Circuit and Off-Road kits now on offer. The new specifications add many of the extras already available to the standard kit and only a few simple sums show that a worthwhile saving can be had on these quality

Dutch made products.

The additions to the kits are as follows: *Serpent* 'Cobra' 4 x 4 Off Road racer now features the latest racing spring clutch, small (38mm) diameter flywheel, front and rear anti-roll bars, drilled and tapped engine mounts to suit the motor of your choice, and exhaust manifold to choice, an alternative gear ratio (53T) and

additional ball races to fully ball-race the car. Price wise the updated 'Cobra' remains at £235.00.

A 2-wheel drive version of the 'Cobra' is also now available at £175 which can be updated to full 4 x 4 capability at any time.

For circuit racers, *Serpent's* 'Quattro' kit now comes complete with full length aluminium chassis,

adjustable front wishbones, new racing spring clutch, 38mm flywheel, quick change hubs, drilled and tapped engine mounts to choice and a new moulded front bumper. As to the price the 'Quattro' remains at £175.00 or with a 2 speed automatic gearbox (normal price £44). £195.00. Really good buys, these should tempt a few people to race these quality cars.

New Bodyshells from Parma

By making good use of their vacuum forming machine *Parma International* are able to supply several new bodies for various scales of racing.

The 1/8th scale 'Lancia' Group C bodyshell was featured on last month's cover and has already proved itself to be a very nice subject for scale.

In 1/12th scale electric racing saloon type bodies are not the most popular choice. However two examples from *Parma* could provide the racer with quite an attractive alternative for club and National racing. Both the 'ASA Dodge Aspen' and the 'Jomac Greenwood Vette' are available in clear polycarbonate.

Finally for 1/8th Off-Road racing we have the

'Chenoweth' single seater dune buggy body suitable for a wide variety of manufacturers cars.

For further details of the above contact *Helger Racing*, 18 Manor Farm Drive, Chingford, London, E4 6HJ.

Chenoweth



Dodge Aspen



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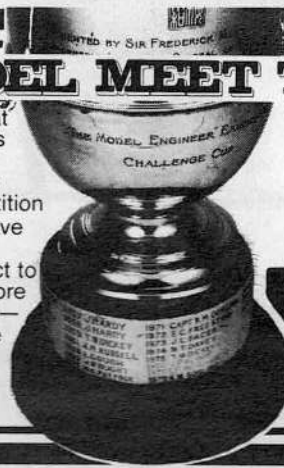


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IN 1/12TH SCALE racing there are several important points which the beginner needs to grasp in a broad manner fairly quickly. None will be a serious handicap to attaining a reasonable club placing if only a general knowledge is mastered. Gear ratios, Ni-Cad charging, motors, handling, etc., can be learned as you go along, without disaster resulting from small errors.

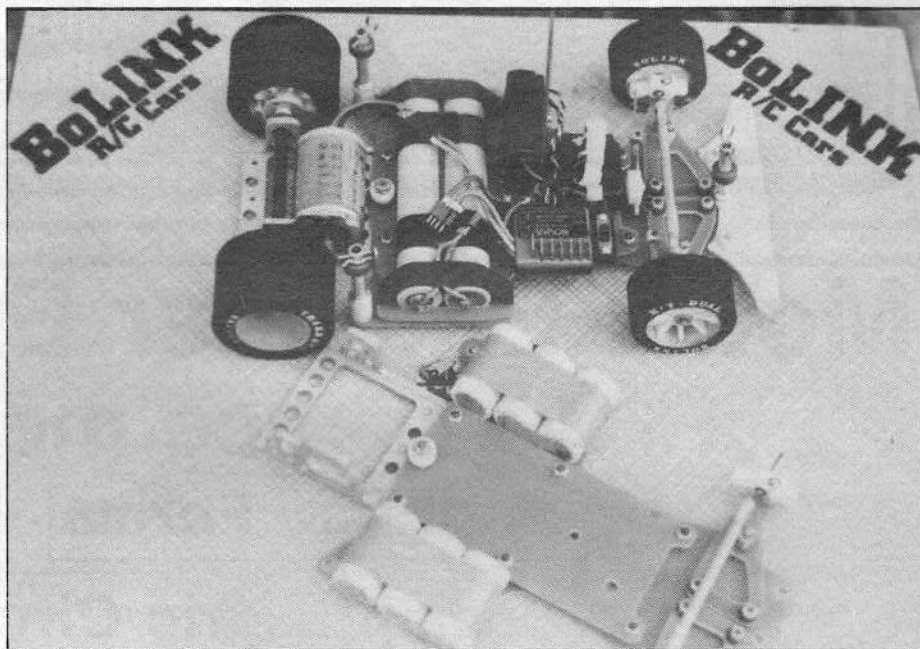
Tyres are a completely different matter.

Having the wrong tyres available for a particular track is often as bad as Torvill and Dean without skates. No-one complains about too much grip, only too little and in 1/12th racing it is made worse by using tyre treatments.

Using carpet as a track surface led someone to discover that by treating the tyre with certain substances the grip can be greatly increased. Without doubt this is where beginners come so easily to grief since there is nothing they can read or refer to for advice, until now! Don't assume this to be a definitive work on the subject, there is not enough space to deal with every fine detail, but start here and don't be afraid to experiment or ask others. Always try new things, discard the non-starters and pursue the promising areas.

Rounding off

The first thing to look at is the wheel. With no tyre on mount it in position on the car and rotate it slowly on the axle. It should run true on the axle, with only the minimum visual eccentricity. Check wheels (or rear sleeves hubs) regularly, preferably every time a new set of tyres are mounted. Damage can easily occur during racing and if it goes unnoticed then the wheel may run eccentric and cause out of balance



Above; the latest 1/12th scale racing product release from Bolink Industries U.S.A. The 'Bandito' looks very interesting and hopefully we will be able to give more details when it arrives.

Tyred Out

1/12th scale racing is all about giving the right treatment - chassis, Ni-Cads, R/C gear and especially tyres.

forces in the extreme condition. Replace badly damaged items.

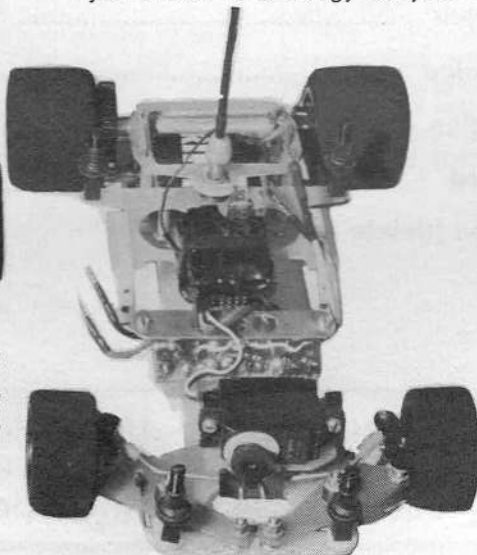
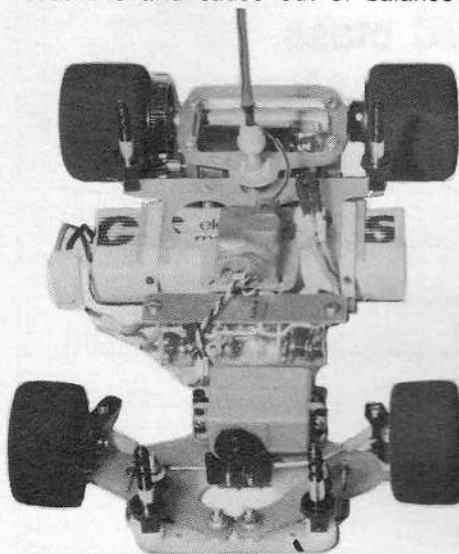
The outside surface of the wheel should be roughened with a coarse file to remove the 'gloss' of the mould so that the adhesive has a good surface for bonding the tyre onto the wheel.

Tyre choice is a dodgy subject. I

could recommend this or that, but recommendations have pitfalls. There are no totally unsuitable tyres on the market, and you can choose Associated, Delta, Mardave, Parma, or Tru Tyres products with confidence.

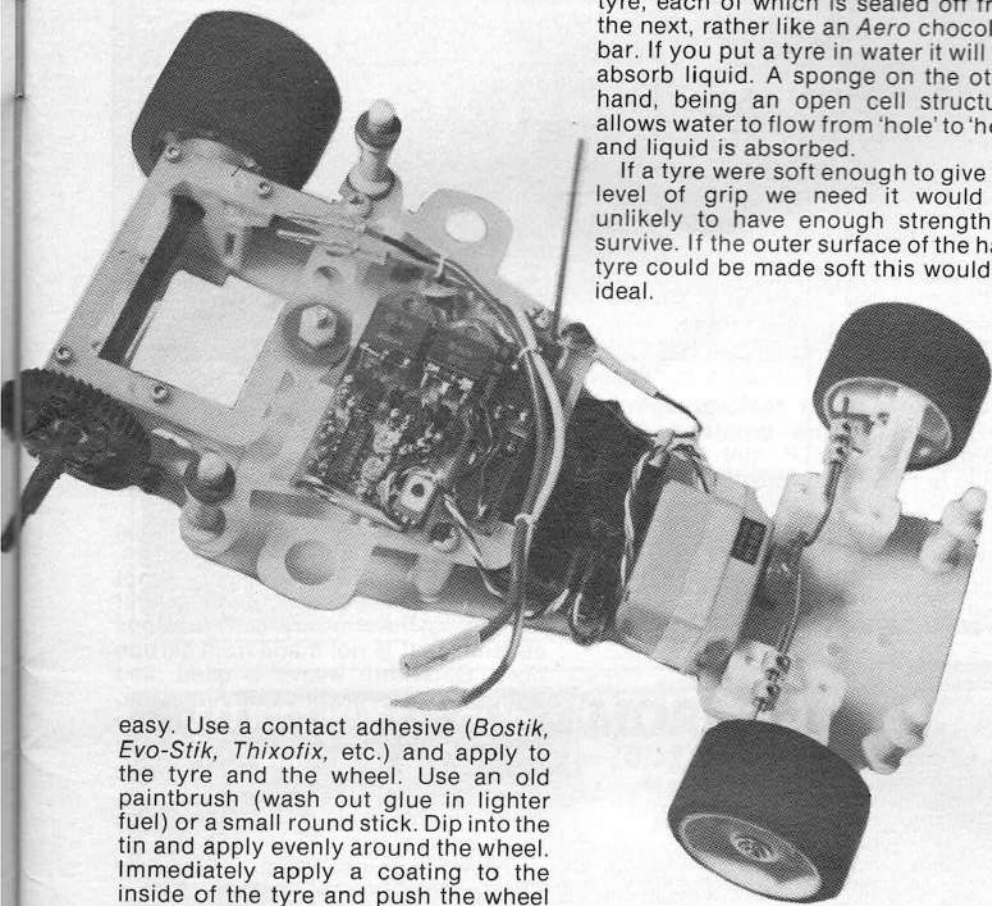
Ask around if you are not sure where to start, but if you have been using tyres for some time, don't be afraid to experiment with other types. The best way to do this is borrow a set from someone else! If you can't then take the plunge and try anything. Wherever possible use the same compound tyre on the front and rear. This ensures that the characteristics of the tyres are in harmony. Different compounds behave differently, and keeping the same tyres all round at least means that the chassis has the same grip characteristics at each end. If hard tyres have to be fitted on one end only to even out the handling then a look at the chassis is called for, since I know of no manufacturer's car that has to be run with dissimilar tyres (front and rear).

Fixing the tyre to the wheel is fairly



Above; little and large, no not the cars but the R/C Receivers. Andy Dobson's car (left) sports a new, ultra miniature Futaba receiver that is half the size of Phil Davies' (right) JR 'Apex' example. The unit uses flyleads instead of on-board sockets and Andy claims no interference problems at all.

Below, for the selected few, Demon Products will adjust the configuration of the popular '2D' controller to suit personal taste. The car belongs to Nigel Hale and the relays poke downwards through the shaker plate in specially cut-out slots.



easy. Use a contact adhesive (*Bostik*, *Evo-Stik*, *Thixofix*, etc.) and apply to the tyre and the wheel. Use an old paintbrush (wash out glue in lighter fuel) or a small round stick. Dip into the tin and apply evenly around the wheel. Immediately apply a coating to the inside of the tyre and push the wheel into the tyre before the glue has cured. Roll the tyre between the palms of your hands to even it out on the rim. I find this the easiest way, while the glue is liquid it is easy to slide the rim into a central position within the tyre. There are other methods but this is the easiest and providing the rim is rough enough to give good adhesion then the tyre will stay put.

Truing the tyre up and machining to the right diameter deserves an article of its own, and we will bring you one soon. The best method is to get someone to do it for you since the rubber dust created gets everywhere! There is only one rule, tyres must run true. Whichever way you achieve this don't settle for sub-standard results as this will only spoil the handling of your car. It is best to leave 24 hours between bonding and machining and a further 24 hours before using them on the car.

The first time tyres are used they will be at their worst. They need to be bedded in, and this usually takes one heat. There is no real explanation for this phenomena. Unless you use a grinding wheel process for truing the tyre there is no short cut to bedding in. After this run the tyres can be used normally.

DECEMBER 1984

Tyre treatments

All tyres available on the market are made of closed cell synthetic foam rubber. A closed cell structure means that air is trapped within 'holes' in the tyre, each of which is sealed off from the next, rather like an *Aero* chocolate bar. If you put a tyre in water it will not absorb liquid. A sponge on the other hand, being an open cell structure, allows water to flow from 'hole' to 'hole' and liquid is absorbed.

If a tyre were soft enough to give the level of grip we need it would be unlikely to have enough strength to survive. If the outer surface of the hard tyre could be made soft this would be ideal.

evaporate leaving the oil behind. It is the oil that degrades the synthetic rubber and softens the outside of the tyre. The degraded rubber is worn away while the car is racing and new treatments must be applied to return the surface to its soft state.

The more tyre surface that is treated the more grip can be obtained. Normally treatment would be applied across the full width of the rear tyres. Use a small paintbrush, dip it in the bottle of treatment and paint onto the tyre an even coat of liquid. The coat should be sufficient so that you can see where you have applied liquid but don't flood the tyre. On the front tyres use the same process but treat from the inner edge of the tyre outwards. By varying the width of treatment applied to the front tyres the amount of grip is varied. If half the tyre is treated and the car lacks steering response then increase the width of treatment. Obviously decreasing the area treated will reduce steering response by lowering front end grip. (See Fig. 1).

The most common treatment used is *Tractite*. As a guide, apply this formulation around 20-25 minutes before you race. After this time, the tyre should be dry to the touch and will work immediately on the track. However, if the track is 'dry', the oil will be absorbed by the felt carpet and the tyre may 'go off' and the handling deteriorate during a race. In this case apply the *Tractite* later, such that the tyre is damp or tacky when the race starts, but beware of initial high levels of grip for the first few laps. If on club nights you don't have 20-25 minutes between heats, then treat as early as possible and remove any excess with a cotton rag, such that the correct dryness is achieved. Because the oil is degrading the rubber, and it takes a long time to evaporate, tyres which have been treated remain usable for up to an hour.

Remember that the dryer the tyre the more grip you will have but on a carpet which is itself dry, you will have to have some wetness in the tyre to prevent it going off before the end of the race.

My thanks to Dave Towell (Mr *Tractite*) and Pete Jones (Mr. *Tru Tyres*) for their help on this subject.

One of the other properties of synthetic rubber is that certain oils will degrade or soften the rubber. However, because of the close cell structure it can take a long time for the oil to reach all the available parts of the tyre, just as hardwoods absorb very little preservative because of their close grain. To ensure deeper penetration in a shorter timescale, thinners are added to the additive to dilute the oil in order to carry it through the tyre as quickly as possible, then allowing the thinner to

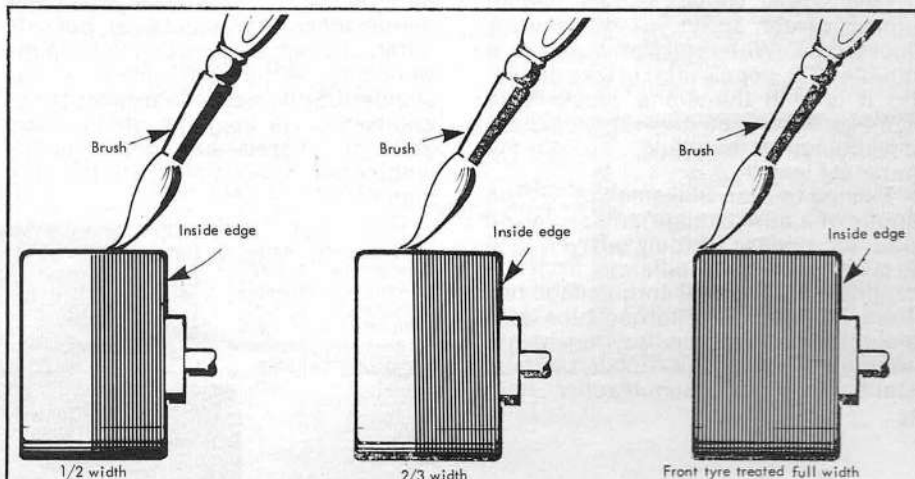
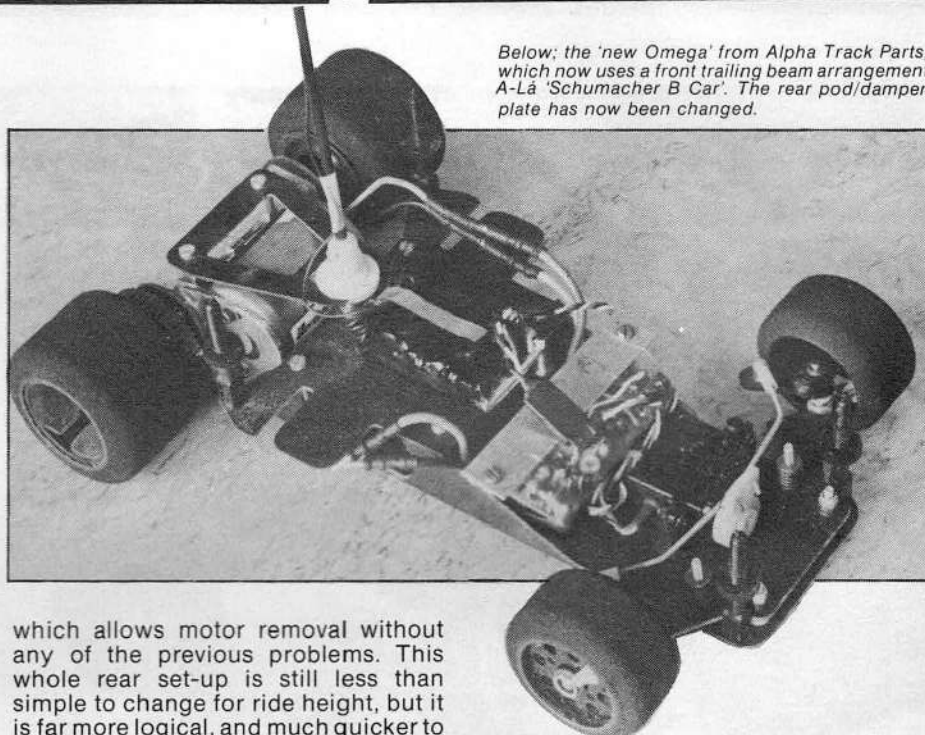


Fig. 1. Application of tyre additives

On The Carpet

LOOKING BACK on my first year as MC's 1/12th scale racing correspondent, there are many things which have amused, frustrated, appalled and interested me. By far the most interesting is the cycles that this hobby goes through, for instance; in 1984 we have seen the domination of *Demon* and *Associated* chassis' broken by the *Schumacher* 'C-Car'. When first released, people were very sceptical, but slowly as the results came and more people changed there was a general acceptance of this and the product. But, the inevitable force of the cycle is never still, so it is interesting to speculate on what will happen in 1985. I suspect that the high pace of development in the *Schumacher* camp will slow now that the World Champs are behind us. With the new 'Clubmans B' car, it is difficult to bet against one of Cecil's products being in the winner's circle.

The *Parma* 'Euro Panther' has proven itself at the highest level, and sales are picking up now that chassis kits are being shipped to the UK. It will be no surprise to find this high quality car in the hands of many drivers, because it has the attributes of handling, quality and results that count in terms of sales.



Below; the 'new Omega' from Alpha Track Parts, which now uses a front trailing beam arrangement A-La 'Schumacher B Car'. The rear pod/damper plate has now been changed.

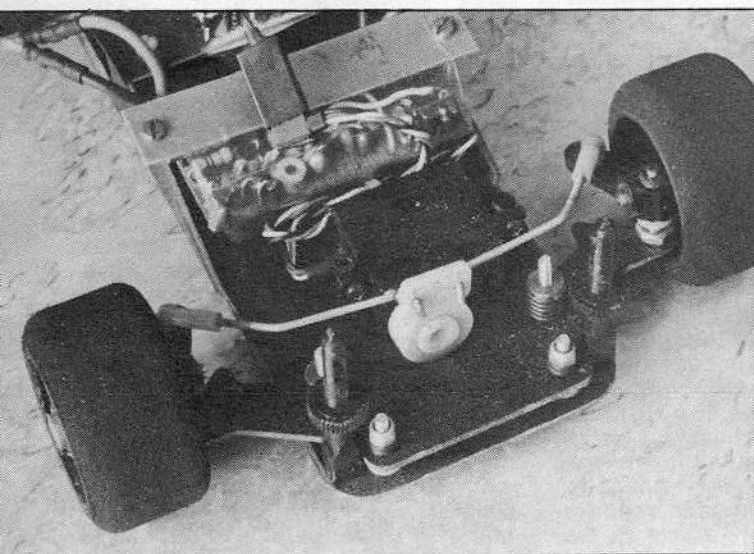
which allows motor removal without any of the previous problems. This whole rear set-up is still less than simple to change for ride height, but it is far more logical, and much quicker to reset than the old one. With the improved motor access, my previous criticisms are answered completely.

The front-end has also been redesigned due to the shortage of

By the time full kits are available there should be an instruction sheet, but even without one assembly is not difficult. The finished chassis is light and strong, but contrary to my previous statements it is not made from carbon fibre. Glassfibre weave is used, and Alan Blakeman lays this up himself to form all the 'blackbits'. You can specify a thick (0.085in.) or thin (0.070in.) front beam, the latter item giving more steering response for those of you with quick thumbs, the thick beam gives more understeer.

Using a thick beam and some *Schumacher* high rate springs, the car was set up as per kit and shod with either *Associated* 'Greens' or *Tru Tyres* '07s'. The ready to race weight is not especially low, but anyone should get it down to around 2lb. with no trouble. On the track handling is excellent, the chassis responding well to changes in front spring settings. Despite some initial collisions of quite alarming proportions the chassis refused to 'tweak' at all. The original merits of setting up, reliability and low cost of running remain.

So here is my pick for the dark horse of '85. You can chat to team members Andy Benson or Tim Biggs at National meetings if you need information or else contact ATP. Three have been obtained in our Club by customers, who are very satisfied. *Alpha Track Parts* is the place to take your £41.25 or send it to them at 128 Knighton Lane, Leicester. Specify thick or thin beam, a spare costs £2.50.



Left; close up of the front beam showing all the *Schumacher* hardware to bolt it place. The steering stub axle blocks are also *Schumacher*. The servo has since been raised up on a platform with the servo saver pointing downwards which eliminates bump steer through the track rods.

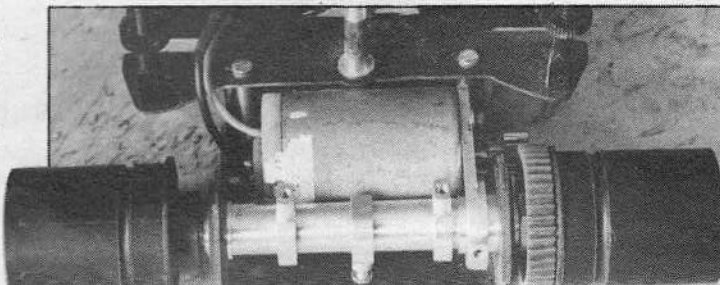
Breaking the Mould

When a car wins one race, people umm and ahh about 'good motor' or 'lucky race'. When it follows up with a double FTD, people start to take notice. So it is with the *Alpha Track Parts* 'Omega' which you may remember me describing as handling, 'not to my personal taste'!

Talking to Alan Blakeman of ATP he spoke of a new 'Omega' and promised one for review. It duly arrived and proved to be quite different from the original car. The rear torque cage has been replaced by a torque tube with simplified adjustment for ride height settings. The damper plate is now identical to the *Schumacher* item

Associated front steering blocks. The design is a copy of the new *Schumacher* 'Clubman B' car, but with different beam dimensions to keep the wheelbase within legal limits. All the standard, *Schumacher* hardware (pivot points, springs, kingpins, etc.) is used, and the chassis has been slightly lengthened to accommodate this new feature.

Right; the torque tube on the editorial example was actually machined from solid! The latest examples are much simpler alloy tubes (lighter too).



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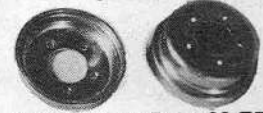
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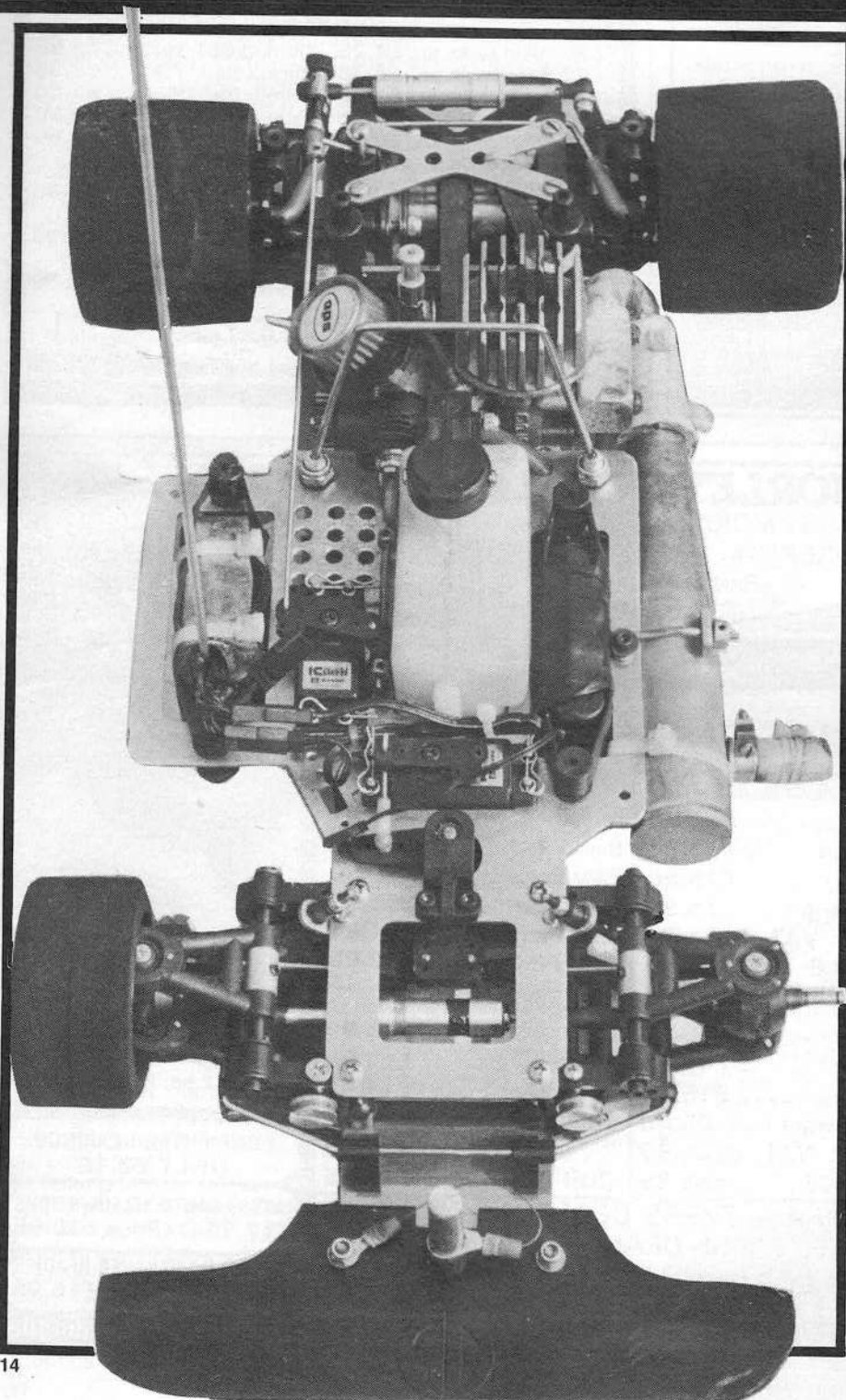
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BRCRA 1/8th I.C. Nat

August 25/26/27: Mendip MMRC Circuit: Weston-s-



Saloon
Formula
Sports/GT.....

ONE OF THE more memorable events of last year's BRCA 1/8th conference was the allocation of the 1984 Nationals event to the Mendip MMROC. Memorable because it marked an eleven year departure from the northern stranglehold on who should host this event. Thus on the Bank Holiday weekend of August 25, 26, 27 the very best of the nations 1/8th drivers gathered in the West Country to do battle.

The organisers had obviously gone to a lot of trouble to stage the event, good facilities were situated nearby (including beer tent), camping and caravanning, the track looked as good as ever, the race organisation was well executed, and the weather was perfect. What more could you want? Good racing? Yes, that was on display also.

The result tables tell the story of the three days racing, Saloon, Formula and Sports GT. Once the 'black line' had been established the grip was excellent, a tribute to the sensibility of having the exhaust outlets pointing downwards.

The drivers choice

Of the cars there were little changes. The top team drivers were in attendance and subsequently the lists of Open finalists gave a distinct feeling of *deja vu*. Except that is in the Formula class when Bajan Panesar, seeded in heat nine, qualified above a goodly number of famous names.

Team cars varied little from the paid for examples, although the SG cars sported some new monoshock dampers front and rear which proved to be very smooth in operation. These units are made from aluminium alloy, are constant volume and give equal amounts of shock absorption to each wheel. Availability is now in the hands of Mr. Greeno, so pay as you enter 9 Village Way East, Rayners Lane, Harrow, Middx.

PB Racing Products have had the

Left: Bob Errington's SG 'Columbia' fitted with the ubiquitous OPS motor and tuned pipe. Also new SG mono-shock dampers front and rear.

tionals

Super-Mare:

Steve White/SG
Gary Culver/PB
Gary Culver/PB

door shut on them at the Nationals in recent years, but looked to make a comeback this year if their recent good form in the National Championship was anything to go by. However PB cars looked thin on the ground compared to their virtual domination of the racing scene just a few years ago.

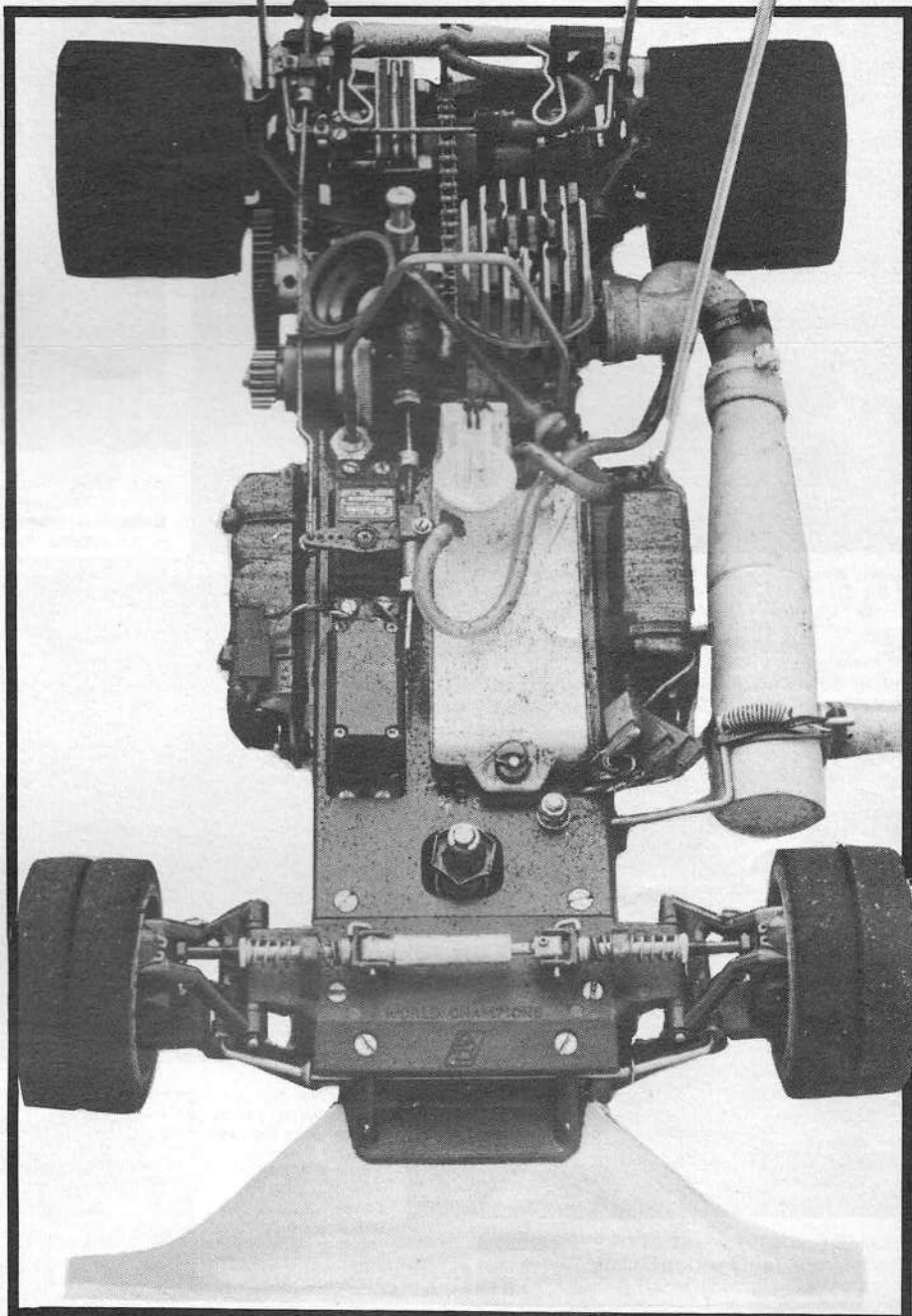
Few differences between the team and Jo-racer cars could be discerned but on the track the differences were marked. Gary Culver, Debbie Preston and Paul Pagdin all had cars that looked very smooth, responsive and extremely fast. Gary's 'Nova' in particular seemed to be glued to the racing line and the power-on cornering was impressive. Both Gary and Debbie used the OPS powerplant with 'sparkling' performance results.

OPS domination of 1/8th scale racing in 1984 looks set to continue into '85 as no other manufacturer can at present match the consistent high performance levels of these Italian motors.

The only real modification to be seen on the PB cars was a small piece of silicon fuel tubing connected into both reservoirs of the rear damper to accommodate any oil displacement.

Of the rest of the cars on show, Serpents were few in numbers (compared to the PB's and SG's) but all behaved well on the track. Walt Bailey of *Elite Models* fitted his car with the Rossi oil-cooled motor which he expressed a great liking for. Also on the *Elite Models* trade stand were examples of a range of engines under the *Mondialmotor* brand name although the OPS parentage was obvious. Walt's *Serpent* featured a brace between the motor pod and the shaker plate and this proved to be the only addition to the car that he raced at last year's Nationals.

Mantua 'Manta-4' cars have grown in numbers and popularity, speak to any *Mantua* driver and all you will get is a solid endorsement of the car's capa-



Above: Gary Culver's PB 'Nova' winner of the Formula and Sports/GT events also showing its OPS preference. Note the missing air-filter, a result of a tangle with Debbie Preston's car in the Open Final.

bilities, a tribute to its simplistic design, ease of maintenance and low price.

The actual numbers of different manufacturers types on show were calculated as follows:

- PB — 44 (all types)
- SG — 37
- Serpent — 12
- Mantua — 5
- Delta — 1

These results were taken from the entries for the Sports GT class.

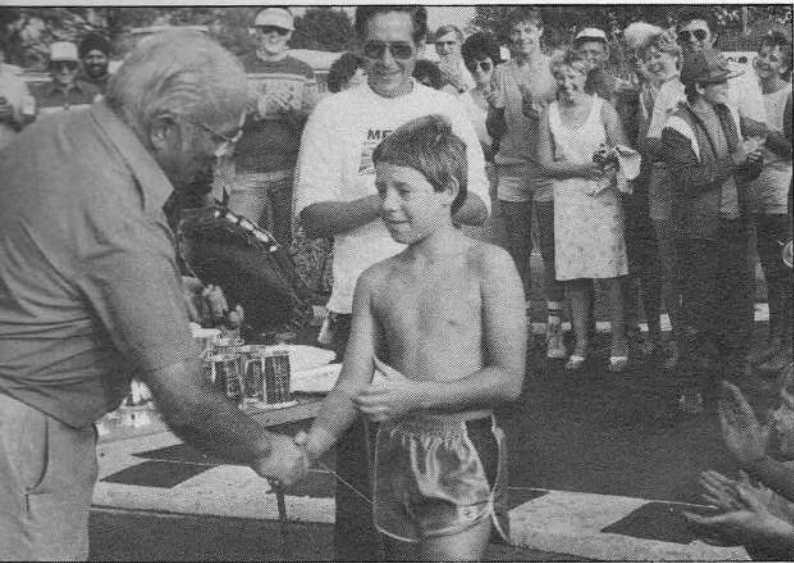
On the track

Of the racing to be seen this was of a very good standard in the lower heats to the dazzling degrees of skill to be

seen in the top heats. Competition for the 'Clubmans' final was particularly fierce as this is the only final that the large numbers of 30-40% drivers can qualify for (excepting the Open final itself). Thankfully the weather remained clear and gave rise to some fine racing and excellent advertising for the sport of R/C car racing. This culminated in the Sports GT class on the Monday where the aerodynamic advantages of the GT shells showed the cars at their best.

One of the highlights of the days racing was Gary Culver's FTD heat which left the spectators gasping as his 'Nova' eclipsed the rest of the field to record almost 21 laps in the 5 minutes. ▶

Racing Report

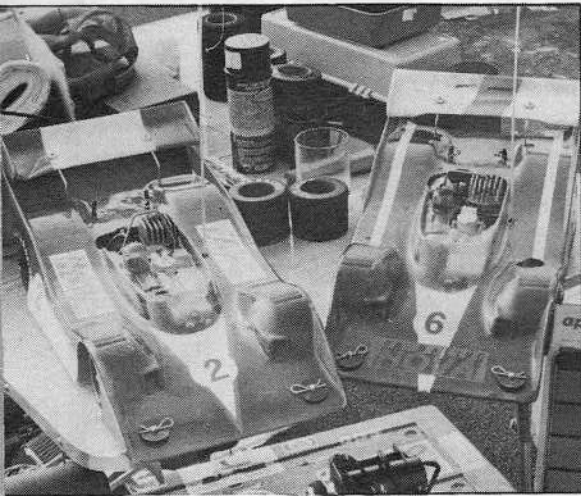


Above: Wayne Draycott, ten years old and winner of the Sports/GT, 25% handicap final driving the Serpent 'Quattro'. Tom Martin presents the trophy.

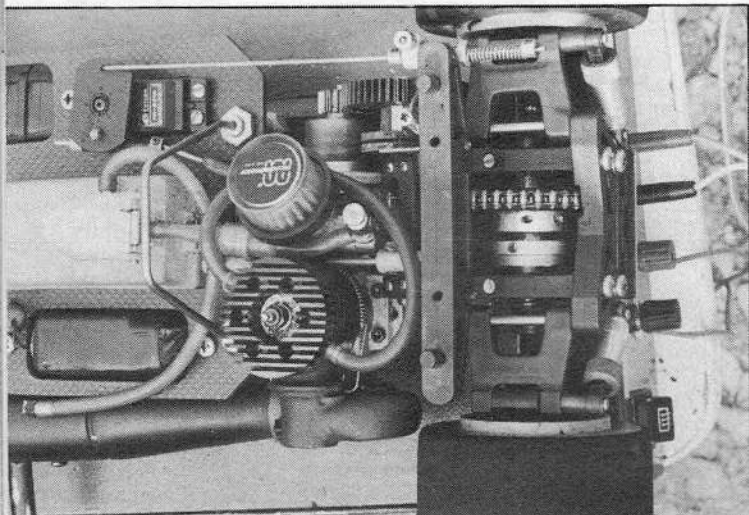


Above: still friends despite the drama of the Sports/GT Open Final. Gary and Debbie show off the latest additions to their silver service tea-sets.

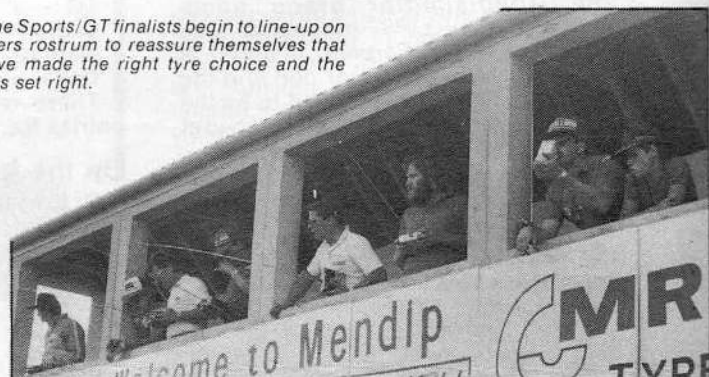
Below: Gary Culver's and Debbie Preston's PB 'Nova's' in the pits after the Sports/GT Open final.



Below left: the oil-cooled Rossi 21 fits snugly into the rear of Walt Bailey's Serpent 'Quattro'. The rear pod to shaker plate brace can just be seen passing between the engine and carburettor.

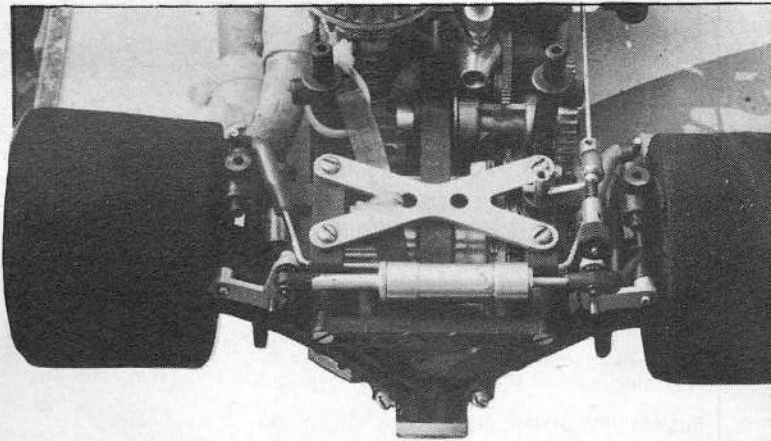


Right: the Sports/GT finalists begin to line-up on the drivers rostrum to reassure themselves that they have made the right tyre choice and the engine is set right.





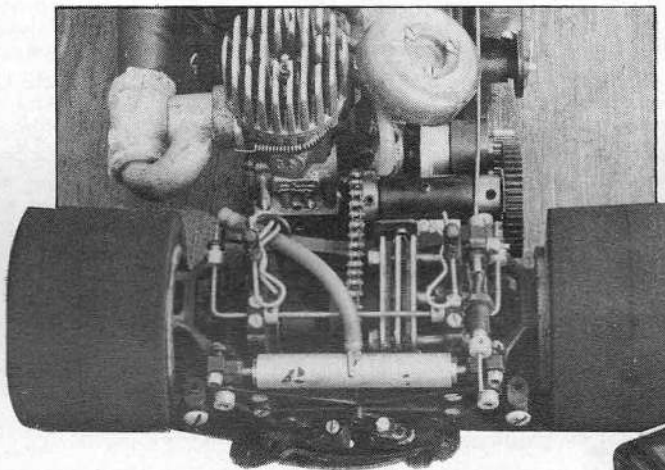
Above: John Keay, proprietor of the Mendip Circuit shows off the impressive array of Silverware donated by Castrol as part of their sponsorship.



Above: the rear of Bob Errington's SG 'Columbia' showing the new alloy, constant volume and ultra smooth mono-shock damper.



Left: part of the infield section directly in front of the drivers' rostrum. Note: the well laid out and highly visible track markings. Above: a typical start line scene as drivers and mechanics wait for the starting signal.



Above: close-up of the rear damper on Paul Pagdins' 'Nova' and showing the oil reservoir linked into both barrels of the damper.

Below: an example of the Mondialmotor engine being sold on the Elite Models stand and produced by OPS. Obviously OPS still lay claim to the World Championship as 'Mondial' means 'world' in Italian.



It's always an education to watch the good drivers especially when you are trying to do the same thing as they are. At Mendip the entry to the straight is one of the hardest corners to get right anywhere yet the real class drivers get it right, flat-out, every time!

THE Final

After the dust of qualifying had settled the finals were got underway and as the sun began to drop the Open finalists made their way onto the drivers rostrum.

From the echelon start on the straight Gary Culver managed to make it through into the lead hotly pursued by Debbie Preston and Bob Errington. Bob soon dropped back and the stage was set for one of the most thrilling finals ever seen in this country.

Gary and Debbie were the principal players and the other finalists were

given supporting roles. Debbie was soon in the lead, but Gary's car trailed her for lap after lap following the same line and never able to pass. Even pit-stops failed to break the procession as their pit crews re-fuelled the cars in unison.

Still the cars maintained the order until the latter part of the race when Gary raised the pace a notch and passed Debbie on the inside. Debbie immediately responded and re-took the lead with an almost identical inside passing manoeuvre which would have left the crowd gasping if Gary had not repeated the process. In fact the lead swapped back and forth until the last minute of the final, at this point Gary was in the lead after the last pit-stop with Debbie's car inches behind as they raced round the wide sweeper exiting from the straight.

At the next hairpin Debbie made her inside move as Gary uncharacteris-

tically went wide, however the gap was too small and Debbie's car cannoned broadside into the leader, Gary recovered albeit minus his air-filter but Debbie was long gone. In an effort to catch up, Gary drove his car almost into the ground and managed to recover 20 yards of lost ground.

Debbie looked set to win until her engine coughed ominously twice on the infield and ran out of fuel along the straight. Pandemonium ensued as Gary's car swept by to re-take the lead and win the race.

So what a fitting end to the Nationals event, a race to be remembered and another win for PB Racing Products and Gary Culver although extremely bad luck for Debbie.

I am sure that the racers present over the weekend would like to extend their thanks to the Mendip organisers who did a great job. So here it is.

THANKS!

Racing Report

BRCA Nationals Results Table

Saloon

5% — 20% Final			25% plus Final			Clubmans			Open Final		
Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps
A. Coles	S.G.	46/11.2	K. Tubby	P.B.	50/0.8	B. Panesar	P.B.	72/15.9	S. White	S.G.	111/15.1
G. Dilley	S.G.	46/13.7	A. Walker	Serp.	50/8.2	M. Stockford	S.G.	70/12.2	P. Greeno	S.G.	109/1.6
R. Hamblin	Serp.	45/4.6	C. Banks	S.G.	47/12.8	C. Dudfield	S.G.	68/0.8	P. Pagdin	P.B.	109/9.3
R. Doran	S.G.	45/12.4	S. Brooker	P.B.	47/16.7	M. Smith	S.G.	68/8.1	B. Errington	S.G.	108/1.0
D. Hill	P.B.	41/9.0	D. Swift	S.G.	43/6.4	M. Perry	S.G.	67/7.8	Debbie Preston	P.B.	108/3.9
D. Jones	P.B.	35/8.0	D. Smith	P.B.	10.5	N. Sayles	P.B.	63/1.4	C. White	P.B.	107/2.6
S. Brooks	P.B.	31/7.2	T. Griffiths	S.G.	31/0.0	J. Munday	P.B.	60/0.0	W. Bailey	Serp.	107/10.7
T. Cater	P.B.	0/0	C. Meyer	Serp.	22/0.0	D. Brader	Serp.	25/0.0	C. Straus	P.B.	93/8.0

Fastest time of day: Steve White: 19/1.0 laps

Scratch Driver Trophy: H. Rimron: 16/2.0 laps

Formula

5% — 20% Final			25% plus Final			Clubmans			Open Final		
Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps
D. Pittaway	S.G.	47/4.1	S. Brooker	P.B.	52/16.4	C. Dudfield	S.G.	72/12.1	G. Culver	P.B.	113/11.6
R. Hamblin	Serp.	47/5.1	S. Jackson	P.B.	51/13.4	M. Stockford	S.G.	71/7.7	Debbie Preston	P.B.	113/14.7
H. Rimron	P.B.	44/9.5	A. Walker	Serp.	51/15.5	N. Wright	S.G.	70/3.0	P. Pagdin	P.B.	112/5.2
D. Jones	P.B.	44/20.3	S. Leake	S.G.	50/6.3	M. Perry	S.G.	70/3.9	P. Greeno	S.G.	112/11.0
A. Coles	S.G.	41/14.1	C. Meyer	Serp.	49/5.4	M. Smith	S.G.	69/4.7	P. Hague	P.B.	110/1.1
S. Brooks	P.B.	37/7.8	J. Pryce	S.G.	44/8.3	K. Tubby	S.G.	66/12.7	S. White	S.G.	109/2.4
J. Nicholls		35/0.2	T. Griffiths	S.G.	41/0	N. McLeod	Serp.	61/17.6	C. White	P.B.	107/13.7
A. Jones	P.B.	33/0	D. Swift	S.G.	23/17.5	R. Leonard	S.G.	35/0	B. Panesar	P.B.	96/12.6

Fastest time of day: G. Culver: 20/12.0 laps

Scratch Driver Trophy: J. Diver: 17/15.0 laps

Sports/GT

5% — 20% Final			25% plus Final			Clubmans			Open Final		
Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps	Driver	Car	Laps
J. Diver	Serp.	50/6.3	W. Draycott	Serp.	52/5.1	D. Ashton	P.B.	73/3.7	G. Culver	P.B.	116/9.5
G. Dilley	S.G.	49/12.6	D. Swift	S.G.	52/19.2	M. Stockford	S.G.	7.2/6.6	Debbie Preston	P.B.	115/0.0
A. Coles	S.G.	47/1.6	S. Jackson	P.B.	51/15.6	N. Wright	S.G.	71/1.3	S. White	S.G.	112/1.5
D. Pittaway	S.G.	44/7.5	C. Meyer	Serp.	50/0.9	C. Dudfield	S.G.	70/4.2	B. Errington	S.G.	112/11.7
D. Hill	P.B.	42/13.4	R. Major	P.B.	49/2.3	S. Fagg	S.G.	69/13.3	P. Greeno	S.G.	110/2.5
J. Nicholls	P.B.	34/0.8	A. Sturgess	S.G.	34/4.7	K. Tubby	S.G.	64/5.7	C. Straus	P.B.	110/4.7
D. Jones	P.B.	29/6.5	J. Brooks	P.B.	27/0.0	B. Panesar	P.B.	54/0.0	P. Hague	P.B.	109/12.2
H. Rimron	P.B.	8/0.0	R. Leonard	S.G.	19/7.0	S. Brooker	P.B.	51/0.0	C. White	P.B.	72/0.0

Fastest time of day G. Culver: 20/0.0 laps

Scratch Driver Trophy S. Rimron: 16/11.0 laps

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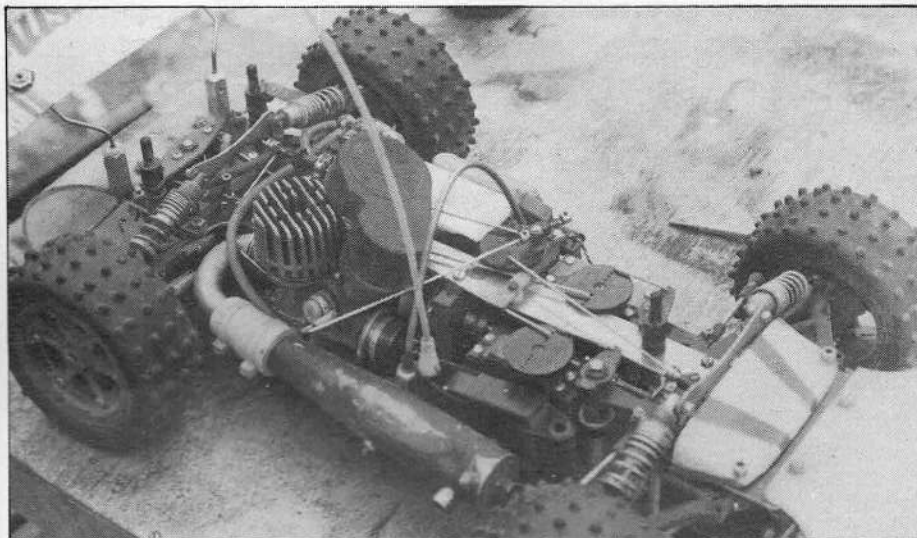
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Off-Road racing, news and views

Shape of things to come

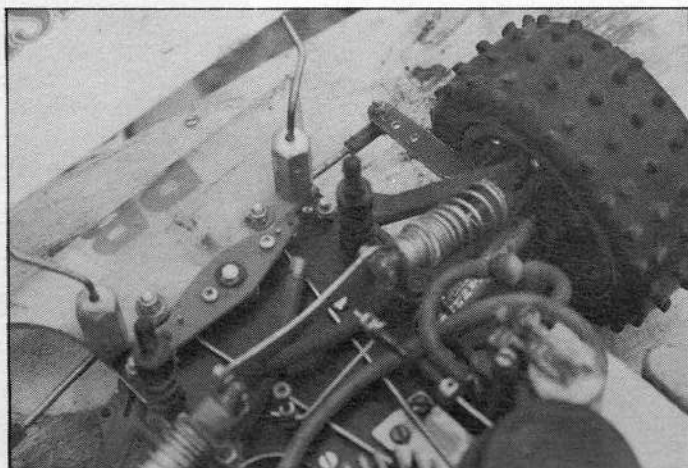
Following on from an EFRA (European Federation Radio Autos) E.G.M. held after the 1/8th Euro Off-Road Championships at Skanor, Sweden, it has fallen to me to liaise with manufacturers and come up with appearances rule proposals for 1986 Buggy racing. A 1983 proposal to enforce saloon style bodies has not met with anything like universal approval, but the governing body is very anxious to prevent Off-Road racing from developing into 'bedstead' racing.

Currently, thoughts are turning towards an open wheel style body such as that used by Yankee and Garbo with optional roll-cage over the top. Both Yankee and Garbo cars look really nice with these mini bodysells



Above; Keith Plested's prototype PB 4-wheel drive, 4-wheel steering Off-Road car. The car uses suspension components from Garbo Kits but the transmission system (shaft drive), gearboxes and differentials are all produced in the PB workshop. Below; the rear wheel steering system showing a pivot bar located on top of a single PB Servo saver.

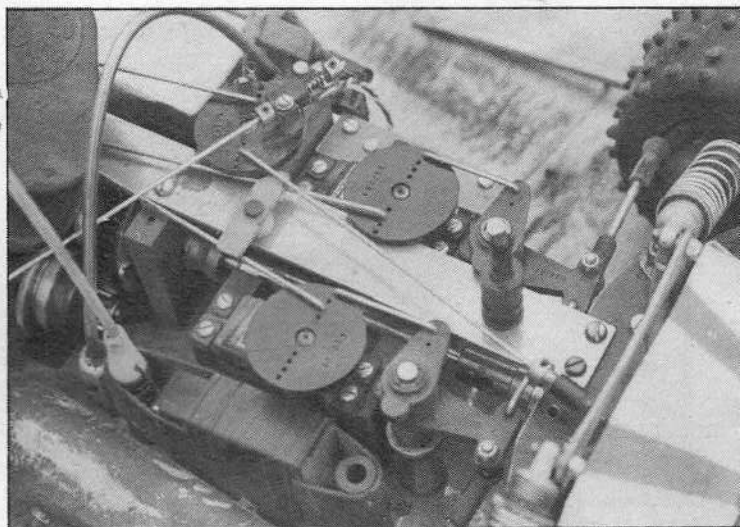
attention was drawn to a new Kyosho 1/10th scale buggy, it looks as though it is called the 'Mud Star' or 'Progress'. First glance registered 4-wheel drive, then a double take, why were the rear wheels not pointing straight ahead? The answer, 4-wheel steering! Initial thoughts were, why bother, just that much more complicated, more to go wrong, more to maintain. First



which seem to last well as they are adequately protected by the cage.

More things to come

The other day, whilst thumbing through the latest copy of 'R/C Technique' magazine from Japan my



Above; Keith has used two steering servo's for his car to alleviate the load of 4-wheel steering.

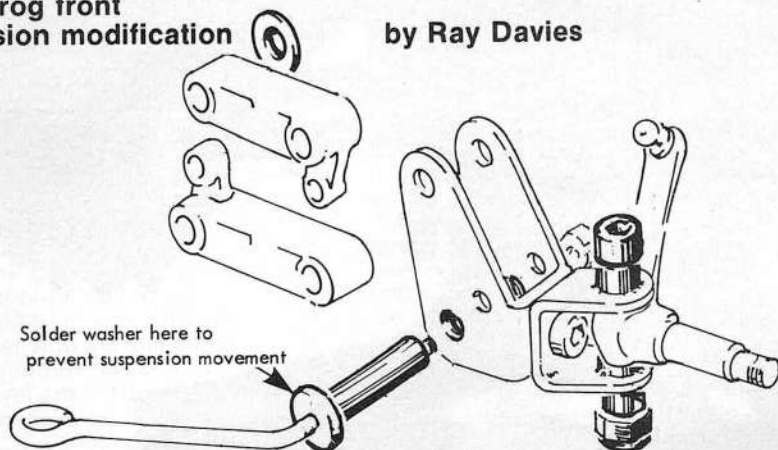
thoughts aren't always the best thoughts, but at the time I resolved to wait and see, after all what might be a good idea in Japanese style racing could prove a total non-starter in Europe.

Well, I didn't have long to wait for following a cryptic telephone conversation with Keith Plested of PB Racing Products I was anticipating seeing a new P.B. 1/8th scale prototype car running at the Basingstoke Club meeting. Sure enough it was there, with, you've guessed it, 4-wheel steering.

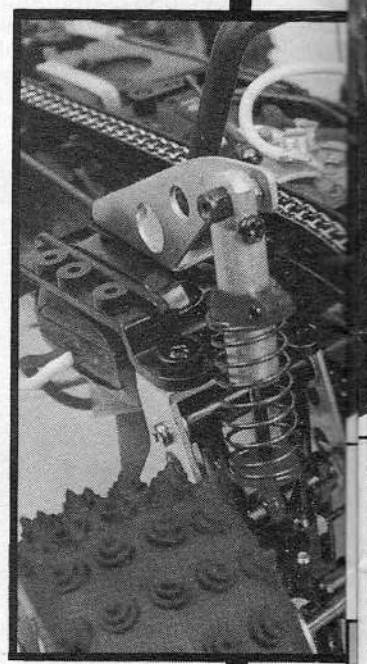
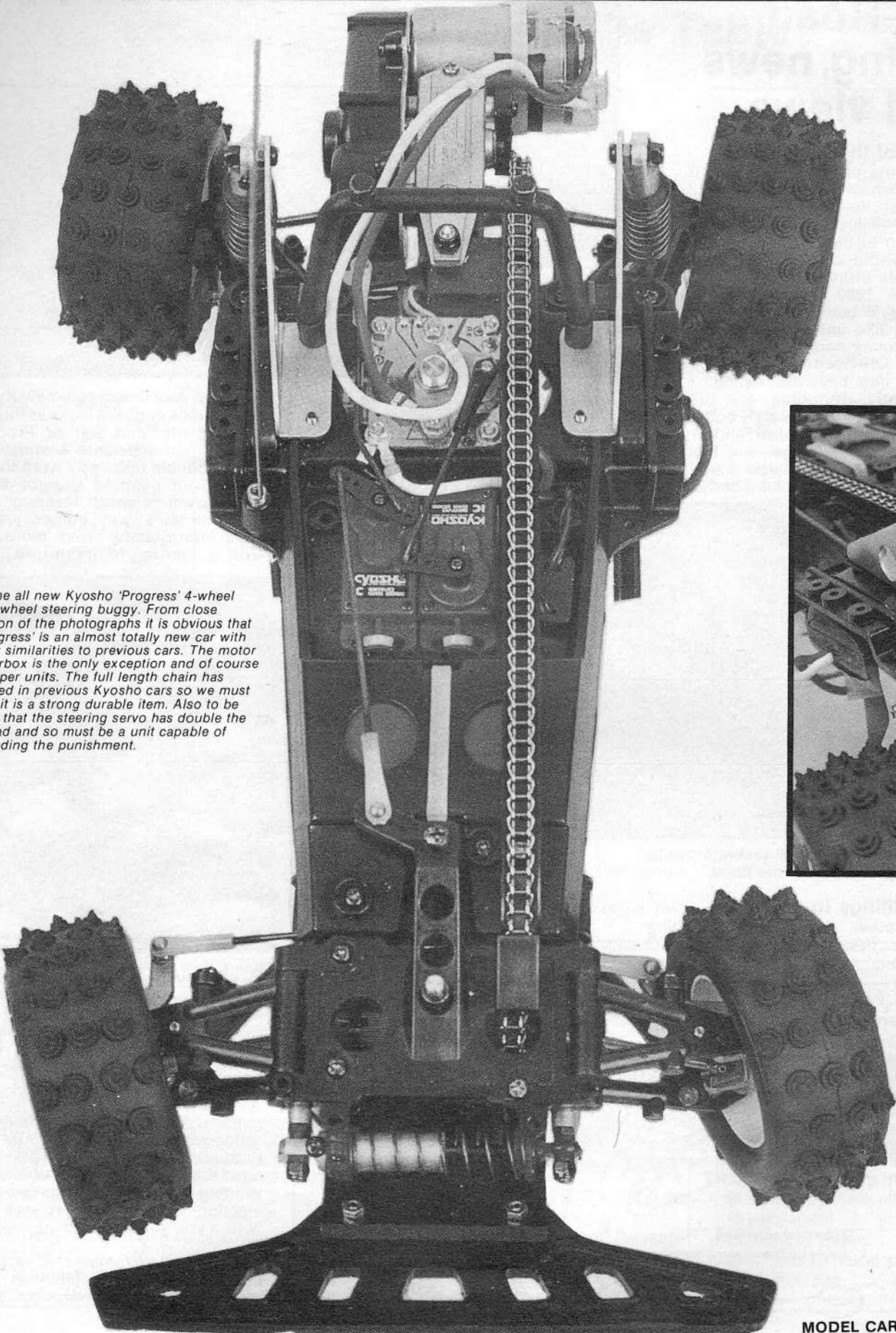
A careful examination and discussion with Keith followed which revealed that for convenience several

Fig. 1 Frog front suspension modification

by Ray Davies

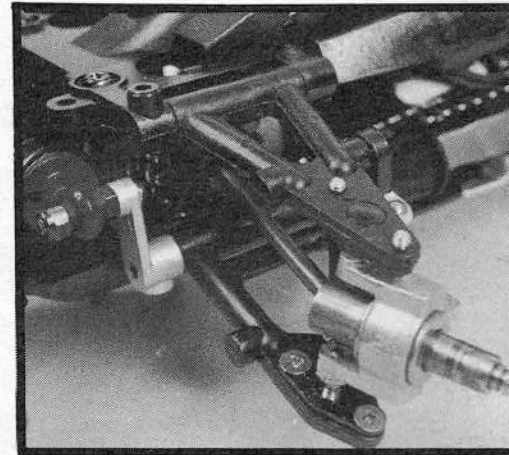


Right; the all new Kyosho 'Progress' 4-wheel drive, 4-wheel steering buggy. From close inspection of the photographs it is obvious that the 'Progress' is an almost totally new car with very few similarities to previous cars. The motor and gearbox is the only exception and of course the damper units. The full length chain has been used in previous Kyosho cars so we must assume it is a strong durable item. Also to be noted is that the steering servo has double the work load and so must be a unit capable of withstanding the punishment.

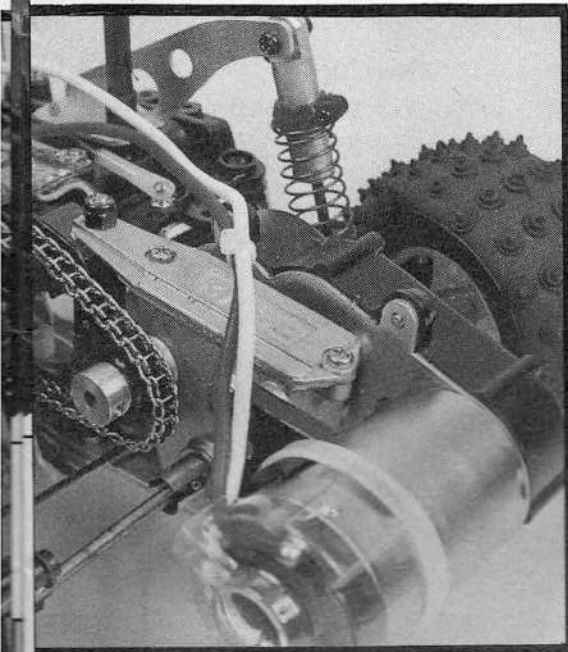


Progress Report

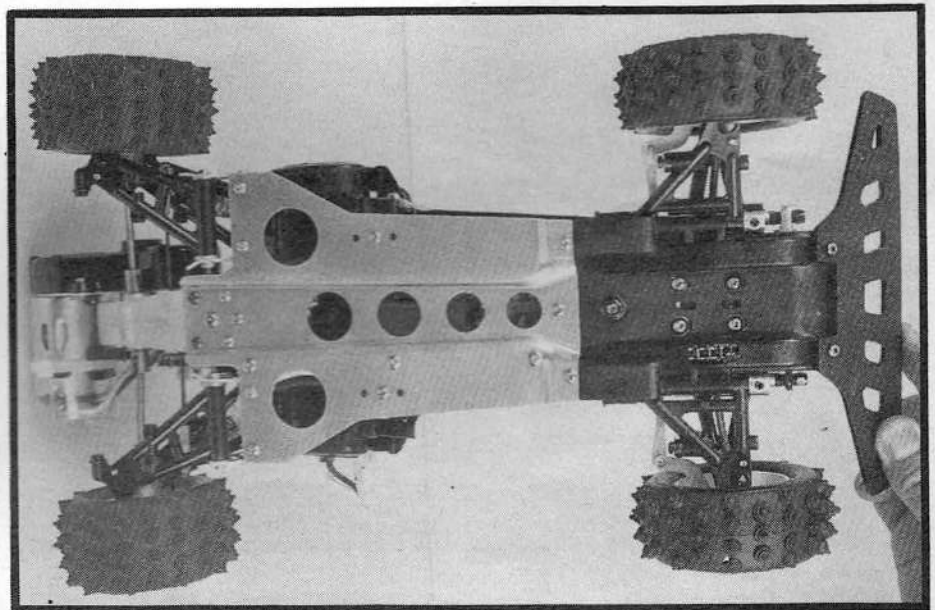
4-wheel drive technology is now firmly established on our race tracks. Now the Kyosho 'Progress' brings us 4-wheel steering.



Right; close up of the front suspension showing the steering and drive stub axle block linked to the upper and lower wishbones via rose joints. Below; the underside of the chassis. At present it is not known how many differentials are included or the all up race weight.



Above; close up of the rear end showing the chain sprocket drive output from the gearbox. The rear wheel steering systems uses stub axle blocks linked to the gearbox with universal joint drive shafts.



off-the-shelf items from Garbo products had been used, but all the drive system was of P.B. origin with 3 differentials, disc brakes on the front and rear drives and of course the rear wheel steering set up.

At this stage one has to take Keith's words that the performance benefits justify the complication, no-one else has driven anything like this after all. Keith feels the major benefit is in an increase in 'power on' steering, that is instead of the car tending to understeer (drift to the outside of the corner) as power is applied during cornering the 4-wheel steering car holds its line much better with the result that the car can go round corners more quickly. The car is very much in prototype state at the moment and will not be launched

until early next year. By which time it is expected that it will have been developed into a world-beater.

It has taken time for 1/8th Off-Road racing to really become established but with the Basingstoke club's recent BRCA Championship meeting attracting 53 entries, there can be little doubt that 1984 has seen the coming of age of this class of the sport in the U.K. Along with the growth in interest has come the need for a careful look at the future direction that the sport is to take, for one would hate to see the growth followed by a slump. Off-Road racing is the one style of model car racing that has everything going for it, no special tracks are needed, tyres last for ages and within reason the cars do not cost an absolute fortune to maintain. The

slow evolution of the 1/8th scale side of the sport has enabled those involved from the outset to spot potential problems so far and avoid awkward situations. Currently many meetings manage to provide 4 rounds of heats for 40-50 competitors, even if only 3 are run, then each driver gets a minimum of 24 minutes track time.

It has been suggested that 5 minute heats should be adopted now that entries have risen to 50 plus so that 4 rounds can still be easily accommodated. It is also proposed that additional finals be run. All these points and many more will be discussed at the BRCA (British Radio Car Association) conference to be held at the Park Hall Hotel, Goldthorn Park, Wolverhampton, on November 4th.

Photo-Action Competition

PHOTO 1:
Stephen Tanswell from South Petherton, Somerset is this month's winner, with a staged shot of his Tamiya 'Frog' Stephen says that the photo was taken on his dirt track in his back garden using a Canon A-1 camera.

PHOTO 2:
Off-Road racing action is the theme of Charles Heath's entry which was snapped at a Chesham Off-Road meeting organised at Sandown Park. Charles comes from High Wycombe and uses a Praktika camera.



WINNER



PHOTO 3:
An interesting set was manufactured by Murray Dawson of Wishaw in Scotland to take an unusual shot of this Mardav 'Marauder'.

PHOTO 4:
At last a non-Off-Road picture and an 1/8th IC racing shot at that! Philip Teague (former Photo-Action winner) took it at the 1982 Mendip Grand Prix using a Praktika camera.

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 - (4) Any number of photos may be submitted but please mark the back of the photos clearly with your name and address plus details of the models, the site and the camera used.
 - (5) If you wish us to return the photographs please include a stamped addressed envelope.
 - (6) Photographs must be all your own work, no copies of previously printed or published material will be eligible.
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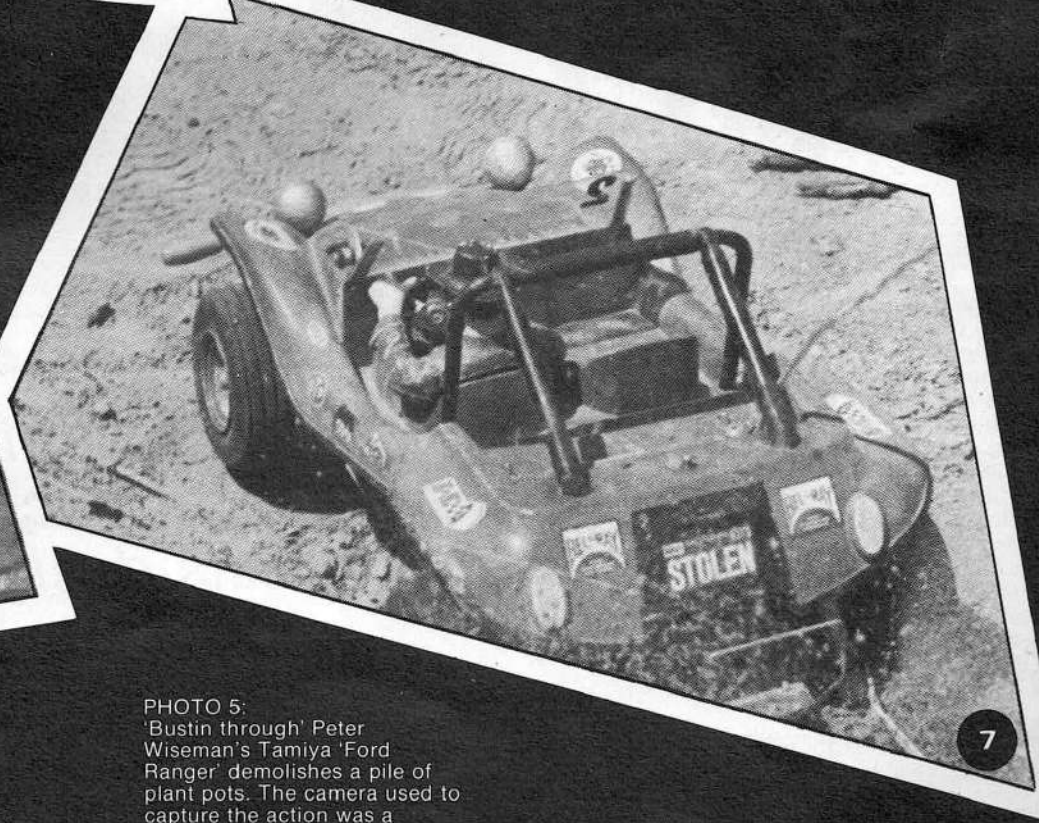
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PHOTO 5:
'Bustin through' Peter Wiseman's Tamiya 'Ford Ranger' demolishes a pile of plant pots. The camera used to capture the action was a Canon AE1.

PHOTO 6:
Wet 'n' Wild action as a Tamiya 'Sand Scorcher' hits a pool of water. Neal Witty froze the action with his Praktika MTL3 camera.

PHOTO 7:
Andrew Stone took this picture of a modified 'Sand Rover' on a motor bike track in Overijse, Belgium (long way to go!) Andrew used an Olympus OM1 with 50mm lens.



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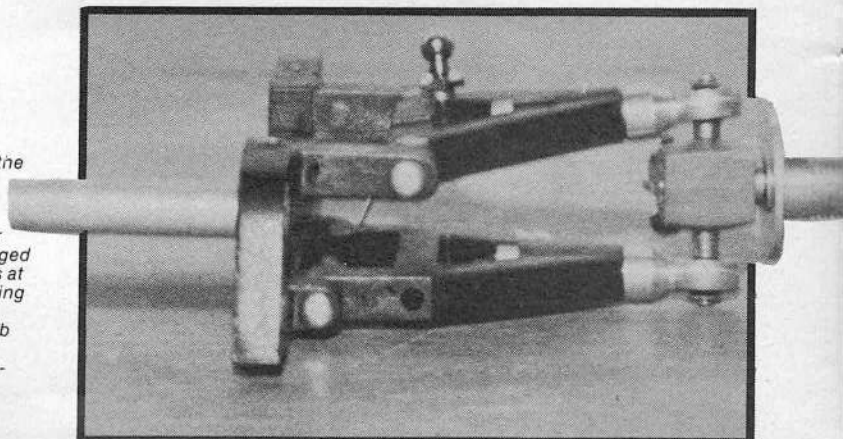
THE JAPANESE are major suppliers to every aspect of modelling. From 1/8th scale engines, through Radio Control gear to plastic moulded static kits. They have always been a major influence on the way the world enjoys its model activities. Yet all this is without a major result in R/C car racing due to their love of the complicated. Four wheel drive 1/8th cars and fully independent suspension 1/12th cars are commonplace in Japan, but fail to make any impression on the simpler European and American products. It is interesting to get an opportunity to try their products, this one being very similar to the machine shown in 'Model Cars' recently.

Pete Winton examines the Japanese approach to 1/12th scale chassis design

Rear suspension

The 'X2' is long in the wheelbase in order to allow a mid-engined layout. This in turn permits a lay-shaft to drive the centre mounted differential featuring plastic moulded bevel gears for the diff action. Drive is carried to the rear wheels by 'ball and pin' drive shafts via a large plastic hub carrier. The wheel hub is ballraced in the carrier, as are the layshaft and diff output shafts. The wheels are held onto the hub by a large central nut. Suspension is by double unequal

Right: one side of the front suspension system showing unequal length wishbones. Castor angle can be changed by placing spacers at the leading or trailing edge of the top wishbone. The stub axle block is supported on rose-joints.

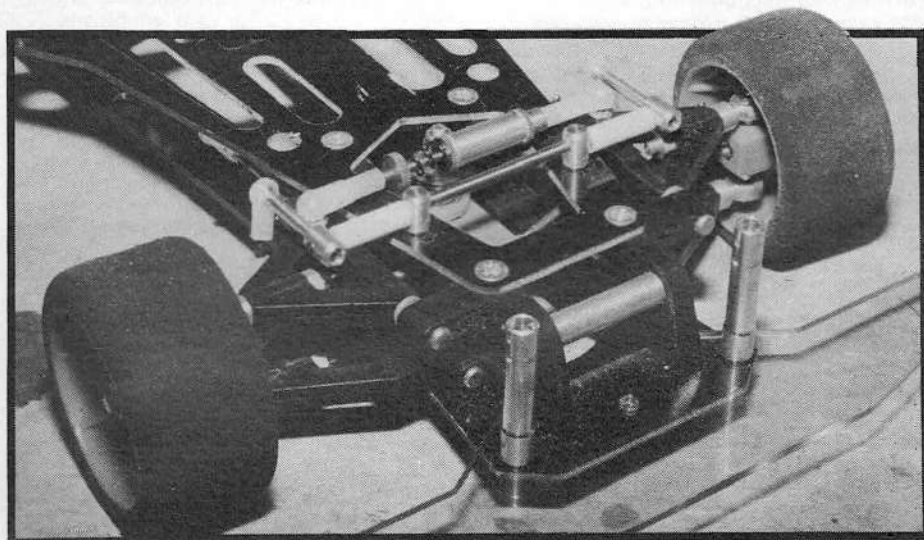
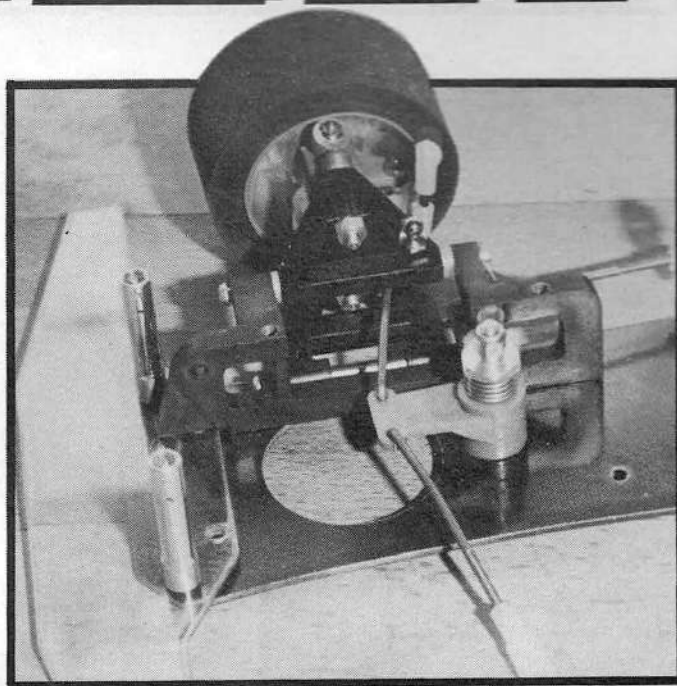


length wishbones, springing taken care of with a coil over monoshock which has adjustable spring tension for setting ride height. All the bulkheads, layshaft carriers, motor mounts and wishbones are all high quality injection mouldings.

Front suspension

The chassis looks like fibreglass dyed black, with a top plate that connects the front and rear wishbone mounts forming a rigid box which flexes hardly at all. Mounted off the front bulkheads are (again) unequal length wishbones. The top wishbones have spacers at each end and by removing the pivot pin and redistributing the spacers, castor angle can be adjusted. The front hubs are supported by rose joints which screw into the moulded plastic wishbones. By screwing the top or bottom wishbones in or out it is possible to adjust front wheel camber. There is a similar adjustment available for rear

Left: front suspension sub-assembly fixed to the GRP chassis. Note the rose joints which can be adjusted inwards and outwards to give camber adjustment. The servo-saver is adjustable and ball-joint steering linkages are supplied in the kit.



low weight of 2lb. 3oz. (on the same scales my Schumacher Car is 2lb.) when fitted with an electronic speed control and Futaba 'FD30M' servo. The (only) drive gear supplied was 48 teeth, and the layshaft (geared 1:1 from the motor) is 1/8th diameter. The tyres supplied were of unknown origin and refused to be moved by 'Tractite', so Wintergreen was the order of the day.

Track times

First runs using a Reedy '05' on 12:48 produced excellent turn in to corners, but oversteer as the power was applied on the exit. Reducing treatment on the front brought a great improvement. The 05 was slow, so changing to the more torquey

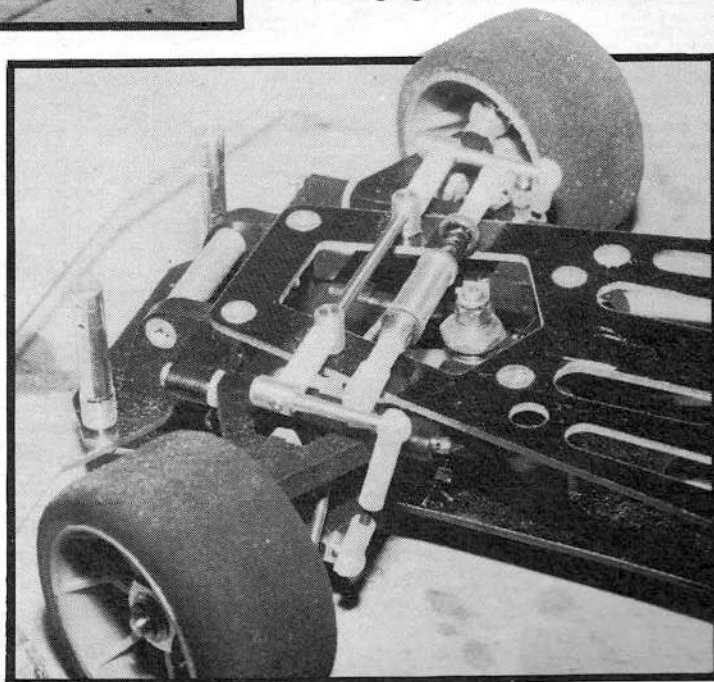
wheel camber, but it is more complicated, involving the adjustment of two screws equally. Without care, unwanted toe-in or toe-out could occur.

At the front a monoshock arrangement is used for springing and damping, as well as a stout anti-roll bar. The wheels use the same centre nut attachment as the rears.

The chassis came ready assembled, but a quick dismantling and re-assembly of certain parts shows it to be straightforward for the competent modeller. A rear anti-roll bar was shown in the exploded diagram, but not supplied. As the rear suspension tended to flop around a bit, I made up a bar of my own. A breakage during testing proved the necessity of the anti-roll bar.

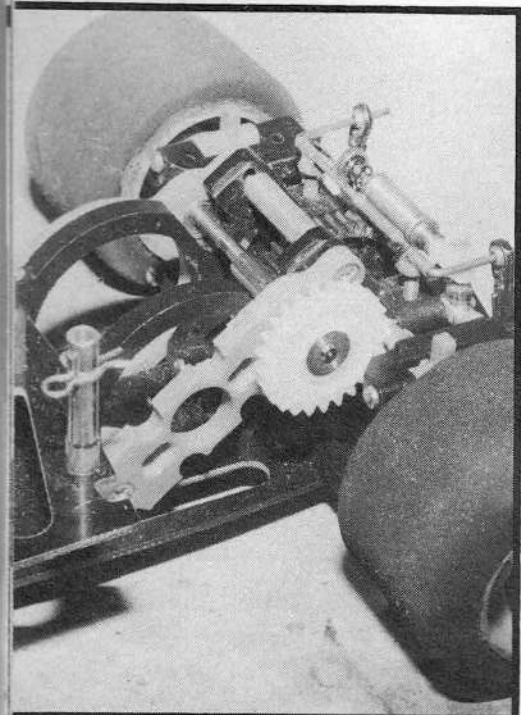
The body supplied was a lightweight by our standards, which contributed to a surprisingly (to me!)

Above: completed front assembly complete with coil-over mono-shock damper and anti-roll bar. The GRP chassis and shaker plate sandwiches the front assembly to give a very rigid structure.

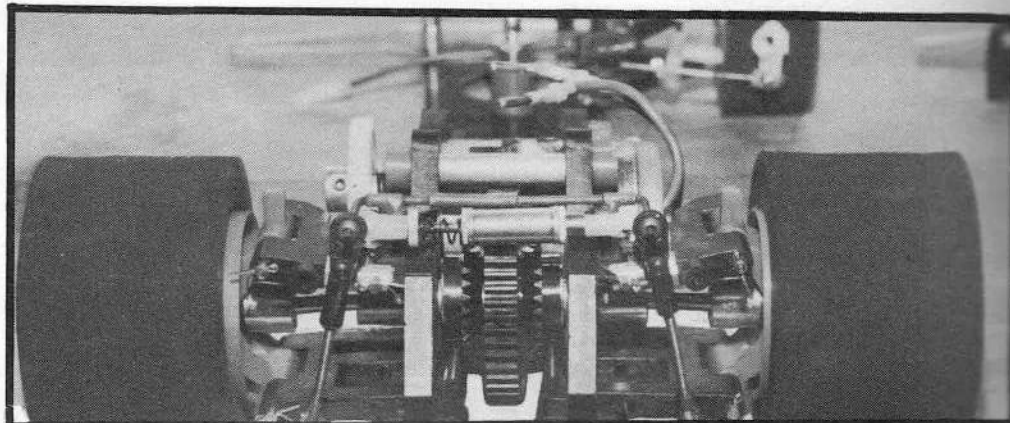


Right: the front anti-roll bar connects the lower wishbones via adjustable ball-joints and tie-rods to give variable chassis roll.

Track Test



Above: the rear drive system with shaped motor mount, layshaft and central differential. Note the home made anti-roll bar, adjustments are made by adjusting the height of the two screws.



Above: the layshaft transmission from the motor drives a hefty plastic gear differential which sits along the centre line of the chassis.

Yokomo on 14:48 brought the expected improvement in speed and acceleration. By the end of the evening's run the car was set such that it could be flung around at will. Turn in was excellent and the car was responsive but rock steady in long fast bends. Tight corners and hairpins were less rewarding due to insufficient lock and, perhaps the long wheel base; but it got round much better than a badly set up Euro/American chassis. Quick

changes of direction failed to catch it out, the chassis roll well controlled.

I can quite see how the Japanese take to these cars with their short (5/6 minutes) races and wide outdoor tracks. With a short wheelbase, and more positive better rear wishbone location (slackness in this area caused some rear end bounce under throttle out of corners) who knows how well this could go.

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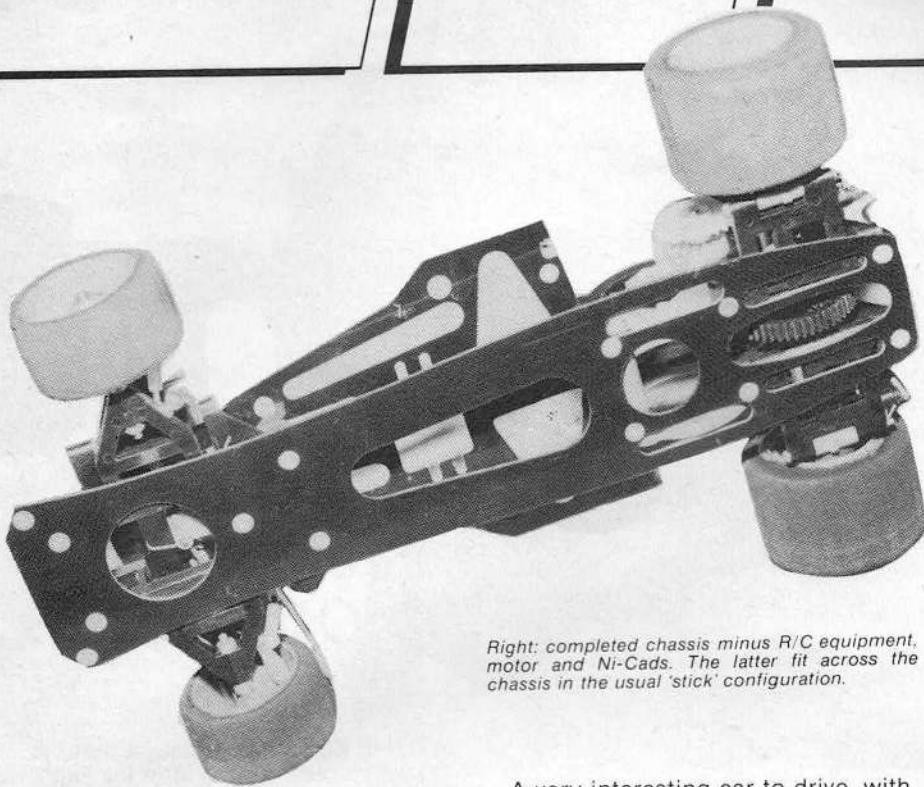
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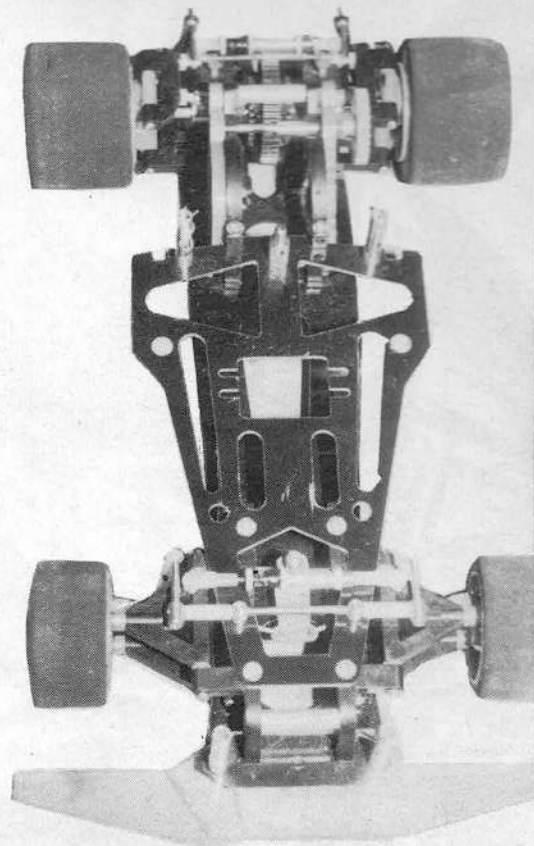
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Above: the underside of the 'Super Hero' chassis showing full-length GRP plate with weight-saving cut-outs.

to boot! But with a quick diet and a shorter wheelbase chassis, there could be some reward.



Right: completed chassis minus R/C equipment, motor and Ni-Cads. The latter fit across the chassis in the usual 'stick' configuration.

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Hunter

Bill Burkinshaw tracks down a budget priced alternative for 1/10th Electric Off-Road racing.

AT THE SORT of price level that the Marui 'Hunter' figures at in the High Street model shops, it is sure to be sought after by many younger modellers looking for performance at a price. What sort of experience are they going to get for their money?

Well, our 13 year old test person, the Editors daughter Catherine was pretty impressed and with only one or two minor exceptions managed to cope easily, even with pre-release Japanese language instructions.

In common with many other 1/10th scale electric buggies intended for the mass market, this car uses a complex fully injection moulded chassis. Tooling costs for mouldings such as this really are immense but

Below, the 'Hunter' rarin to go and ready to make it's impact on our racetracks.



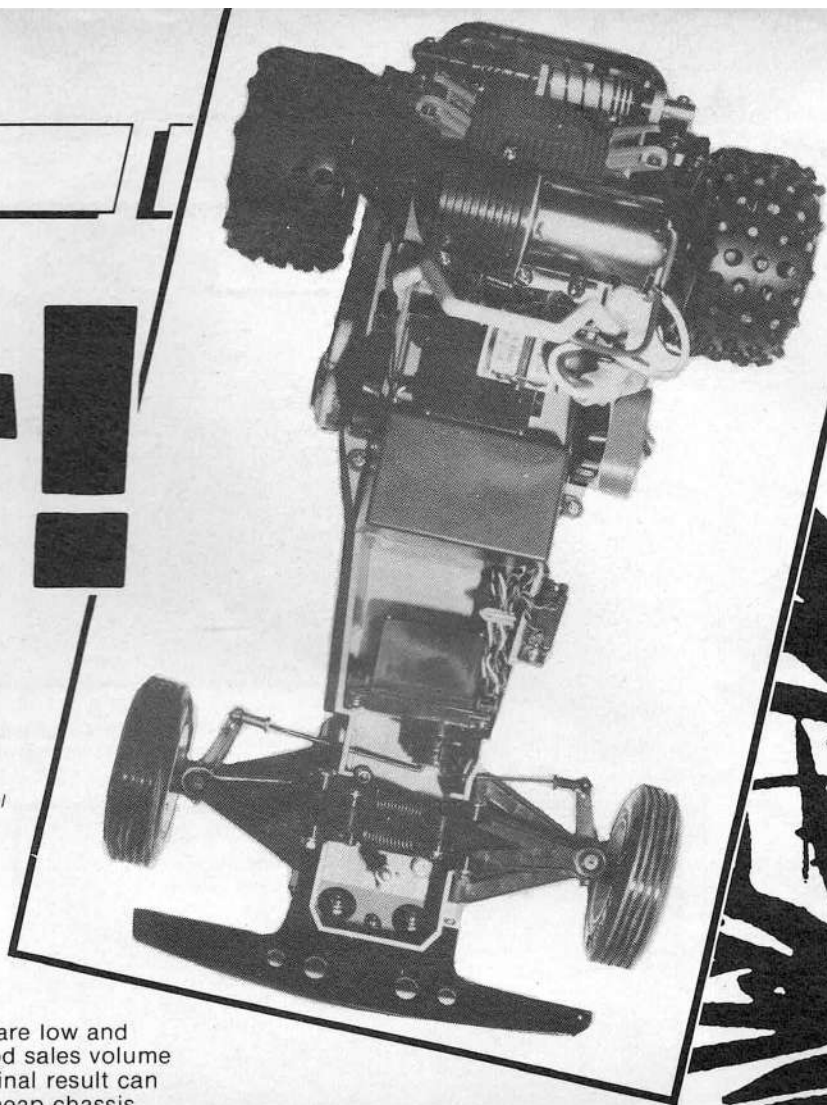
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AMERANG

er!

Right, the 'Hunter' chassis minus the bodyshell to reveal all the mechanics. The R/C receiver is protected by a plastic case as is the motor and gearbox.



actual material costs are low and providing a really good sales volume can be achieved the final result can be a comparatively cheap chassis. Such a chassis should not really therefore be thought of as 'cheap', it is a very expensive item!

Several features make the 'Hunter' stand out from the opposition, inboard cantilevered style front springing for a start, a good idea if dampers are fitted (not standard on the 'Hunter') as they are protected from damage. The single, transverse, oil filled, coil-over rear suspension strut is bellcrank mounted with vertical tie-rods connecting up the rear, swing-axle suspension. This arrangement cries out for an anti-roll bar, for with the suspension as it is, zero roll resistance is present and with the fairly high centre of gravity of the 'Hunter', there must a tendency for the front inside wheel to lift on cornering. Not an uncommon problem with softly sprung buggies. Gear ratios can be changed easily as the motor mount is adjustable to accommodate any of three different pinion gears supplied.

A plastic bevel gear differential is supplied, the gear teeth look rather small, and frail for heavy usage; only time will tell on this point.

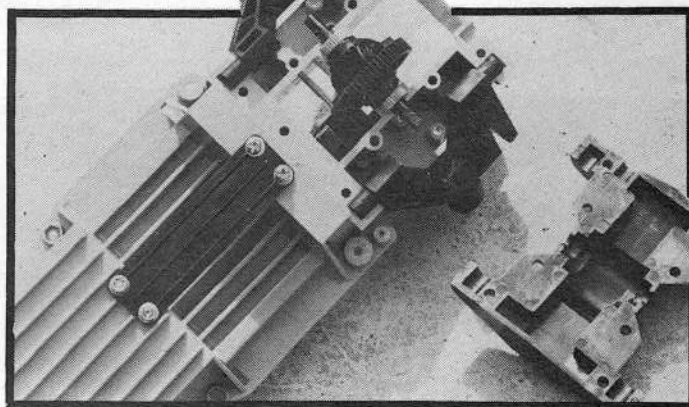
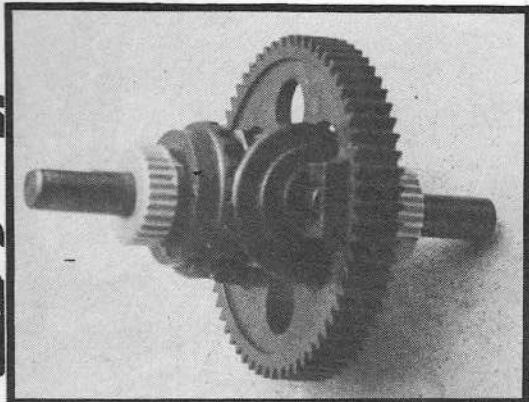
Each step of the construction is accompanied with a key drawing which clearly illustrates the correct screw, pin, nut or bolt to be used. Drawings are very explicit and detail the use of lubricant, thread lock etc. as required.

Front suspension uses a combination of pivot points moulded integral with the chassis and pivots moulded into a separate bolt on

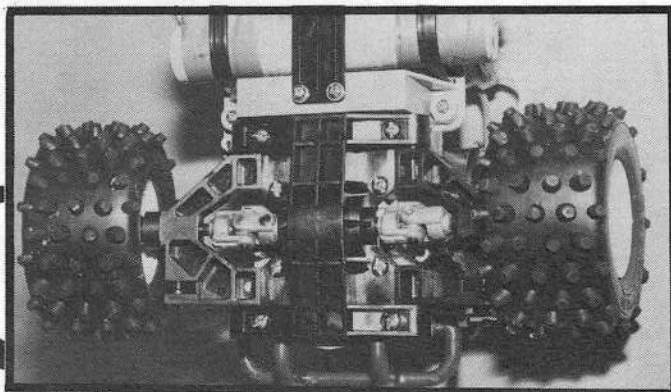
moulding. An interesting little sub-assembly which, once put together results in a free moving suspension system. Steering blocks swivel around a vertical spindle (king pin) which is fixed to the wishbones with roll pins, slightly difficult to push right into place, but not impossible.

The rear drive and suspension system incorporates the familiar 2-stage reduction gearing to the rear wheels via a differential, in turn coupled to half-shafts with die-cast universal joints. These U.J.'s must be fitted carefully otherwise there is a possibility of the drive system being unduly stiff. Not all of the ribbed plastic cover around the rear of the 'Hunter' actually protects any complex mechanism, although the smart style leads one to suppose that they might, looks good though! The damper was relatively simple to assemble and the whole drive and suspension system ended up as a smooth and free moving unit. ▶

Track Test

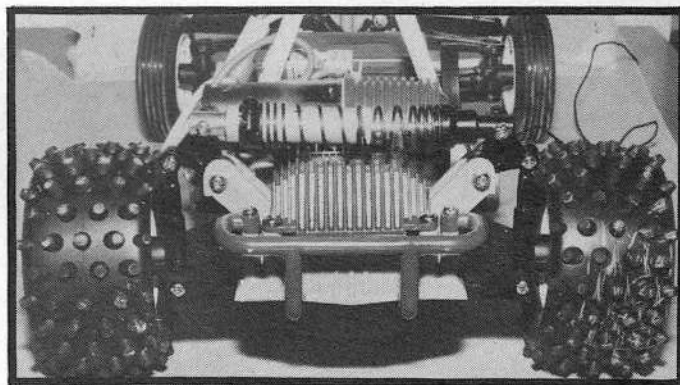


Left, close up detail of the plastic geared differential. Above, the differential fits into the bottom of the chassis and is secured by the plastic guard which also retains the suspension wishbones.



Left, the underside of the complete gearbox assembly showing the nylon universal joints.

Right, the rear suspension and damping system. The coil spring can be adjusted to give different damping and ride height.



Control System

A three forward, one reverse speed, resistor controller is supplied, the metal frame fixes to the servo with double sided tape. Some soldering is necessary and strangely on our kit coupling red to red and white to white during wiring up resulted in a car with 3 reverse speeds and 1 forward. Two minutes work reversed the motor connections and all was well however. A substantial servo saver is supplied with adaptors for various different makes of servo including the *Acoms* unit fitted to the review model. The receiver battery pack fits into a central box in the chassis with receiver sitting on top covered over with a moulded plastic lid. As supplied the R/C equipment housing is not waterproof, splash-

proof is a more appropriate description. *Tamiya* flat 5 or 6 cell Ni-Cad packs fit into the battery space or 6 cell 'stick' style battery packs, either type is retained with re-useable tie-wraps.

Tyres, Wheels and Body Shell

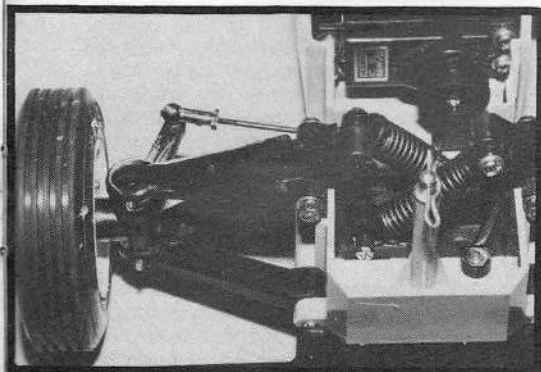
The rear tyres are of a spiked pattern and as well as being one of the softest rubber found on a Japanese kit incorporate a vent hole to allow the tyres to squash more readily. However they were the most difficult yet found when it came to fitting over the wheel inserts. The edges of the mouldings are also quite sharp and care needs to be taken otherwise tender skin could be cut.

The wheels are held together by several self tapping screws, lengths are important so check that you have the right ones before tightening everything up.

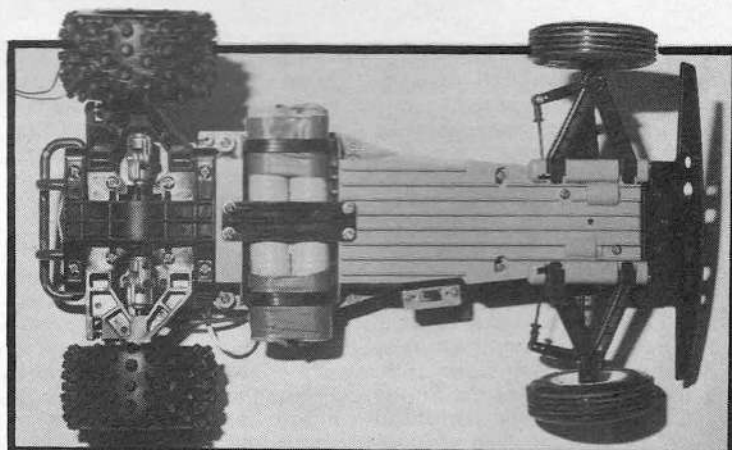
A vacuum formed polycarbonate (*Lexan*) bodyshell is provided complete with aerofoil, headlights and self adhesive decals. This clips onto the rollover bar and is retained with a simple body pin at the front. Once trimmed and decorated the 'Hunter' looks purposeful and ready for anything.

A Hunting we will go

With the high gear ratio fitted the 'Hunter' is very quick off the mark. As usual, first runs were carried out on the road outside my house and on the smooth tarmac road, high speed



Left, close up of the front suspension showing the double wishbones and cantilevered spring dampers. Right, the complete chassis shown from underneath.

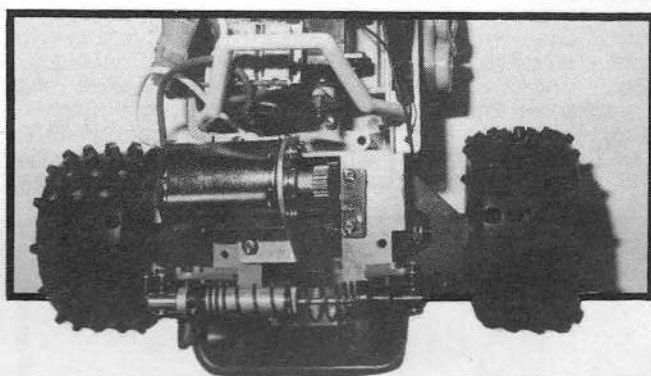


Left, the motor and gearbox with the covers off. The kit includes three different motor pinion gears to vary the ultimate gear ratio. The motor mount is slotted to accommodate the various gears and achieve a close mesh

oversteer was marked. As soon as the 'Hunter' moved onto the grass however, the situation changed and the car became very manageable. Lack of damping at the front end was quite noticeable and to get the best from the car, dampers really do need fitting.

Conclusion

An interesting car, really good quality throughout, incorporating some interesting ideas. Excellent presentation of the kit in the familiar Japanese style.



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OXFORD

AT THE TIME of writing the stock car racing season is rapidly reaching its close, but with three major meetings left, there is still plenty of excitement in the season still to come, and which I will no doubt be reporting on in future issues.

Those three meetings are the RSCA Championship at Lilford on September 16th, the final round of the Series Championship at Brighton on September 23rd and the Champion of Champions Meeting at Keighley on October 14th. The Lilford meeting which as I write is less than two weeks away has already attracted an entry of around fifty of the country's top 1/8th scale drivers including the '84

World Champion Paul Dudley, European Champion of Champions Cliff Emms, '83 Series Champion Graham Laurence and defending Champion Ivan Congreve. Several of the drivers will then be at Brighton a week later for the final round of the Series Championship, which has turned into a two-horse race at the top where both Cliff Emms and Steve Talbot share the lead with 47 points. Steve having won two of the five rounds so far and been second in three, whilst Cliff has won the other three, come second once and third once. Other top points scorers are Graham Laurence 20, Andy Fulford 19, Peter Butterworth 14, Paul Dudley 12, Phil Richardson 11, Mick

Anderson 10, John Buckley 9, and Les Calder and Clive James 8. With 10 points for a win down to 1 point for 10th place it is clearly a fight between the two at the top, but there will be some keen competition lower down the table as well. All the leading drivers in the Series Championship and the three Regional Championships, plus the winners of the major meetings will be invited by the RSCA to race in the Champion of Champions meeting at Keighley which should be a good meeting to round off the season.

One must not forget the 1/12th side of the sport, whose aficionados will be racing at their Clubs up and down the Country all winter. Hopefully the 1/12th sect-

ion will be putting on a race meeting at the Wembley, Model Exhibition in early January. At the moment I don't have details of the day or time, but hope for more news on that in the next issue which should reach you before Christmas.

Could I also take the opportunity to apologise for the non-appearance in some recent issues of the 'Club in Focus' spot, which has been due to lack of space when the issue has been printed, my friends from the Sussex Club down in Brighton have been waiting since the July issue to see their Club featured — it will happen one day!

Now let's get back to this issue, and catch up with what has been going on.

1/8th Stockcar World Champs

Wendy Lawrence gives 'Taking Stock' the low-down on this prestige event, held in Italy during August

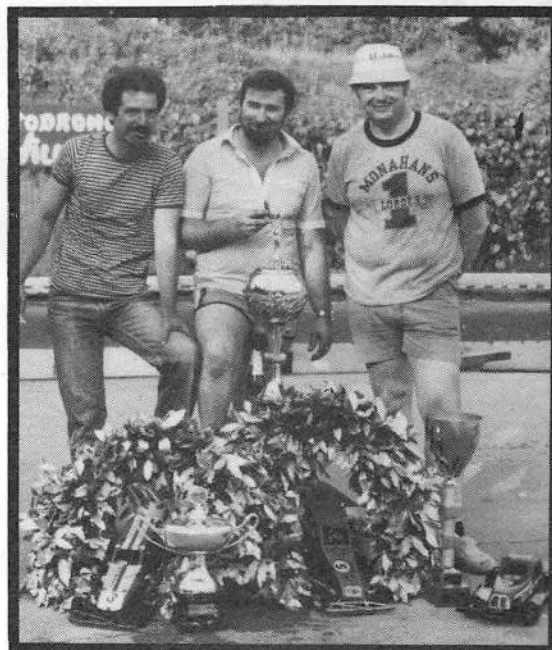
THIS YEAR'S World Championship took place at San Giovanni Vel Dano a purpose-built circuit in Italy. Being so far away only three globe-trotting drivers from Britain made the journey. Paul Dudley, Graham Laurence and Peter Micheli to see if they could bring back the title that Les Calder had won the previous year in Germany.

Practice was on the Saturday, but the track was open all the week for those arriving earlier who wished to make use of it. The British drivers arrived a week previous, the Dutch and German drivers arrived Wednesday and Thursday, so by the end of the week the track was getting busy.

As the track is only used two or three

times a year the surface was a bit tricky at first, but as more oil and rubber was laid down it seemed as if 2402 tyres would be the answer. Practice for the three British drivers was going fairly well, though the 90 degree plus temperature did not appear to suit Graham's O.S. engine, so he changed to his *Super Tigre* which seemed to like the conditions — what did you expect in Italy Graham? Paul was getting help in tyre choice from a lizard which had found its way into his tyre box, and Peter was just happy to be in Italy, his

Right; the British trio of 1/8th I.C. Stockcar drivers who attended the World Championships in Italy. L to R Grahame Lawrence, Paul Dudley and Peter Micheli.



MG having got him there safely as reported in the October issue.

So to the big day itself. By 7 o'clock (in the morning!) the pits were filling up, Italian, British, Dutch and Germans all busy together and when language barriers were encountered hand signals worked wonders. All were eager to see who was going well, and who would end up as Champion at the end of the day. A total of 36 drivers had booked in, but as they were checked it was apparent that there were going to be some non-starters and in fact only



Above: the first three places in the World Championship final, Grahame Lawrence 2nd, Paul Dudley 1st and Franco Brisighini 3rd. Right: the World Champion finalists on the driver rostrum.

27 turned up. Each driver was called to the rostrum in turn, paid his 15000 lire (approx. £7.50) handed in his radio and in turn was handed an envelope containing a programme, stickers, a commemorative plaque and a beany hat.

Qualifying

The race format was that of all EMSA meetings, three heats for each driver, the best two only counting for qualifications to four quarter-finals, which in reality meant that only three of the starters were going to fail to qualify.

So to the racing and Round 1 which was a good one for the British drivers as Paul Dudley and Graham Laurence led the way with 39 laps, followed by Peter Singels (NL) and Linds Claffetti (I) on 38, followed by Peter Micheli, Giovanni Cherici (I) and Franco Brisighini (I) on 37's.

The second round of heats was not a

good one for the British drivers, Peter stayed the same with a 37. Paul also dropped to 37 and Graham went down to 36. The round was headed by the Italian, Lorenzo Lelli with a 41, being followed by John Bekking (NL) on 40 a lap ahead of Italian, Paolo Innocenti on 39 and fellow Italian Alberto Annovi on 38. One man who was having a poor meeting by his usual standards was Italian Ascanio Cherici who had only a 33 and 30 to show for his efforts so far.

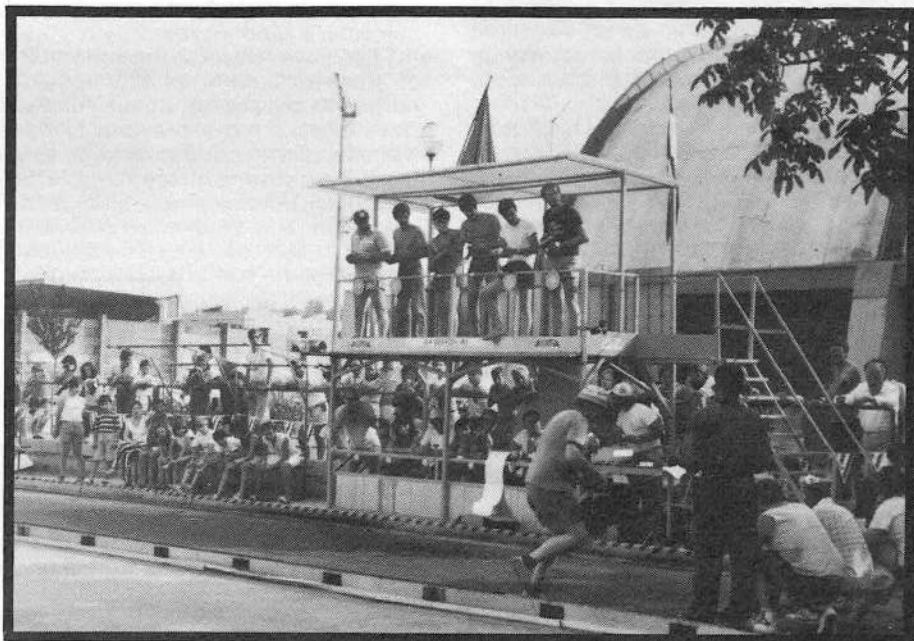
So to the third and final round, the make or break round as it is often called, but at this meeting much of the pressure was already off, only three drivers were to be dropped for the quarter-finals. The round was headed by Peter Singels with 39 laps, followed on 38 by Paul Dudley and Franco Brisighini with John Bekking, Lorenzo Lelli, Robert Strobel (D), Gino Balicchi (I) and Graham Laurence all on 36. Peter Micheli had a poor 18, but was happy knowing two 37's had left him quite safe to qualify.

After qualification, the three drivers who were to go no further were all Dutch, Mareika Van Bre, Alexander

the third quarter which he won with 44 laps, the same as second man Stefano Cherici. The last of the quarter finals was by far the fastest with five of the six drivers getting over the forty mark, being lead by John Bekking on 46 with Gino Balicchi on 45, Willi Kramer and Peter Micheli on 44 and Ascanio Cherici on 42 getting back to something like his true form. It was all the above mentioned drivers who discovered they had made it to the last twelve, the three from Britain had made it, along with six Italians, two Dutchmen and one German.

Semi-finals

Once again the only sure way to the Final was to win your Semi, and that was going to be a real task. Lorenzo Lelli, Ascanio Cherici, John Bekking, Willi Kramer, Graham Laurence and Peter Micheli were out in the first semi which was a close affair, with Willi Kramer and Graham Laurence both ending up with 46 laps, the verdict going to Willi on time, followed by John Bekking and Peter Micheli on 43, John just getting the verdict from Peter on



Tangerink and John Stark.

Prior to the start of the quarter-finals there was a siesta, as it was too hot to race in blazing sunshine, but before too long it was back to business. At this stage things were getting a little tense as the only sure way to the semi-finals was by winning your quarter-final, as the other eight places would be taken from the fastest losers overall. The first quarter-final was won by the Italian Lorenzo Lelli with 48 laps ahead of Graham Laurence with 45, and Paoli Innocenti with 43 third place. In the second quarter-final Peter Singels emerged as the clear victor with 47 laps, being followed by Franco Brisighini on 43, the only two to break the forty barrier. Paul Dudley was out in

time. The second semi saw Gino Balicchi, Stefano Cherici, Paolo Innocenti, Peter Singels, Paul Dudley and Franco Brisighini line up against each other, and an easy win for Paul Dudley with 50 laps ahead of Franco with 47 and Cherici getting third place verdict with 43 laps the same as Paolo Innocenti.

The six to make it to the Final were Paul Dudley (50 laps, Franco Brisighini (47), Willi Kramer (46), Graham Laurence (46), John Bekking and Stefano Cherici (43). Poor old Peter Micheli had missed out on the Final by two hundredths of a second, as had Paolo Innocenti both of them recording 43 laps, but being beaten by the clock.

Taking Stock

The Final

There was a short break to let engines cool, etc., before the six finalists came to the rostrum, and the '84 World Final got under way. For Stefano the race lasted only 29 laps before he was forced to pull out with problems, but on the track the British duo were in first and second place, and they held on to those positions for the five minutes of the race, with Paul Dudley taking the Championship back to England with 47 laps and Graham in second place half a lap behind with 46. These two were well ahead of Franco Brisighinni with 43 in third, one lap ahead of Willi Kramer on 42 in fourth, John Bekking in fifth with 44, Stefano's 29 leaving him in sixth place.

So the trophies and laurel wreaths were presented and a happy band of British drivers, wives and families made their way home. Les Calder may have lost his crown, but his one consolation must be that it has stayed in Britain. It should be noted that last year in Germany it was a British one/two with Les and Roy Crowson, this year it has been Paul and Graham.

Many congratulations to Paul and Graham, and to Peter for his excellent 7th place and my thanks to Wendy Laurence for the report and lap score sheet.

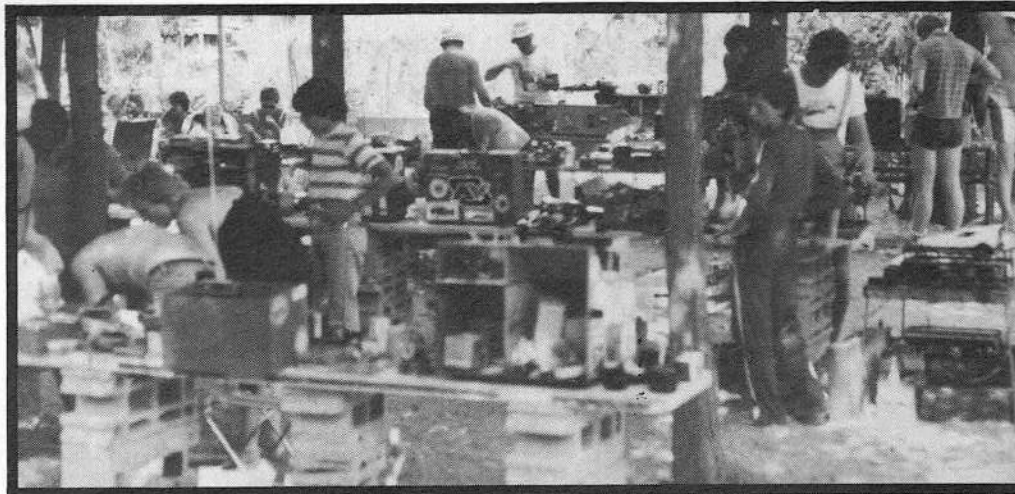
Paul of course was driving his *Puma*, which he makes and sells, and Graham who has recently taken over the distribution of *Puma* in the south was not driving his new car as sales have been so heavy there was not a *Puma* available.

1/12th National Meeting — Wirral, August 26th

Once again it is with great thanks to Chris Loughran that we have a report on the most recent of the Nationals Rounds, the last Round being back in May.

The Wirral Round was to be held at a new venue, on board a land-based Sea Cadets training ship 'The Revenge'. The track was shorter and narrower than last years, but there were no more than seven cars in one heat. Entries were down at around 42, but what with the Bank Holiday to contend with and the good weather it was still a good turnout, though there were to be plenty of retirements.

The floor was of wooden planks, as per ships deck, rather dusty despite a good washing/mopping session and bumpy, particularly on the corners. Practice got underway for all except yours truly who found himself left with radio which refused to work. Repaired that, only for the plug on the throttle servo to fall apart, repaired that, got on the track straight into the fence only to break the reverse micro. Ah well, all the others were practising happily, even if noisily as their cars crashed into the barriers having taken off on the bumps.



Above: a scene from the World Championship pits area in Italy.

The heavier cars appearing to suffer worse than the others, Bob Jessop in particular, his car breaking its Lexan chassis, so he reverted to his spare.

After practice the Concours was held, with all drivers voting for the car of their choice, which turned out to be the replica Robbie Pearce body of Leicester's Mark Ford.

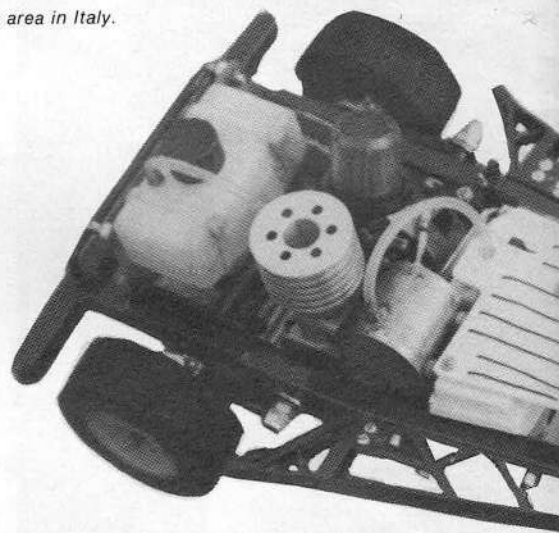
Then it was down to the serious stuff of Round 1, with all the favourites putting in big scores. Shaun Riley and Dave Clark the two previous National winners both recorded 48 laps, as did Dave's sister Shirley and Chris Loughran, but these were all topped by the 49 of Tim Walker, who is at the moment out of the Championship running as he has missed a meeting.

To prove his point Tim also headed Round 2 with another 49, followed by Martin Higham and Kelvin Hawkes with 48's. Shaun Riley, Adam Longrigg and John Cutts all managed 47's. Both Dave and Shirley Clark retired in Round 2. Dave when his broken servo-saver made it difficult to get round and Shirley when the reverse micro jammed in full reverse.

During the half hour lunch break which followed, the pits were a hive of activity as cars were repaired and broken pieces replaced. Tim Fielden had replaced his servo receiver and two transmitters in an effort to cure his radio problems which put him out of the remainder of the running for the day. He was not even to make the consolation final.

Round 3 had Shaun, Shirley and Gregg Lloyd racing each other in heat 1, Shaun winning with what was to be the F.T.D. of 51 laps, being followed home by Shirley with 49. Gregg having radio problems and doing a lot of damage to the woodwork as his car twitched all over the circuit. In their heat both Peter Storer and Martin Higham broke the 50 mark, whilst Ian Johnson and Phil Smith both recorded 47's.

In Round 4 the F.T.D. of 51 laps was equalled by Dave Clark, Adam



Above: a view of Steve Talbot's 1/8th scale car AFTER a race meeting.

Longrigg put in his first 50, Tim Walker recorded another 49 whilst Shirley Clark was again having trouble with the reverse micro but still managed a 46.

Tim kept up his consistency in the final round which he headed with 50 laps along with Dave Clark, these two being ahead of the next man up who was Martin Higham with 47.

It was now time to look at the qualifiers. Those going through to the final were Dave Clark with 198 laps, Tim Walker on 197, Martin Higham on 194, Shaun Riley and Adam Longrigg on 193, Pete Storer on 185 and Phil Smith, the leading Junior on 1984. Those to fight it out in the Consolation were Pete Wright, Ian Johnson, Grahame Hawkes, Shirley Clark, John Cutts, Bob Jessop, Colin Higham and Kelvin Hawkes.

So to the Consolation Final. Kelvin had been having trouble all day trying to find some tyres that would work properly, but he was still in with a chance. At the start he appeared to be going well, but a few bumps into the fence seemed to take the edge off his car, possibly his tyres were letting him

down again. John and Shirley then took up the running with John having a slight lead to about half distance when he got in a pile-up which let Shirley through to take the lead. John got himself free and fought back, with the two of them fighting for the lead for the remainder of the race, Shirley holding on to her advantage to take the remaining place in the final.

Right from the start of the Final Pete Storer shot into the lead and first lap pile up, which let Martin Higham through, followed by Dave Clark; even after making contact with each other these two retained the lead. Meanwhile, Pete Storer, Adam Longrigg and Shaun Riley were getting in each others way, which let Shirley Clark catch and pass them. On lap 14 Dave got by Martin who was being caught by Shirley, but looked to have the situation under control. On lap 37 Dave lapped Martin, and soon after both Martin and Shirley tangled with Paul Smith. Martin making the better escape, so that the result was: first Dave Clark, second Martin Higham and third Shirley Clark. The full results are on the technical chart.

Chris asks me to pass on thanks to Pete Wright and the Wirral Club for putting on the meeting, to *Windmill Models* who were there to supply bits and to *Motile Model Developments* who supplied all the finalists with a set of tyres.

Incidentally, *Motile Model Developments* have just put out a new tyre numbered 12/005 which looks good for the front end.

Series Championship Round 5 F.A.S.T. (Bolton) August 26th

Twenty-five drivers made it to the F.A.S.T. Club's track at Horwich for the fifth round of the Series Championship. Most of the drivers were from the north, but the two leaders Cliff Emms and Steve Talbot had made the journey along with Andy Fulford and Trevor Heasman. Also present was the newly crowned World Champion Paul Dudley, complete with Trophy to show the admiring onlookers.

According to Club Secretary Mike Seddon, who sent the report of the meeting, it was a great success from this Club's point of view and he asks me to thank all the drivers who raced in this Club's first major fixture.

The racing format was the usual one of four heats for each driver with the best three counting for qualification, the top four qualifiers going into the Final and the next six fighting it out for the two remaining places through the Consolation. At the end of qualification it was those 'terrible twins', Cliff Emms and Steve Talbot who headed the list of qualifiers with a total of 133 laps each, averaging as you will realise just over 44 laps for each of their three counted heats. They were followed by Mick Anderson on 129 and Peter Butterworth grabbed the fourth place in the Final with 125 laps. The six to fight again were Paul Dudley and Andy Fulford with 120 laps, Mark Holden on 117, Trevor Heasman with 116, Dave Stell on 111 and Phil Richardson with 109. This of course meant that all those who had travelled from the Midlands



Above; Peter Butlin of Nottingham cleaning his car at the trackside with both eyes on the opposition.

had picked up points as they were all in the top ten.

The Consolation resulted in a win for Andy Fulford with 43 laps, and he was followed home by Paul Dudley with 41. Just a lap adrift was Trevor Heasman with 40, ahead of a battling duo of Mark Holden and Dave Stell who both finished with 39 laps, Mark just edging Dave into fifth place. Sixth place was taken by the unlucky Phil Richardson who only managed 21 laps.

So to the Final, with Andy Fulford and Paul lining up with the other four for five minutes of racing. Once again it was Steve and Cliff who led the way, Cliff just emerging as victor with 60 laps ahead of Steve with 59. Third place was taken by Mick Anderson with 56 laps, while Paul just pipped Andy into fourth place, both finishing with 54 laps. In sixth was Peter Butterworth with 52.

Thus another competitive Series Round was concluded with the final Round at Brighton on September 23rd.

Wirral 1/12th stockcar results

Posn.	Name	Car Type	Gear Ratio	Cells	F. Tyres	R. Tyres	Speed Control
1	D. Clarke	M'Fied Mardave	13.53	Soft	Prowler 12/002	Prowler 12/001	Parma
2	M. Higham	M'Field Mardave	12.46	Yuasa	Standard Mardave	Med. Soft 'D'	Associated
3	S. Clarke	M'Fied Mardave	13.53	Enduro 1200	Mardave Standard	Med. Soft 'B'	Parma
4	A. Longrigg	M'Fied Lectricar	13.54	Sanyo	Med. Soft	Prowler 12/001	Lectricar
5	T. Walker	M'Fied Lectricar	13.54	Sanyo	Med. Soft 'D'	Med. Soft 'D'	Parma
6	P. Smith	Kimbrow	14.48	Sanyo	Hard	Med. Soft	Mardave
7	P. Storer	Standard Mardave	12.52	Sanyo	Soft in Hard out	S/Soft	Mardave
8	S. Riley	S'Built	12.54	Sanyo	Prowler 12/004	Prowler 12/001	Parma

Concours: M. Ford (Leics.). Junior Trophy: M. Ford.
F.T.D.: S. Riley & D. Clarke (51).

Belting Up

Judging from what I've seen around the ovals so far this season there appear to be less drive belts breaking. I can only put that down to the wider belts now being used by most drivers. The *Mardave* type seems to be favourite, being 20% wider than the old standard belt, and being cheap to use needing only the modified *Mardave* clutch drum. Nevertheless the *Kingsway Kar Komponenten* unit is favoured by some, being much wider but requiring either the new *Kingsway* clutch unit and flywheel or your own modified.

Well that's it again for another month. Please send me any comments, tips or news from your Club, area or self, to 85 Elliott Road, March Cambs. See you ovalling around.

Hello Sugar

Paul Landels recently informed me of some 'gripping' experiments down on Weston Shore. Taking their lead from Californian racers the Southampton club have started to treat their track with sugar water in order to increase grip. Apparently the Americans use *Coca Cola* (which is basically the same thing) on their outdoor circuits for both 1/8th and 1/12th scale cars to provide instant grip. At Southampton they use one kilo of sugar to five gallons of water and only treat the corners using a sprinkler or watering can.

Paul reports quite amazing results with instant grip for everyone after the solution has dried on the track. Cheaper, harder tyres can now be used with satisfactory results straight away without having to wait for the black line to appear which for club meetings may take all day. The expense of one kilo of sugar is relatively little and can easily be accommodated under the race fees. Perhaps other clubs would be willing to give it a go and let me know the results, who knows... perhaps we can expect sponsorship from *Tate and Lyle* next year?

London calling

As mentioned in the 'Seen and Heard' section of this issue newsletters from various clubs arrive here at the office. **The London RCC** September issue carries the good news that a grant from the sports council has been procured to re-surface their Crystal Palace circuit. Hopefully this will be done over the winter months in readiness for the '85 racing season. For any further details about the London RCC then contact Steve Fagg, 75 Chislehurst Road, Orpington, Kent, BR6 0DQ. The club holds regular race meetings on Sundays at the Crystal Palace National Recreation Centre.

PB Racing QLs

No, not 'Quantum Leaps' but tyres for 'Qualifying'. This is the title given to PB's latest tyre introduction. Paul Pagdin of the aforementioned company claims that they have found the main supplier of 'Super-Tyre' rubber and are now able to supply in large quantities. The best news of all however is the price, £3.95 a set of rears in ringed form, £5.95 pre-trued. The latter facility is unnecessary as a couple of laps of the track will grind untrued tyres concentric anyway.

One last thought. If PB can sell tyres of comparable quality to *Gandini's*, *Bajoma's*, etc., then why were these tyres so expensive in the first place?

Contact your local model shop or apply to *Ted Longshaw Model Cars*, 7 Warren Road, Chelsfield, Orpington, Kent, for supplies. Tel. (0689) 55313.

COLUMBIA



Photo's by
Fer Van Helden

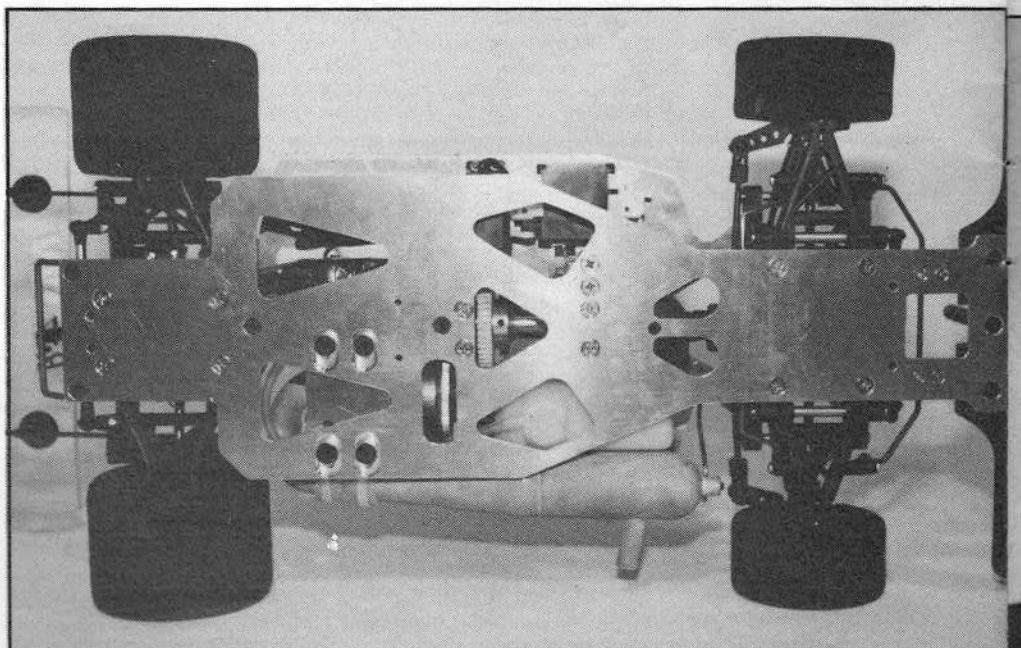
4WD for 1985

As you can see from the accompanying photographs the *SG Racing*, four wheel drive, circuit racer is well on the way. Obviously SG feel that 4WD is the way to go and have moved accordingly. Unfortunately no performance data is available to us at present so whether or not there are any advantages remains to be seen.

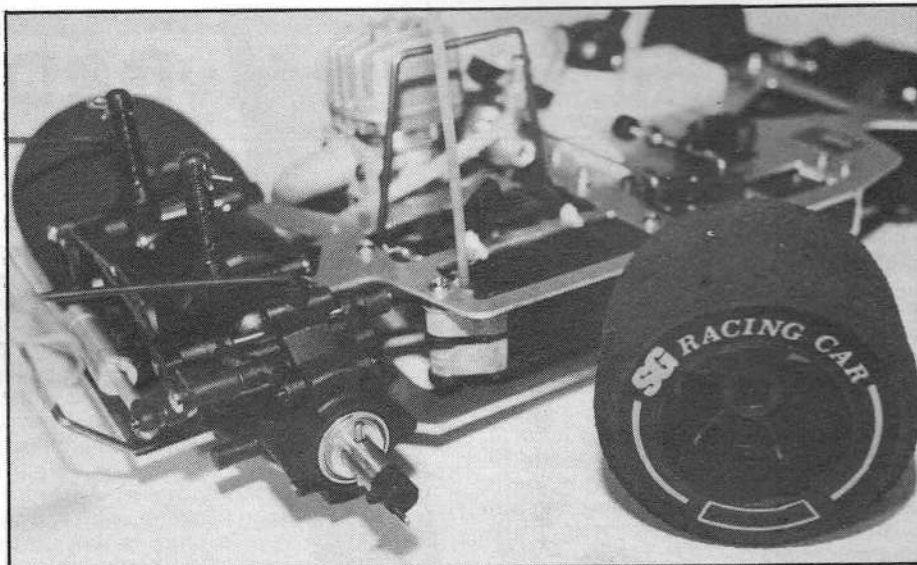
Four wheel drive has led a chequered history as far as racing in this country is concerned. Banned in 1983, made legal in 1984 will we now see another discussion on this subject during our own BRCA Conference and the EFRA AGM? If so who will raise the issue.

Price and availability are not yet definite although we are told that production will have begun by the time you read this and it will not be cheap (surprise, surprise).

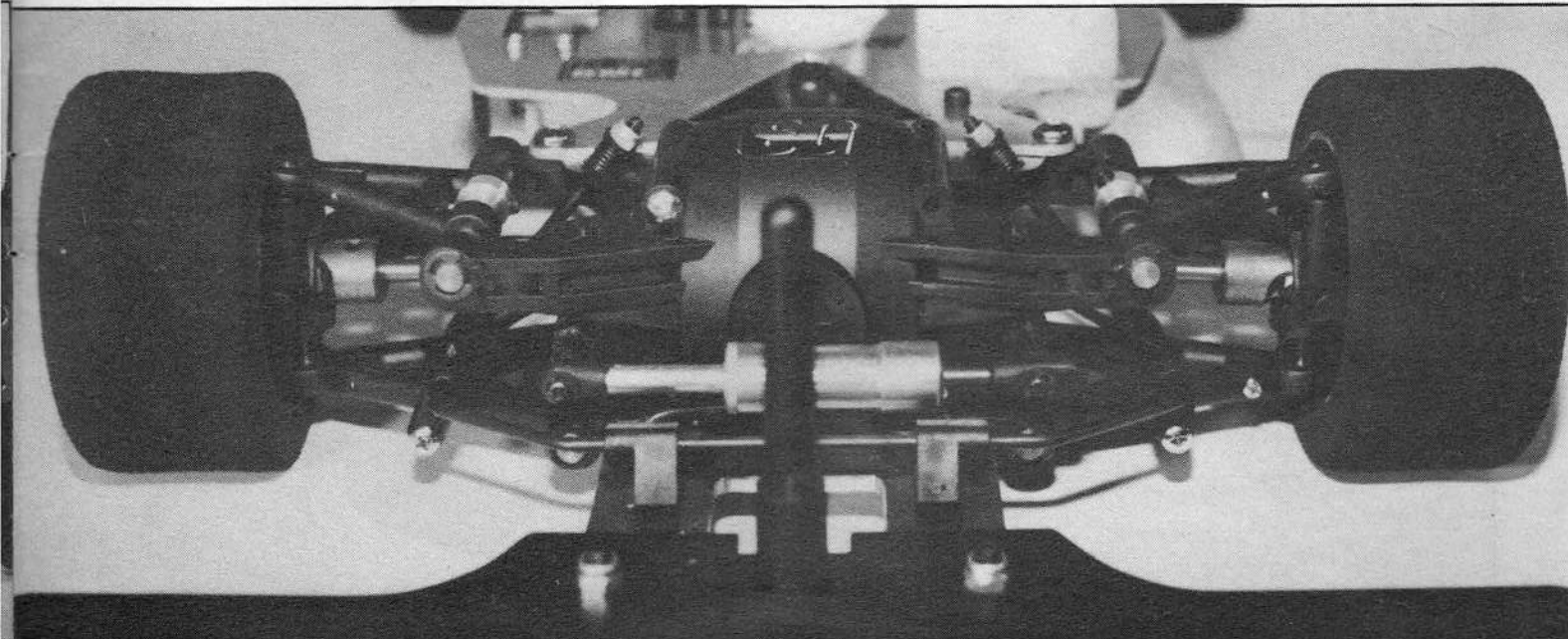
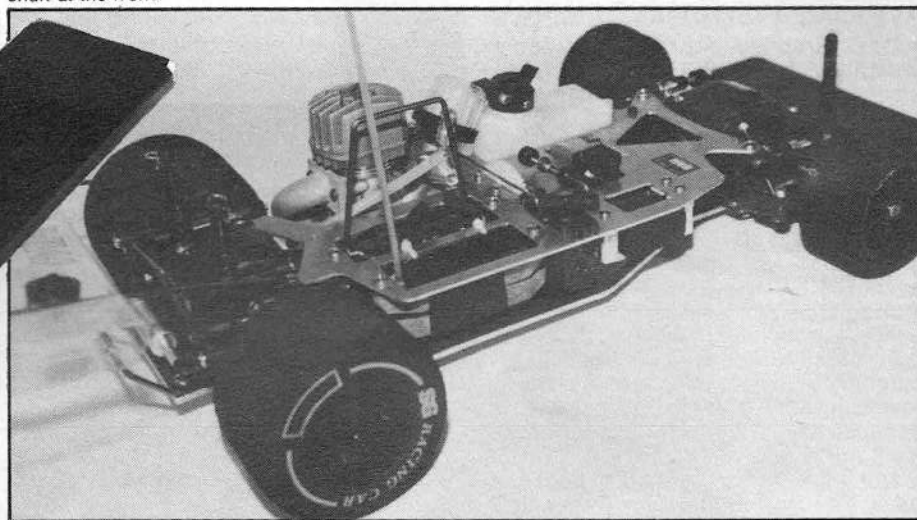
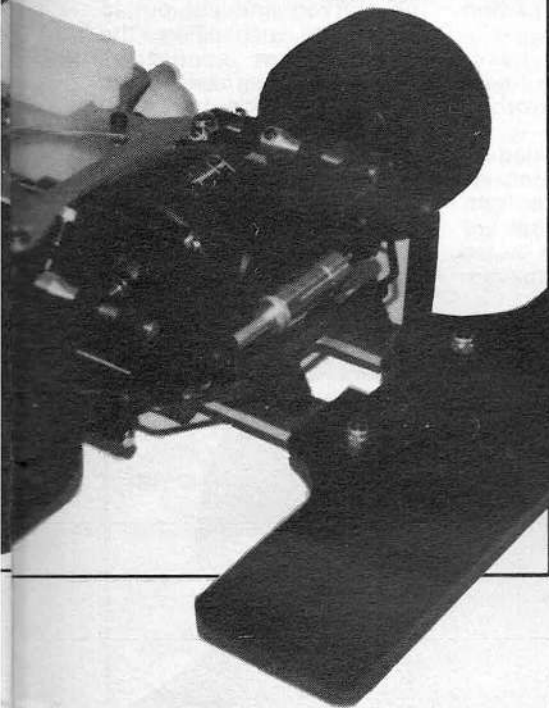
Above: the complete 'Columbia MK 4WD' which has been on the SG development workbench for roughly six months. Below: the underside of the chassis made from 3mm thick alloy and cut-out for lightness. The engine flywheel is recessed to prevent stones from stopping the engine. The chassis thins out dramatically toward the front and first impressions are that it could be very susceptible to damage from a head on collision. Particularly with the shaft drive transmission system. It is claimed that the weight is even a bit lighter than the 'MK2'. Below right: the front-end shows the very Garbo-ish gearbox housing. No front differential is used but the wheels are fitted with roller clutches. Universal joints transmit the drive from the gearbox to the front wheels.



MK4WD



Above: the SG 'Quickchange' rear wheel system. Many of the components used on the 'MK2' are used. Below: side shot of the 'MK4WD' showing the R/C layout. The steering servo drives a very flat servo saver similar to the type used in 1/12th and 1/10th scale electric racing. This servo saver fits underneath the drive shaft at the front.



Chequered Flag

Formula 8/20 revisited

Well, not quite but something along those lines would seem to be receiving some support if some of the club newsletters I have been reading are anything to go by. Both the **London RCC** and **Yorkshire RCMCRC** have put forward 'limited cost class racing' proposals to their members and I am sure that other clubs are also doing so. It is obvious that the limiting of *initial* cost is not the answer, instead the *ongoing* costs are the problem and in particular, tyres. Even though cheap, good performance tyres are available, they still have a horrendous wear rate, thus nullifying the low price advantage. Limit the types of tyres eligible for club racing to specific grades and only allow low nitro fuel and you have a low cost class. It won't catch on for National racing but would be ideal for the club championship — who knows, maybe clubs holding Open meetings or the East Midlands League would be interested?

Associated revisited

D&D Graphite is probably a name unfamiliar to most UK 1/8th circuit racers but in the USA this company has been producing a range of carbon fibre monocoque replacement chassis' for some of the more popular American cars. Indeed most of the American racers at the last World Championship event in France 1983, be they *Associated* or *Delta* drivers, used examples of the *D&D* chassis. The monocoque idea was in effect first used to good effect at that time and ever since then the idea has been catching on. The reason for the delay in reviewing the chassis since 1983 is because we gave it to Jeff Lindstrom to try it out.

Not that Jeff isn't reliable, because he is, it's just that in between then and now he has had the dubious distinction of being elected to the position of BRCA secretary.

Time has been at a premium ever since. Nevertheless it is now ready and the exercise still holds interest. So over to you Jeff . . .

D&D Graphite/Assoc

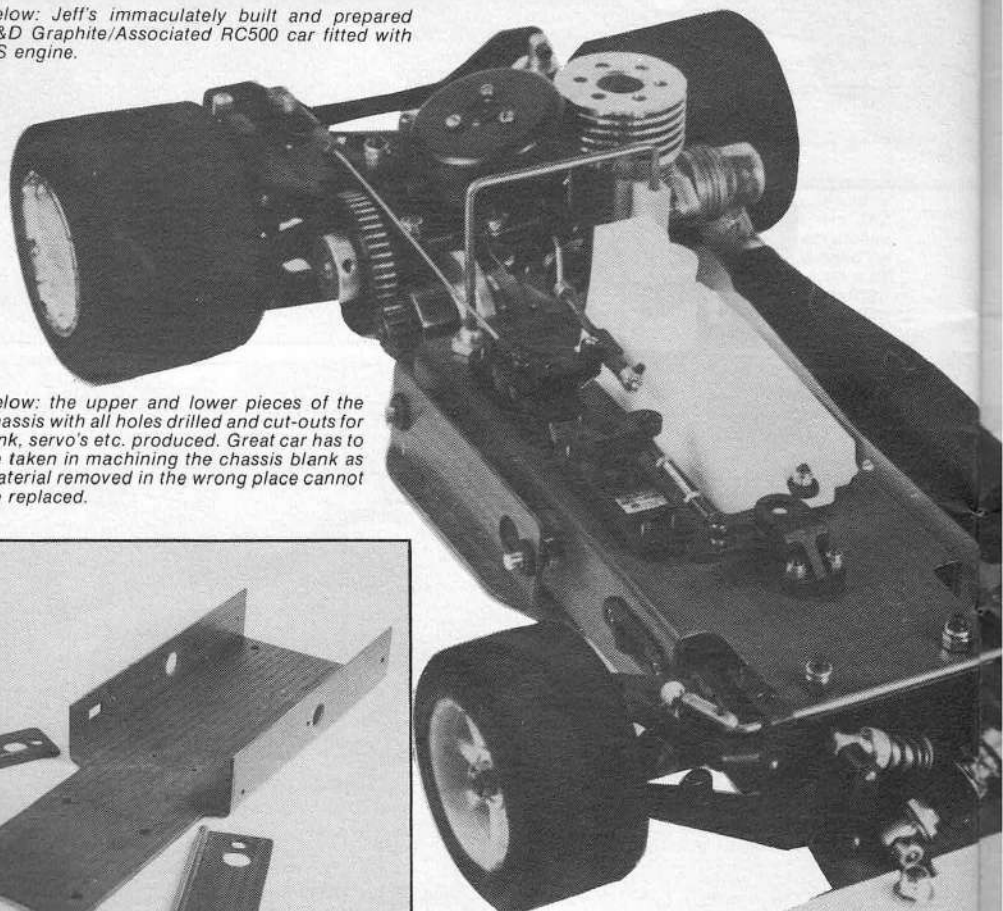
THE PROSPECT of updating what is already a highly successful car to the latest specification was quite exciting, especially as this set up had already proved itself to be a world beater — setting the fastest time of the week at the 1983 World Championships in the hands of Ralph Burch. The 'kit' consists of two unequal length channels of carbon fibre, the larger having a double thickness base, which will form the 'main chassis (bottom)', the other, the 'radio crate' (top).

Construction is started by placing the standard chassis into the centre of the bottom ensuring that rear edges are aligned. Drill all the holes save for the rear centre hole.

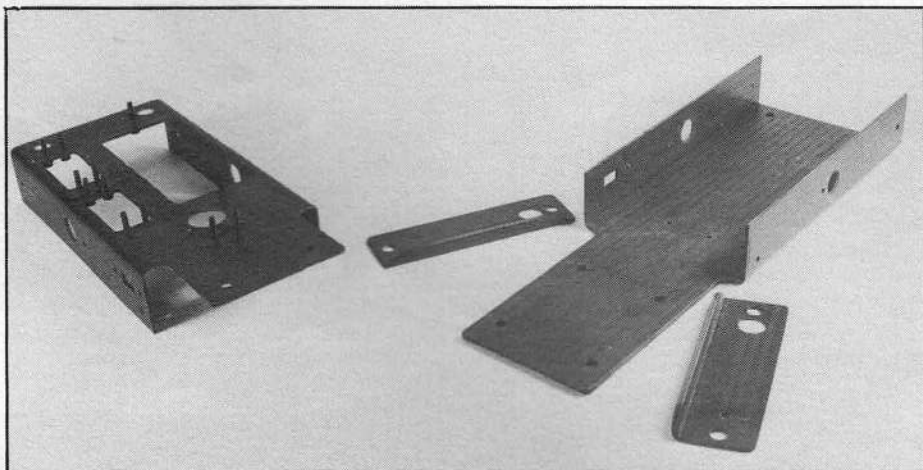
Next fit the top into the bottom, again ensuring the rear edges are even. Drill all holes that require alignment with the top i.e. front bulkhead, servo saver, etc., using the bottom as a guide. It is very important that the drill be perfectly vertical and therefore a drill stand should be employed.

Next the front end should be marked and cut out to clear the suspension, the waste pieces should be retained as they can be used later. Once this has been done, a test fitting should be tried and if necessary, adjustments can be made to ensure correct clearances. Extra holes for body posts, bumper, etc., should now be drilled, and all bottom holes

Below: Jeff's immaculately built and prepared D&D Graphite/Associated RC500 car fitted with OS engine.



Below: the upper and lower pieces of the chassis with all holes drilled and cut-outs for tank, servo's etc. produced. Great car has to be taken in machining the chassis blank as material removed in the wrong place cannot be replaced.



ciated RC500 built by Jeff Lindstrom

countersunk. The rear pod has to be modified to enable it to fit into the bottom (as shown). A trial assembly should now be made, opening out any holes where necessary, in order that the top can be marked out to accommodate servos, fuel tank, etc. After disassembly, these areas should be cut out plus any lightening holes that may be required.

Once all the 'cut outs' have been made, the car should be finally reassembled and finished. It is advisable to bolt the sides together in at least three places and by employing the *P.B.* method for 'hanging' the radio equipment, this is easily accomplished as two of the fixings per side are mounting

posts for the radio and Ni-Cad pack, the third being a nut and bolt. Incidentally, this is where the discarded pieces of chassis can be used creating mounting plates for the equipment, by drilling and fitting 'rubber' grommets (not PVC).

It is essential that everything remains square and true during assembly, as once bolted together the chassis will be virtually tweak-proof!

Finally, you may notice that one or two things are not as original, i.e. tank, servo saver, etc., and I would just like to explain the reasons for these alterations. Firstly, the servo saver was changed to the superb S.G. ballraced type because it made steering servo and linkage

fitting so much easier as well as servo change when necessary (2 minutes before final). The tank was changed to *P.B.* in order to lower the CG and make body fixing much simpler. The roll-over bar posts were purchased from Dave Preston, and are a great improvement on the nylon, enabling the chassis halves to be rigidly clamped as well as providing the roll-over bar mount, sadly lacking on the original. The front anti-roll bar and revised rear shock absorber mount are *Associated's* own modifications.

Truly this update has certainly improved an already superb car which I am sure will continue to be amongst the leaders in the

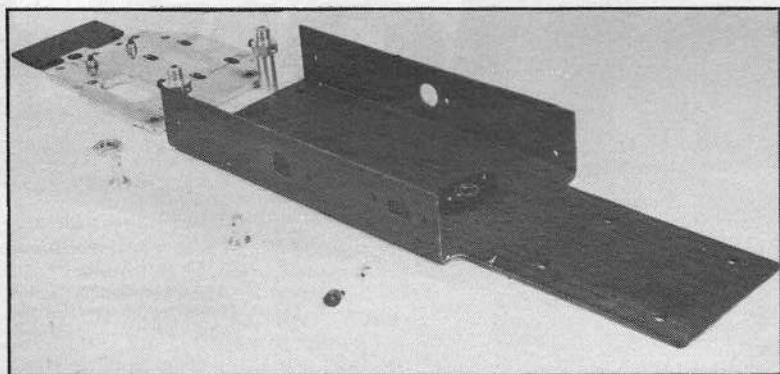
world of 1/8th scale IC racing.

Tip:

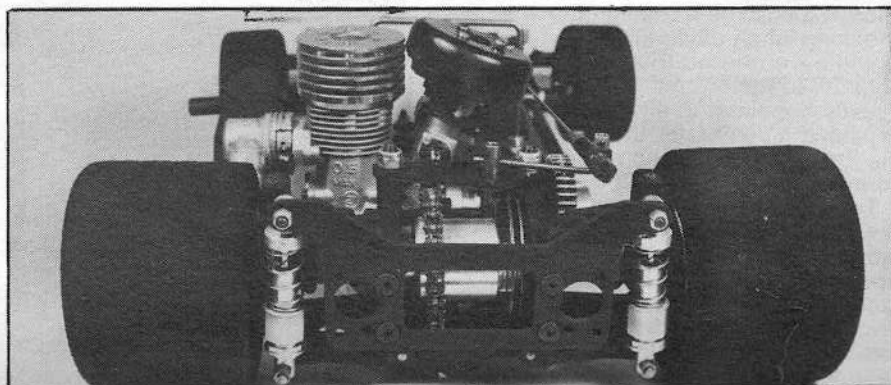
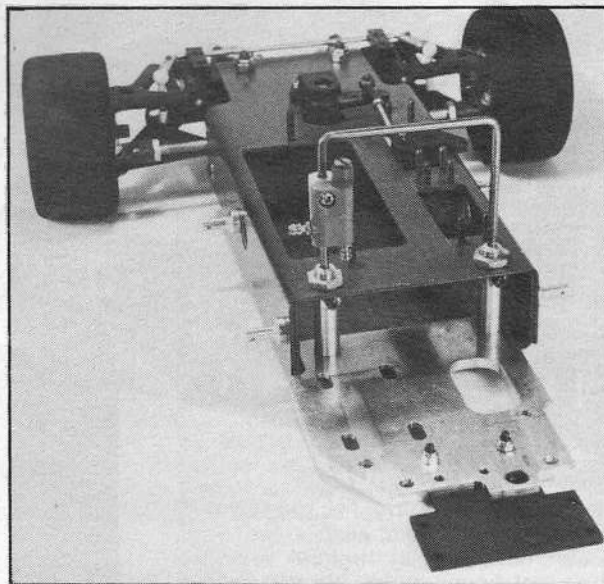
Do your shockers leak? If so — then follow these instructions.

1. Dismantle shock absorber
2. Cut or file flat or flats on piston (a little at a time) ensuring all traces of swarf are removed.
3. Re-assemble shocker with a much thicker grade of oil (SAE140) — or thicker.
4. Check shocker action.
5. If too stiff repeat 1-4 until satisfactory

This should reduce leakages to an absolute minimum as thicker oil has greater difficulty in leaking out of seals than thin oil. □



Above: the bottom deck is slightly thicker than the top-piece. Note the SG servo saver bottom mounting. Right: the chassis now complete at the front with servo saver in place. Jeff has engineered an R/C mounting system similar to that of the PB 'Nova' using excess chassis material as mounting plates. Below right: the rear end of the car fitted with the Associated GRP damper mount to provide a direct damper action as the suspension is compressed.



This was the 21st National final Meeting to be organised by the former Electric Car Racing Association, now The British Slot Car Racing Association. For this event the BSCRA had chosen the Olympia Exhibition Hall, Blackpool and the dates, September 15, 16, 17.

My first Nationals was the disastrous 1968 event at Wood Green, London, when the event was held in a badly lit, scruffy Dance Hall with no decent catering on site. That year the tracks Power was inadequate to say the least and the end result was that E.C.R.A. was almost wiped out overnight. The only saving grace was the fact that the Officials concerned left the scene and the rest of the people got their act together and made things better for future events.

Several interesting developments surfaced at this meeting. On the controller front the use of variable ohmage controller boxes was almost universal. The most popular was the S.C.D. unit the subject of a future 'Model Cars' review. The most conspicuous version was the waist-belt system of Bolton's Paul Lyon. This version was claimed to produce a linear controller response when the box was switched in circuit.

The Parma Turbo controller was much in evidence, most notably in the hands of the Saloon class winner Tim Ryan. His style of driving was

somewhat animated! In fact I would say Tim must be exhausted physically and mentally after a race.

Many of the now unobtainable H.B. and E.C.E. units were seen with leading drivers. The new Manhandle controller was the news at these Nationals with its ready-to-use features, causing a good reception by many drivers. Hopefully we will be able to give you more details at a

British Slot Car Racing Association Nationals

Trevor goes to Blackpool, to view the premier event for British Slot car racers.

Below, the BSCRA Nationals Circuit situated within the Olympia Exhibition Hall, Blackpool.

However at Blackpool the room was in my opinion as bad as Wood Green, the power at the track was such that people could not run their chosen motors and the lighting was shocking when daylight faded. I would have refused to race in light so poor. The catering near at hand was equally hopeless. In all fairness I expected much better than this for the Premier Slot Racing event in this country.

To be positive, the racing that I saw was outstanding. For me the race of the Championships was the Sports Car Final won by veteran racer Ian Jenson. Steve Jenkins and Phil Firth are also to be praised in the closest Nationals Final that I had seen for years.





Above, the individual class winners.

later date. Ian Jensen as ever was using the same old controller that his father made in 1968. But, like the broom and handle tale, only the frame and operating linkage remains of the original.

On the car front there were several interesting developments. The Saloon class winner of Tim Ryan was interesting in the respect that the rear axle was supported on the gear side by a ballrace mounted in a pillar block. The other side was located in a close fitting brass tube. The reason for this was to allow the angle between the motor and rear axle to be reduced. The tube was used on the one side because to fit a ballrace here would mean the motor can would have to be cut away and rules prohibit this. As is now standard practice this car was fitted with the small diameter *Mutley* gears as were most of the entries. The name of the game nowadays is to run as small diameter rear tyres as the rules permit. This is to allow the body to be mounted lower as well as reducing the rotating mass of the wheels and tyres. Some people were running magnesium alloy rear hubs to further reduce weight, whilst others removed the boss on the axle gear and soldered the gear directly to the rear axle. This is another weight-saver, but carries with it the problem of changing gears in the event of damage. I gather that some people are considering using hexagonal section rear axles to further reduce weight.

Another modified item seen on the Ryan car was the slot guide which was cut away around the lead wires. The triple lead wires were soldered directly to the braid clips through the holes cut in the slot guide. This operation will be difficult to carry out unless a small soldering iron tip is used. The advantages of this method are that the body can be mounted lower and again weight loss.

DECEMBER 1984

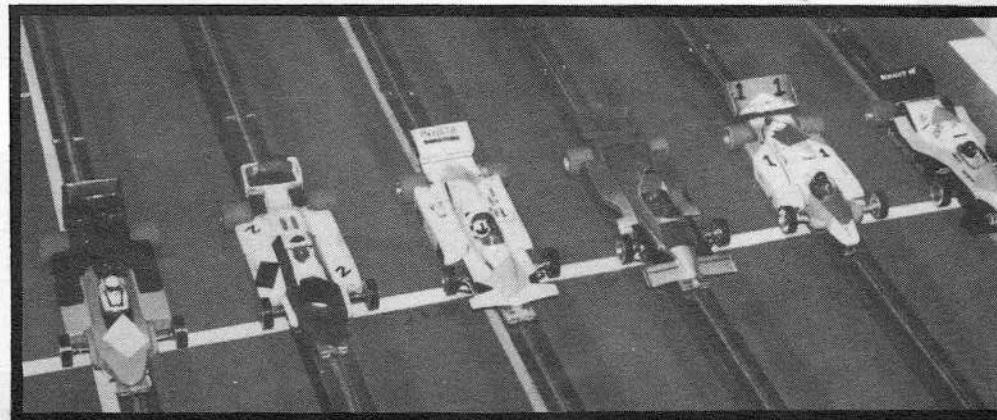
Many people were using the British-made *Invictor* armatures, I had an interesting talk with Mick Lawrence who gave me the impression that at last we can run a motor with the majority of the parts made in Britain. As mentioned earlier some drivers experienced problems with the track power which did not reach the standard demanded by the rules. The

Canadian, *Potential Kinetics* product which ace motor builder Pete Hore had worked on. A lot of motors were lightened, some to a degree which made one wonder how they managed to stay in one piece.

One thing which was very clear was that to succeed the motor had to be set up by an expert. Just putting things together in an average fashion is not good enough any more as everything to do with the motor has to be 100% or you get nowhere. The critical factor is the airgap between armature and magnets and several people were having their commutators trued up between races. Mick Lawrence was using a neat portable battery powered machine to true armatures during the meeting.

The trend in chassis' was towards shorter wheelbase types. I got the distinct impression that for the Nationals Track a chassis longer than 3-1/8th inches was a handicap.

Once again a lot of people did not perform on the day up to their previous good form. I believe that the reason for this is that a lot of people let the event get on top of them and



Above, cars line-up for the start of the Over-All Grand Prix Final.

people with cars set up with very hot armatures had to replace them with less current consuming items and this prevented us seeing how the 25 gauge armatures would perform. Ian Jensen used the same chassis which has won two previous Championships to win the Sports Car class again. The armature was the

never approach the racing with their normal amount of confidence. I never went well at the Nationals when I was deadly serious about competing. The only time I made a National Final race was the time I entered for the hell of it and did not care whether I won or not. Maybe some people try too hard?

Results

Saloon Main Grade

1st Dave Harvey
2nd Jim Huxley
3rd Chris James

Open Saloon

1st Tim Ryan
2nd Ian Jensen
3rd Steve Mutimer

Sports Main Grade

1st Chris James
2nd Phil Morris
3rd Paul Lyon

Open Sports

1st Ian Jensen
2nd Steve Jenkins
3rd Phil Firth

Formula 1 Main

1st Paul Lyon
2nd Chris James
3rd Mark Harrison

Open Formula 1

1st Mark Harrison
2nd Steve Jenkins
3rd Chris James

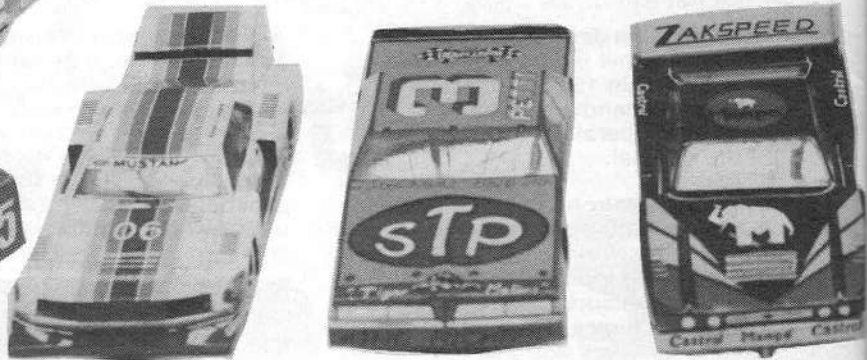
Slot Car Acceleration

Below, the eventual Saloon Concours winning car produced by Graham Head, this Ford 'Mustang'.

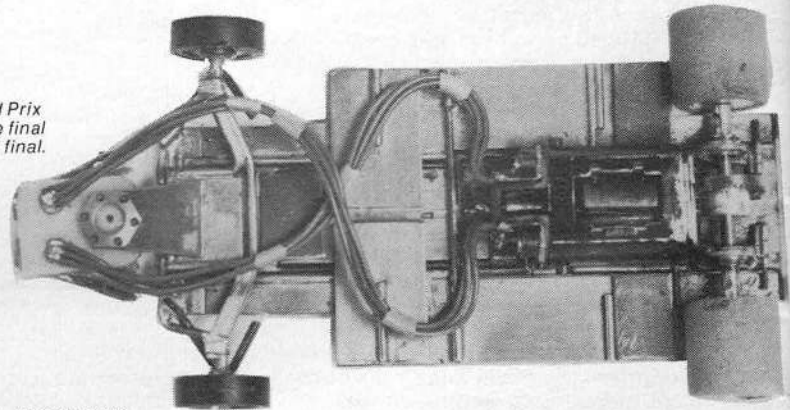


Above, Andy Darker's Opel "Manta" winner of the Novice Saloon Concours prize. Below, the Grand Prix Concours winner Chris Adam's Toleman.

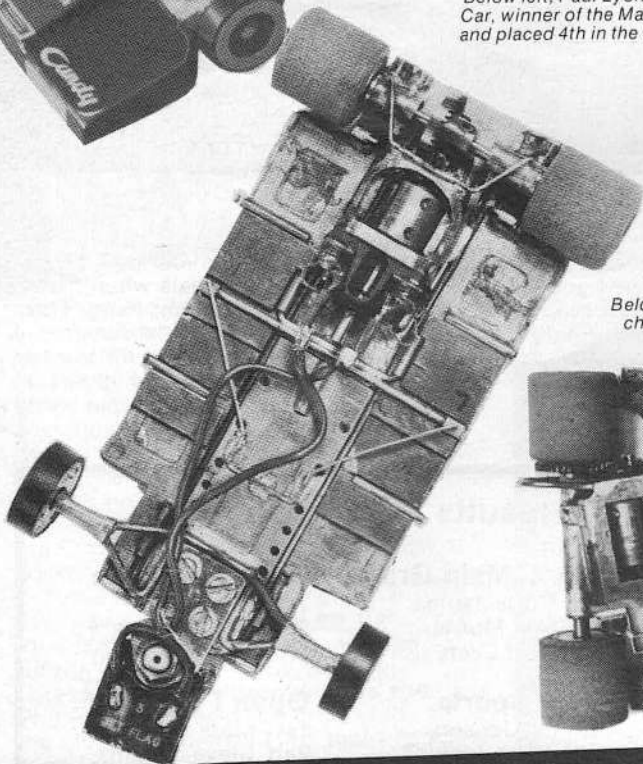
Below, line-up of cars for the Saloon Concours judging. A very high standard or reproduction was evident right across the board.



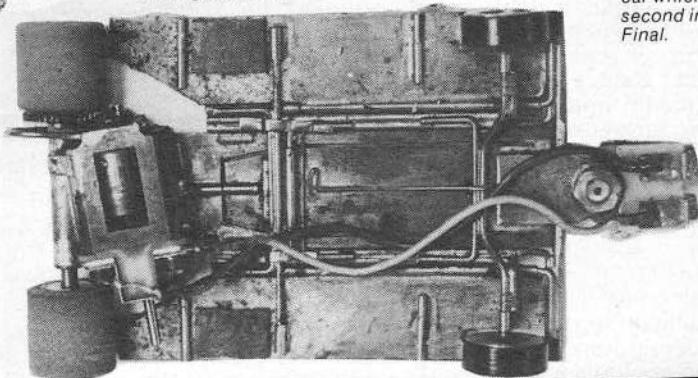
Below left, Paul Lyon's Grand Prix Car, winner of the Main Grade final and placed 4th in the Over-All final.

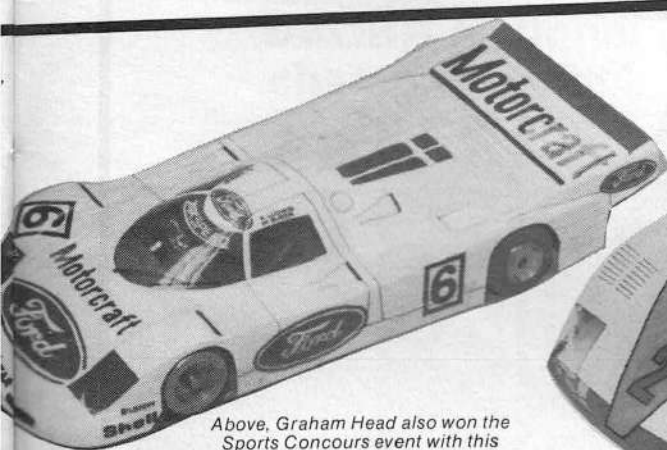


Above, Mark Harrison's Over-All Grand Prix winning car which was also placed second in the Main Grade Final.



Below, Chris James' sports chassis placed 1st in the main grade final.

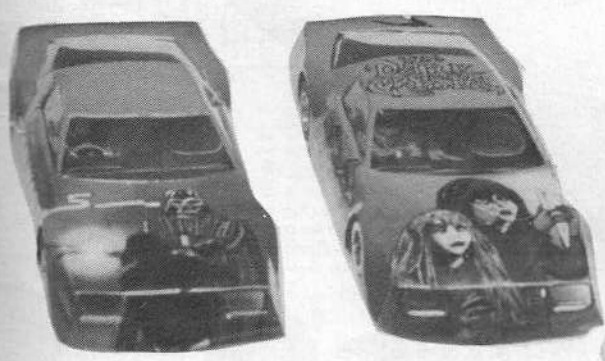




Above, Graham Head also won the Sports Concours event with this marvellous Ford 'C100' shell.



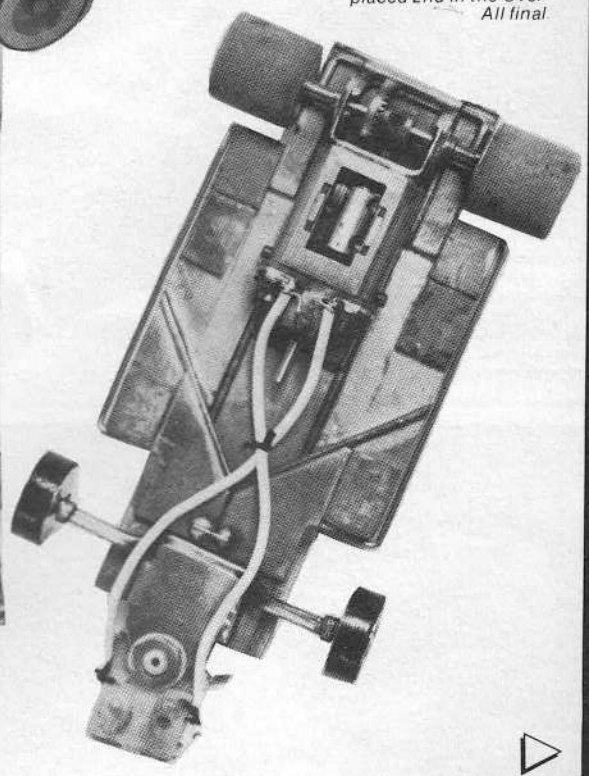
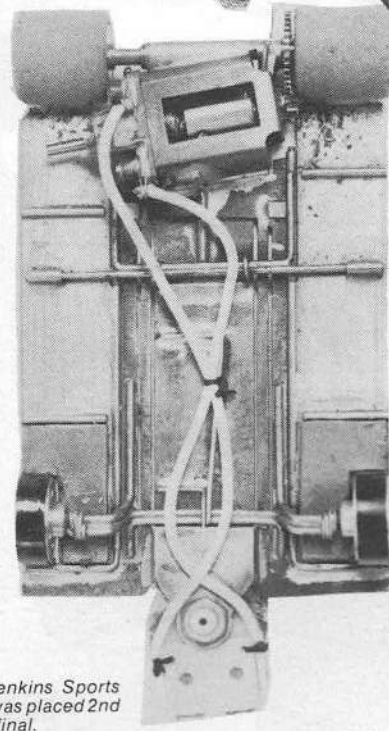
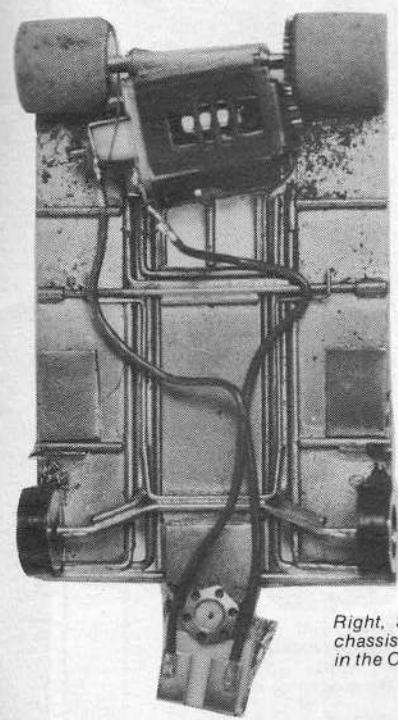
Above, the Roedale Team Cars



Below, Dave Harvey's Saloon car chassis winner of the main Grade Final in the Saloon Class.



Above, Graham Head's Grand Prix Concours entry the Marlborough 'McLaren'. Below, Steve Jenkins Grand Prix car, placed 2nd in the Over-All final.



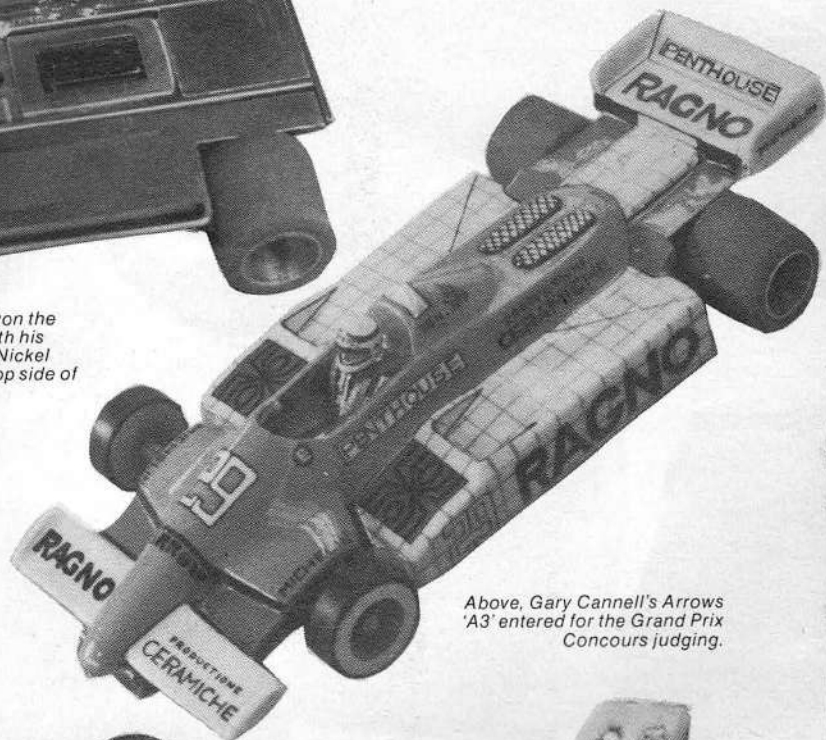
Right, Steve Jenkins Sports chassis which was placed 2nd in the Over-All final.



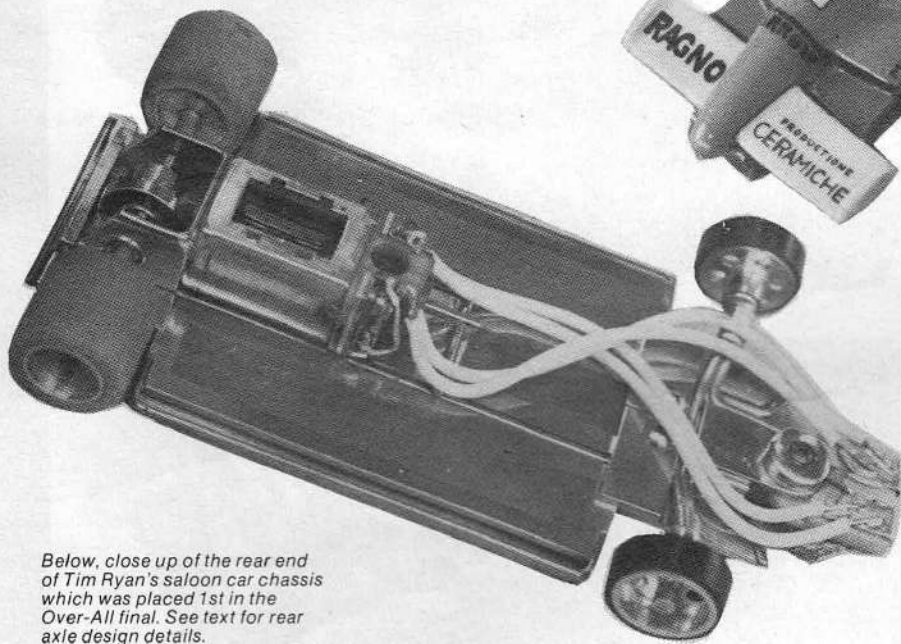
Slot Car Acceleration



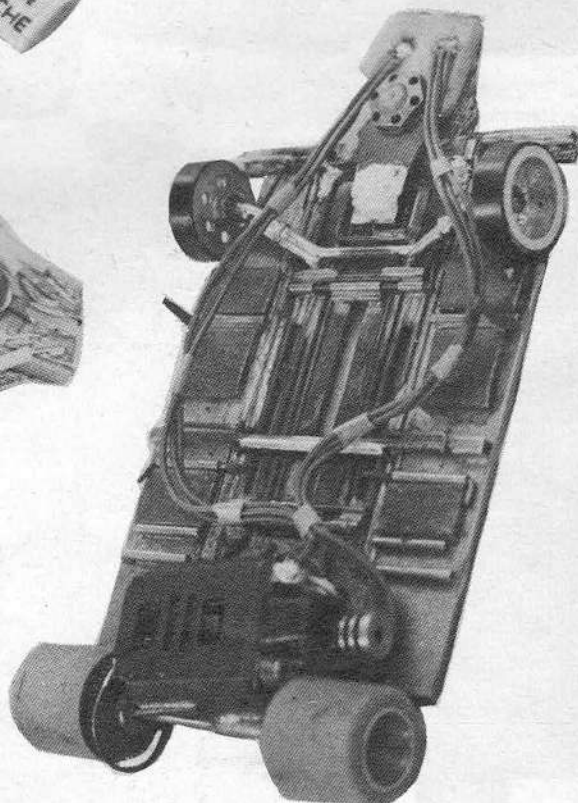
Above, Geoff Mitchell won the constructors Trophy with his beautifully engineered Nickel Silver chassis. Below, top side of Geoff's car.



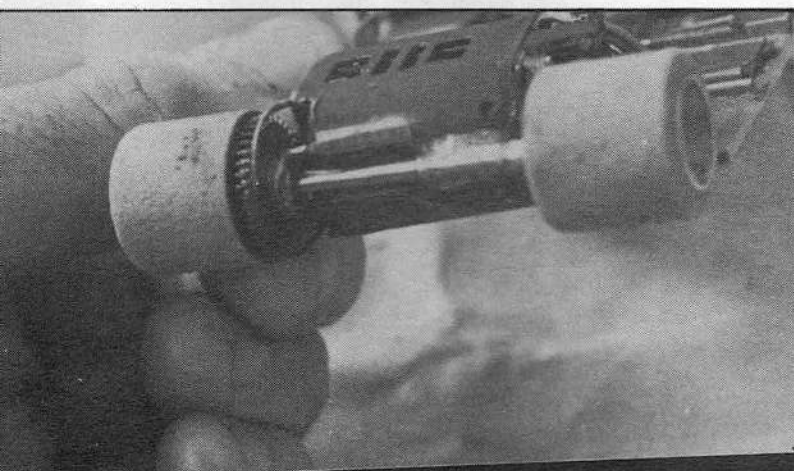
Above, Gary Cannell's Arrows 'A3' entered for the Grand Prix Concours judging.



Below, close up of the rear end of Tim Ryan's saloon car chassis which was placed 1st in the Over-All final. See text for rear axle design details.



Above, general view of Tim Ryan's winning saloon chassis showing triple lead wires soldered to the slot guide.



BSCRA National champions 1984 Technical chart

NATIONAL CLASS	AREA & CLUB	NOVICE SALOON	MAIN GRADE SALOON	OVERHALL SALOON	MAIN GRADE GRAND PRIX	OVERALL GRAND PRIX	MAIN GRADE SPTS/GI	OVERALL SPTS/GT
NAME	Richard Mack	Jim Ryan	Paul Lyon	Mark Harrison	Chris James	Ian Jensen		
AREA & CLUB	6. Tytringham	8. Independent	2. Bolton	2. Bolton	6. North London	8. Haydon		
CAN	Mura 'C'	Mura Trinity	Mutly 13	1300	1300	1300	1300	1300
MAGNETS	Mura II's	Mura II's	Mutly Cobalt	101 Cobalt	101 Cobalt	101 Cobalt	101 Cobalt	101 Cobalt
ARMATURE	Mura Gp 12	Mura Gp 12	Lyon 33x28g	Invicta 7x28g	Infinity 29db	Infinity 29db	Infinity 29db	Pot. Kinetics 66
BRUSHES	Mura Big Foot	Mura Big Foot	Mura Big Foot	Mura Big Foot	Mura Big Foot	Mura Big Foot	Mura Big Foot	Pull-outs
SPRINGS	5 coil	5 coil	Mura light	Mura light	5 coil	5 coil	5 coil	Mura light
GEARS	Mutly 9;36	Mutly 10;38	Beatties 8;36	Kyan 9;36	Mutly 8;38	Mutly 8;36	Mutly 8;38	Mutly 8;39
FRONT WHEELS	1-0-1	1-0-1 light	Mutly mags	Mutly mags	MG pin	MG pin	MG pin	1-0-1
REAR WHEELS	1-0-1	Ryan	Mutly mags	Kyan	1-0-1	1-0-1	1-0-1	1-0-1
CHAS. BUILDER	Richard Mack	Tim Kyan	Paul Lyon	Tim Kyan	O.P.P.	O.P.P.	O.P.P.	O.P.P.
CHAS. DESIGN	Flexi-iso	Anti-deck iso	Flexi-board	Anti-deck Board	Flexi-iso	Flexi-iso	Flexi-iso	Flexi-iso
MATERIALS	All brass	S/steel & br.	All brass	All brass	S/Steel & br.	S/Steel & br.	S/Steel & br.	S/Steel & br.
WEIGHT	123 gms	125 gms	116 gms	118 gms	116 gms	118 gms	116 gms	115 gms
WHEELBASE	8ft 4ins	8ft 6ins	8ft 10ins	8ft 10ins	8ft 4ins	8ft 10ins	8ft 4ins	8ft 5ins
BODYSHELL	Cat Mazda	Betta Corvair	Mutly MP4	Betta Lotus 91	Betta Shadow	Betta Shadow	Betta Shadow	Betta Shadow
CONTROLLER	Parma Turbo	Parma Turbo	Lyon belt	Manhandle	E.C.E.	E.C.E.	E.C.E.	Jensen Spl.
RESISTANCE	2.0 ohms	1.7 ohms	1.2 ohms	1.5 ohms	1.5 ohms	1.5 ohms	1.5 ohms	0.9 ohms

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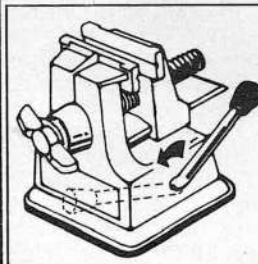
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Northern Ireland Radio Car League

July 29 — 1/8th I.C. Grand Prix

Report: J. Campbell.

AS WE ALL expected the track record came 'tumbling down' at the new track at Ballee Ballymena. In fact it was getting to the stage where if you didn't break the record you probably wouldn't qualify for the A Final, incredible but true! It must have been frustrating indeed for local drivers like Mark Doyle from Portadown and Karl Walker from Antrim putting in times like 15-08 and 15-13 respectively (both personal bests) and not getting in with the big boys ... such was the 'talent'.

Fast times

Having said all that I should point out to anyone who missed the best race ever held in Ireland, that we did have the *Serpent* 'Works' team or as they prefer to be known 'The *Serpent Owners Club*' in the form of Tim Long from Lincoln, Derek Brader from Nottingham and Walt Bailey from Mansfield (BRCA Chief Steward). In his very first heat Walt took the record from 16-03 to a sizzling 17-17 with a Formula One shell. Not to be outdone David Herron (who held the record at 16-03) bettered his best with a 16-01! Then came Ballymena man Michael Moore (*Delta* 'Eagle') no less! with a 16-07. D. Brader followed 16-18, and Jim Strain squeezed in between them with 16-17 and last to qualify the other member of the team T. Long with 15-11.

From A to B

So that was the A Final wrapped up and it seemed like it was going to be a really fast affair, and so it was, more of that later! In the meantime Mark Doyle 15-14, Karl Walker 14-06, John Campbell 14-03, C. Wade 14-11, J. Dobson 13-02, and R. Charters 12-01 were preparing to do battle in the B final and Doyle brought the *Serpent* home in 1st place closely followed by K.

Walker, then J. Campbell fourth, J. Dobson, 5th R. Charters and 6th C. Wade.

Just before the A Final started the rains appeared in a big way with the result that Walt Bailey didn't run, to the disappointment of the spectators but no doubt the relief of the other finalists, for them it was going to be that bit easier to get to the chequered flag first! D. Brader got off to a flying start but J. Strain chased him all the way with the jam in the sandwich M. Moore driving the lone *Delta* 'Eagle' in amongst all those 'Serpents' finished a close third. Fourth was T. Long and 5th D. Herron.

Sports GT

And so, on to the GT Class, and the possibility that there might be an 18 lapper in this class owing to the more streamlined GT bodies which make these cars handle much better. The record stood but Walt Bailey lowered it again with 17-15 in his second heat but that was that; no more records broken that day. The finalists were the same as F1 except that Sam Nesbitt slipped into the B with a best ever time of 14-15 pushing Campbell Wade out (he was having one of those miserable days).

In this Class it was the B Final that provided the 'entertainment' Mark Doyle went into an early lead that was never to be disputed but John Campbell was chasing hard in 2nd place hotly pursued by R. Charters and Sam Nesbitt. Both Tommy McKendry and Karl Walker tangled with each other early on in the race and effectively put each other out (and would you believe had a *friendly* chat about it later) see, I told you it was a *sport*. At the end it was M. Doyle 1st but J. Campbell tangled with the straw bales at the end of the straight in the last minute and gave his 2nd place to young R. Charters, Sam

Nesbitt came home with T. McKendry 5th and Karl Walker 6th.

Then came, what was on paper, the *fastest* race ever held in Ireland, the A Final for GT cars with five *Serpent* 'Quattros' and a lone *Delta* 'Eagle'.

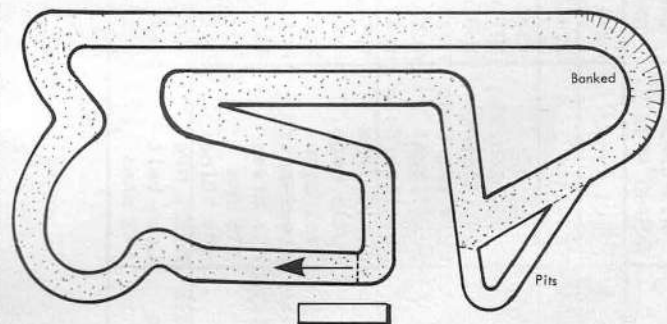
The fast one

On the off Walt Bailey literally jumped into the lead and it looked like it was going to be procession, mind you, a very close one at that, after 10 minutes' racing you could have covered all cars in the space of ten yards, then disaster struck the leader, Walt Bailey (broken clutch nut) and his race was run. D. Herron from Portadown took up the lead

believe.

In the early stages the commentator said that the young 'uns were worth watching (they weren't even in the first four at that time) what faith this man has! but he was right! and Michael Moore from Ballymena took the flag with a new race record of 90 laps so he wasn't hanging around at any stage. The other young 'un, David Herron from Portadown managed 2nd place, third went to Englishman T. Long, 4th to another Englishman D. Brader, 5th to J. Strain and 6th to the unlucky Walt Bailey, still he did get fastest time of the day trophy in both classes and takes the track record back to England with him. I have a feeling that not one Ulsterman will rest 'til it's back in Ulster hands again.

Ballymena club circuit



but only for a few minutes and he too went out with clutch trouble so Tim Long slipped out in front but very soon he was sidetracked with the same problem. His fellow countryman Derek Brader held the front spot for a little while but lo and behold he too went out and it was starting to look like it was just not a good position to be in at this stage of the race as every driver that managed to hit the front promptly went out. It happened to big Jim Strain as well but all this time young Michael Moore with the *Delta* 'Eagle' who at the start didn't seem as though he was going to figure at all was biting at the heels of each leader and at about $\frac{2}{3}$ distance slipped into the lead (to the delight of the home crowd) some 200 I

Round-up

So all in all an excellent race enjoyed by all, not least the many spectators and against all the odds the organisers came through; slick lap counting by Matt and Jean, good race direction by Alastair, lovely hamburgers by Margaret and Alison, keen refereeing by Billy. Generous sponsorship by K. Doyle of *K.D. Cars* (Gilford) and the Ballymena Model Car Club. All these things added up to *success*. Thanks to all the helpers, spectators and the boys from across the 'shrough' (Irish Sea) who added a touch of class and gave us all something to aim for.

Roll on next year. And to all who missed out on a fantastic race, don't do it again! See you next year, OK?



Woodvale BRCA 1/10th Off-Road National Championship Meeting

August 5. Report: Charlie Formby.



Top left: Richard 'Ishy' Isherwood displays a rarely seen smile after winning the standard class A Final. Above: 380 class winner, Wayne Pendleton received his trophy from Gayle Ferguson.

THE FIRST WEEKEND in August saw the Liverpool Model Car Racing Club make their first venture into two day racing.

The Woodvale International Rally was the venue at RAF Woodvale, Southport, Merseyside. The format for racing was standard class 540 and 380 on Saturday 4th and BRCA Modified Class 540 on the Sunday. The track was smoothish grass on slightly sandy soil, overall length was just over 100 yards so lap times promised to be very fast.

Standard Class

Racing started at 10.00a.m. with the first of the Novice heats. Phil Thomason and Mark Ferguson figured well early on. As usual times got quicker as the heats went on towards the experts. Richard Isherwood set the FTD early on for as the day went on the track got more and more cut up and slippery making the time difficult if not impossible to beat.

Novice Final

Neil Smith and Phil Thomason were the early leaders in a close first couple of laps however, a few spills later on allowed Mark Ferguson to storm through and take a commanding lead. However, down the field two ladies were fighting it out — Pauline Brace coming out on top after Phil Thomason came between her and Claire MacFarlane. Pat Patterson came down from Cumbria to take a creditable 3rd place with his *Mardave 'Apache'*.

Intermediate Final

No-one had any answer to Ian MacLarney's 'Scorpion' with 'Rough Rider' gearbox. This combination making the car very fast and also

coping with the bumps very well. Nigel Marshall hung on to second place with Howard Dalton taking third.

380 Final

Veteran Wayne Pendleton proved his win at Chesterfield was no fluke by again leading home some of Britain's top '380' drivers. Tony Brace had his best result for some time taking second place from Selwyn Horn who hung on well to keep Kevin Blears back in fourth.

Expert Final

Simon McRae (AYK), Darren Harris, Kevin Blears and Gary Butler all lead during the early part of this Premier Final. In fact there was a different leader at the end of each of the first five laps. It was Richard Isherwood who managed to fight his way to the front and hold on. Steve Newey and Derek McLarney both had severe cases of brain fade which was a result of being the co-organisers of this weekend's meeting, so one can forgive them for being lapped by the eventual winner 'Ishy' Isherwood. (I thought that was new Japanese building material for model aircraft!).

Sarah Walker proved her ability with an airbrush by winning the Concours award for the second time on the

run at Liverpool. The theme for her latest effort was the Stars and Stripes which everyone thought appropriate at the start of Olympic Fortnight.

Well day one was almost over and all the campers gathered at the beer tent for copious amounts of liquid refreshment. Tim Fountain won the prize for the most refreshed drinker, he also won the 'Butt the Signpost' competition and the LSD (Longest Search of the Day) whilst looking for his tent.

Novice	380
1. M. Ferguson	1. W. Pendleton
2. N. Smith	2. T. Brace
3. P. Patterson	3. S. Horn
4. S. Lundstrom	4. K. Blears
5. P. Brace	5. T. Fountain
6. P. Thomason	6. M. Farrar
7. C. MacFarlane	
8. P. Waddington	

BRCA Modified Class

A slight change to the shape of the track, for the modified event and at last, a sight of the sun, drying out the surface and leaving a dusty layer on parts of the track. Motors varied in the extreme from the £35 modified *Yokomos* to the humble standard *Mabuchi*. Strangely enough performance was pretty even — no-one was having any trouble lasting the 5 minute race duration. Racing was fast and furious, drivers were looking for a fast 14-lapper to qualify for the Main A final.

FTD went to Kevin Blears with his 'Scorpion' again set during the early rounds of racing.

BRCA Modified C Final

Phil Thomason and Neil Smith showed well in the early stages but a few mistakes on the very slippery track soon saw them relegated to the lower positions. Tim Fountain driving his '380 Brat' faultlessly gave him the winner's laurels followed closely by Stuart Lundstrom. ▶

Results

Open Class Standard

Expert	Intermediate
1. R. Isherwood	1. I. McLarney
2. K. Blears	2. N. Marshall
3. D. Harris	3. H. Dalton
4. G. Butler	4. S. Horn
5. W. Pendleton	5. A. Everest
6. S. McRae	6. C. Worthington
7. S. Newey	7. D. Stevens
8. D. McLarney	8. I. Oddie

Below: Standard Class A Finalists. L to R. Simon McRae, Richard Isherwood, Kevin Blears, Wayne Pendleton, Darren Harris, Steve Newey, Derek McLarney, Gary Butler.



BRCA Modified B Final

Lawrence Harris led until he retired with mechanical trouble, handing the lead over to Charlie Formby who drove a steady race to hold off Martin Farrar and Simon Nichol and so take a well deserved victory.

BRCA Modified A Final

It was Kevin Blears who made the best start and had a couple of seconds lead at the end of the first lap, from Jamie Booth who had come through the field to second place and was slowly catching Kevin up. There was an interesting contrast in driving style Kevin was driving flat out over the bumps, whilst Jamie was

BRCA Modified			
BRCA 'A'	BRCA 'B'	BRCA 'C'	Open 'A'
1. J. Booth	1. C. Formby	1. T. Fountain	1. G. Hopkinson
2. K. Blear	2. M. Farrar	2. S. Lundstrom	2. D. Harris
3. R. Isherwood	3. S. Nichol	3. P. Thomason	3. S. Newey
4. W. Pendleton	4. D. Dewhurst	4. A. Everest	4. M. Langridge
5. S. McRae	5. G. Cuddy	5. N. Smith	5. N. Woodhead
6. I. McLarney	6. P. Henshaw	6. P. Brace	6. D. Stevens
7. D. McLarney	7. C. Worthington	7. J. Melvin	7. T. Brace
8. N. Ward	8. L. Harris	8. P. Ward	8. I. Oddie
		FTD: K. Blears	Open 'B'
		Concours: P. Brace	1. N. Marshall
			2. K. Creaser
			3. P. B. Smith
			4. C. MacFarlane
			5. S. MacFarlane
			6. M. Ferguson
			7.1 S. Borne
			8. H. Dalton

picking his way carefully but quickly around them. Wayne Pendleton, Richard Isherwood and Simon McRae (AYK 'Sidewinder') were having a terrific dice for the minor placings with 'Ishy' taking 3rd eventually.

At the finish Jamie held a good lead over Kevin who in turn was well ahead of the

3rd placed driver.

All in all a good weekend's racing with most competitors going home with a trophy. Most drivers agreed that this type of meet with something for the wife and kids to do besides watch the racing was a very good idea. Liverpool Model Car Racing Club would like to thank the

Woodvale Committee for their permission and assistance in running the meeting. Special thanks must go to *Tamiya* (Richard Kohnstam) *Ripmax*, *Ever Ready* and *Hem Cranes* for their generous sponsorship. Last, but not least, thanks to Ken Fleming for the original idea.

Stafford 6-hour 1/12th Electric endurance team race

August 26th — Report: Mark Brown

SEVEN TEAMS assembled for the Stafford 6 hour team endurance meeting at GEC Stychfields on Sunday, August 26th.

First impressions of the track were that it was definitely a modified motor circuit, although some drivers did start with standards to get used to the layout, but they soon changed their minds after seeing the speeds of the other cars. The most popular

choice seemed to be a double or triple wind motor.

At 2.30 precisely the seven teams lined up for the start, then it suddenly dawned on the drivers that they were in for 6 hours of speed and skill equal only to a National. All the teams got away smoothly at the start and soon settled into a clean and precise driving line. The driving was very clean and very few shunts took place, maybe this was because of the



Above: the victorious ATP team. L to R. Glyn Peglar, Tim Bigg, Alan Blakeman and Andy Benson.

warning given at the start, that any dirty driving would result in a penalty of a one minute stay in a part of the circuit called the 'sinbin'. This threat seemed to work, as the 'sinbin' was never used during the whole meeting.

Most of the teams consisted of four drivers, although team *Demon* had five drivers of which I was one. The other members of the team were Nick Adams (Team Captain), David Gale, Pete Jones and Keith Helmke.

The comparison between endurance races and normal (sane) eight minute racing is slightly noticeable when you take part. For instance, as you leave the rostrum after your driving stint you have to immediately get your car on charge and 'goop' your tyres ready for your next go, you then fly over to your marshalling point and relieve

your team mate. Whilst you are marshalling you keep one eye on the track and the other on the drivers' rostrum for the signal that your driver is to bring his car into the pits. As soon as you see the signal you call to one of your team mates to lend a hand with the pit stop. When the car comes into the pits one of you grabs the car and removes the counter pennant from the anti-roll mast and attaches it to the replacement car, whilst this is happening you are plugging in the new car, as soon as the car is placed on the circuit and released the driver puts on the power and rejoins the race as quickly as possible. If a car starts without or loses its pennant, it has to have it replaced, if this was not done the car was not counted when it crossed the line. When you had done your marshalling you then returned to the pits to finish

Below the Washington Rejects team members.





Above; the third placed Demons. L to R. Pete Jones, Mark Brown, Keith Helmke, Nick Adams and David Gale.

off your tyres and monitor the last few minutes' charging.

As soon as the driver before you starts his run, you then stand behind him on the rostrum, ready to take over in case he breaks down, so your team was assured of a car on the circuit at all times. This routine seems quite easy until you have to do it repeatedly for six hours on a tight schedule.

Overall there seemed to be very few mechanical failures, but the most spectacular and entertaining of the few breakdowns, was by the GEC Stychfields team when a trail of black smoke poured out of the back of one of their

cars. Its almost sure if Murray Walker had been there he would have assumed it was a blown turbo, but as we discovered later it seemed they had put too much additive in the motor.

While the race was going on *Alpha Track Parts* built up a comfortable lead with *Washington Rejects* in second place, with *Demon* and *Parma UK* fighting it out for third place.

The positions were pretty consistent in the second half of the race, with *Alpha Track Parts* and *Washington*

Right: the Stafford circuit laid out with fire hoses to reduce damage to the cars.

Rejects assured of first and second unless a major catastrophe took place, it was then left for team *Demon* and *Parma UK* to battle it out for third place.

As the last hour approached both *Parma* and *Demon* started to cut the length of time on the circuit to about six minutes. In the end the *Demon* team just managed to hold off a furious and determined challenge by *Parma UK* for 3rd place with the narrowest of margins, just five laps.

The first three places were:
Alpha Track Parts 1st:
Washington Rejects 2nd:
Demon 3rd.

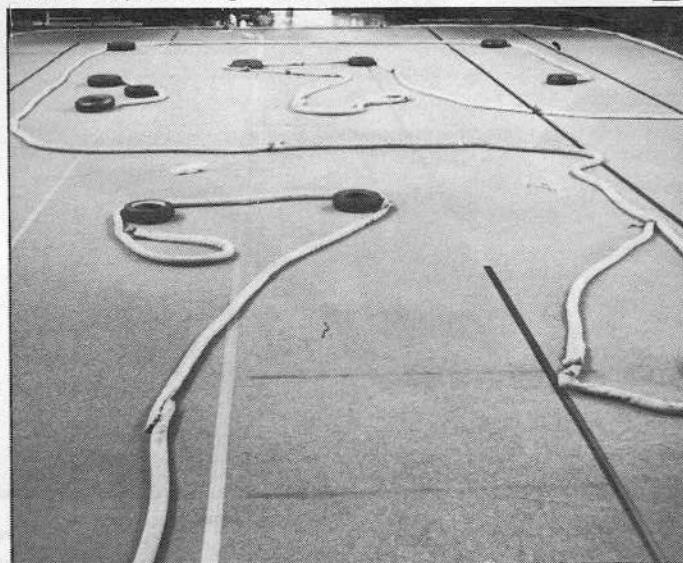
My congratulations must go to team *Alpha Track Parts* with the driving skills of Alan Blakeman, Andy Benson, Glynn Peglar and Tim Biggs winning by overall speed, duration and driving skill.

The track lasted well with the only trouble being, one piece of tape coming loose at

the top of the straight giving a couple of minutes of spectacular aerobatics by a few cars. Also, a few course alterations by moving corners where cars hit the barriers and weren't reorganised by the marshalls, these are the only criticism I have of a very enjoyable and well organised meeting.

A word of praise to the team of North Cheshire who finished a creditable seventh place. They valiantly turned out with three drivers which was reduced to two after about four hours, but still they carried on to clock up an excellent score. They also have the honour of having a car lasting on the circuit for 13 minutes 21 seconds; is this the start of 10 minute racing? — we will see.

A final word; a vote of thanks must go to the ladies who lap counted for the six hours, because without them there would have been no meeting. □



	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	Position
1. GEC Stychfields	275	547	827		1384	1671	5th
2. Parma UK	267	544	824		1401	1701	4th
3. North Cheshire	219	458	713	No	1196	1203	7th
4. Washington Rejects	271	547	837	Lap	1422	1718	2nd
5. Alpha Track Parts	275	559	850	Time	1438	1733	1st
6. Demon	265	546	830	Re-	1407	1706	3rd
7. Supercharge Models	253	521	796	corded	1354	1635	6th

Wrexham BRCA 1/8th I.C. National Championship meeting

August 12 — Report: Philip Curtoys.

AFTER LAST YEARS 'Wet and Windy Welsh', Wrexham was rewarded this time with wonderful conditions plus the appearance of the European Champion, Steve White. Sadly, the number attending this National Grand Prix was not as many as 1983 and this was a pity as the track and

surrounding area is not in very good order indeed.

'Thrapps' ("The Big E") made FTD in the Formula One Class on Saturday and then went on to win the final from Debbie Preston after being two laps in arrears. On Sunday Gary Culver almost clocked 25 laps in a heat and

not only gained the club all time track record but was well over a lap ahead of everyone else. Congratulations Gary, were you using Formula 1 practice tyres? Debbie won the Sunday race in her efficient and steady style but Gary, under pressure ran out of stamina.

The European Champion had a dreadful meeting mechanically as did his brother Chris — it could be said to have been a 'White wash-out' for them.

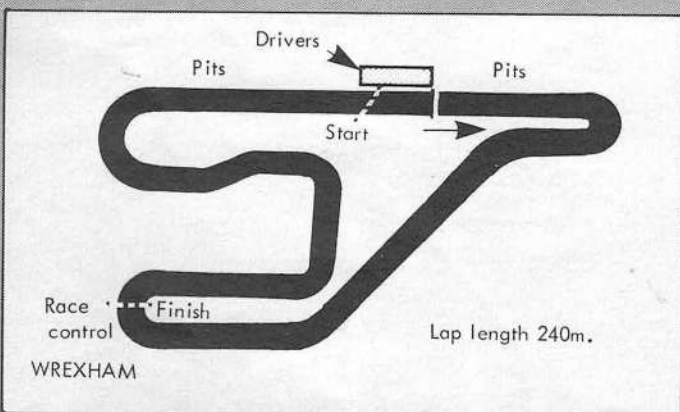
The Clubman race on both days was typical of the rush and thrust of drivers reaching this class but once warnings had been heeded some exciting racing was seen. Charlie Dudfield ran away with the Saturdays final, but on Sunday it was Neil McCleod by a hares breath from Charlie again. ▽

Racing Round-up

with John Price also on the same lap in third place. In the handicap events the Wrexham Chairman's son, 14 year old Stephen Fletcher, walked away with the race on Saturday but the following day Father took control. There was some talk about who should get the new tyres in this family concern for the Sunday race but apparently the matter was resolved with everyone happy — Father won this time!

Being warned on Saturday clearly had good effect on Nigel Wright who, thereafter, drove carefully and with consideration to win the Sunday 25% plus Handicap Final and the newly introduced 'Gentlemen Jim Cup', now a regular feature of the summer meetings. One hopes this will encourage the tidying up of general standards of driving at all levels.

Right: the Wrexham Club 1/8th scale circuit situated off Hosely Lane, Marford Nr. Wrexham.



Results

Saturday: F.1.

Open

1. Bob Errington
2. Debbie Preston
3. Paul Booth
4. Paul Pagdin
5. Steve White
6. Chris White
7. Colin Straus
8. Gary Culver

Clubman

1. C. Dudfield
2. A. Stafford
3. Steve Fagg
4. Nigel Wright
5. John Price
6. Mike Broker
7. Julian Curtoys
8. Dave Fletcher

5 — 20%

1. Stephen Fletcher
2. C. Baldry
3. A. Norman
4. R. Doran

Sunday: G.T.

Open

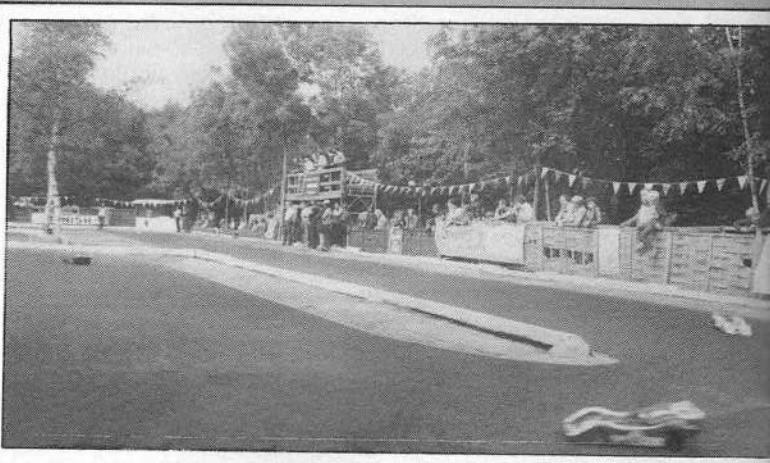
1. Debbie
2. Colin Straus
3. Bob Errington
4. Paul Pagdin
5. Phil Hague
6. Gary Culver
7. Chris White
8. Steve White

Clubman

1. N. McCloud
2. C. Dudfield
3. John Price
4. C. Banks
5. Steve Fagg
6. D. Wothall
7. Nigel Sayles
8. Dave Cotton

5 — 20%

1. Dave Fletcher
2. Ray Heffer
3. S. Nicolls
4. C. Baldry



Rolls Royce, 1/12th Electric BRCA Grand Prix, Derby

September 8/9 — Report: Pete Winton.

I HAVE GREATLY enjoyed this year's National series, my first as both competitor and journalist. However, it is likely that if the organisers at Derby follow those at Chesterfield then there will be two venues which will not attract Yours Truly in '85!

The problem quite simply is track layout. I criticised Chesterfield for a narrow track, and Derby was in the same class. The similarities

don't end there; like Chesterfield, the circuit layout was very good and tested driver skill, the track markings were slightly better, access was excellent and everyone talked about the track! There was *not* a six foot minimum where it mattered, and mistakes of only small proportions were punished with a collision with the marking hose. No-one managed a consistent

line all weekend, not even Andy Dobson or Jimmy Davis, whose only bad error really cost him dear. For the last time (please) organisers six foot is a *minimum!*

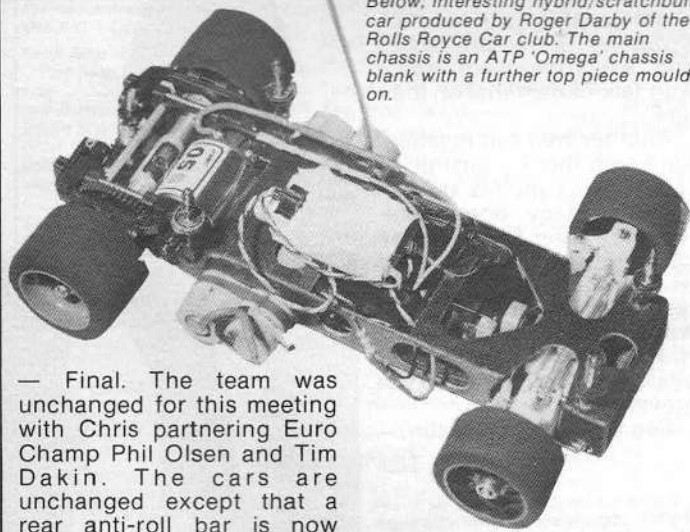
Once again this detracted from the excellent organisation, there was only one lap counting dispute all weekend, the heats seeding was good and everyone was kept well informed of the days proceedings. To para-

phrase the song, 'excellent meeting, shame about the track'.

In the Pits

Dave Towell organised the event with his Derby club colleagues and the meeting was sponsored by *Rolls Royce*, with the local *Vauxhall/Opel* dealer donating an array of stickers which were instantly snapped up. Since the last National event several people had been to the World Champs with various degrees of success.

Riding the crest of a wave were Team *Parma*, winning the standard class at the Worlds, with Chris Arnold making the Modified Class A



Below; interesting hybrid/scratchbuilt car produced by Roger Darby of the Rolls Royce Car club. The main chassis is an ATP 'Omega' chassis blank with a further top piece moulded on.

— Final. The team was unchanged for this meeting with Chris partnering Euro Champ Phil Olsen and Tim Dakin. The cars are unchanged except that a rear anti-roll bar is now available and was being used by Chris. Neatly engineered in moulded plastic with piano wire anti-roll bar it was felt to give a more stable cornering attitude. As predicted the car is now in the hands of many others including Glyn Peglar, BRCA Chairman Paul Hatton and young Martin Allen from the Barking Club, who had an excellent weekend. Chris and Phil made the A-Final both days.

Down in the Team *Demon* camp Nick Adams had changed the drivers, not the car. Suffering from either rusty thumbs or a bout of generosity he had stepped down from the team in favour

problem subsequently traced to a faulty rear axle pod brace after the event!

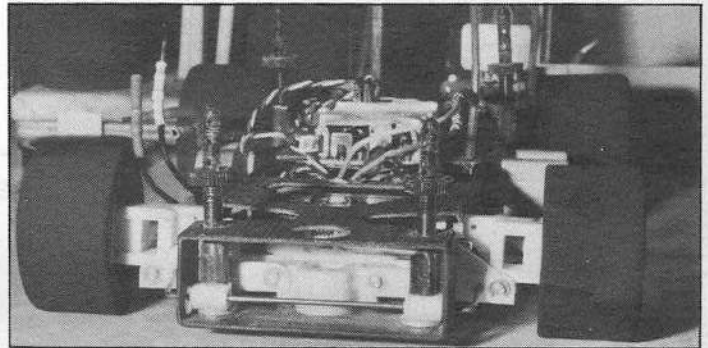
Wayne Davis was absent from Derby (the silence was deafening!) so *Associated/Team Jim Davis* gave Bill Jones his call-up papers. Nigel Hale and Jimmy Davis have finally abandoned the new full independent front suspension unit, although the Americans still think they have reinvented the wheel with this development. Jimmy was his normal smooth and quick self, but Nigel's car looked terrible on Saturday and only slightly improved on Sunday.

Team *Schumacher* were as usual Phil Davies, Andy

made the A-Final both days, but Les had the sort of weekend it is best to forget.

Alpha Track Parts have now put together a team of drivers to campaign the 'Omega' car in '84 and '85, Alan Blakeman (Mr. ATP), Andy Benson and Tim Biggs. Others had been offered the deal, the less wise turned down the drive! Alan and Tim used the latest 'Omega II' with trailing front beam, Andy relying on the older design which he has powered to a win and two F.T.D.'s in recent Nationals.

Andy Dobson with the field following in the order, Fred Hatfield, David Gale, Fraser Smart, Jimmy Davis, Grahame Davies and the rest. Jimmy started to move up quickly passing Fraser and David before Fred let him through into second. Fred and Fraser then had an excellent dice for third place after Fraser passed David, third going to Fraser after an excellent passing manoeuvre. Jimmy started to close rapidly on Andy Dobson, but with insufficient time left, Andy came in first from



Above; *Associated* full independent suspension front end on Roger Darby's scratchbuilt suspension car.

He will shortly change to the beam set up. Tim Biggs made his first A-Final on Saturday, for Andy Benson the A-Final on Sunday.

Modified class

On Saturday the modified class was run. There is now a vast array of motors in use for this class, although *Reedy's (Associated)* and *Ferrari's (Parma)* are still the most popular. The day was rather dull by some standards. Radio interference was rife which caused some high speed chaos but in general the qualifying table had a familiar look to it when the three rounds were over. The B-Final provided a most hilarious incident. Keen to preserve every available amp in his cells, Nigel Hale had his car placed on the grid without touching the throttle. On the buzzer nine cars shot off down the main straight in forward motion whilst Nigel went off backwards! John Robson fielded the errant 12is and connected the motor the right way round which allowed Nigel to join the race one lap down. The A-Final set off at high speed led by

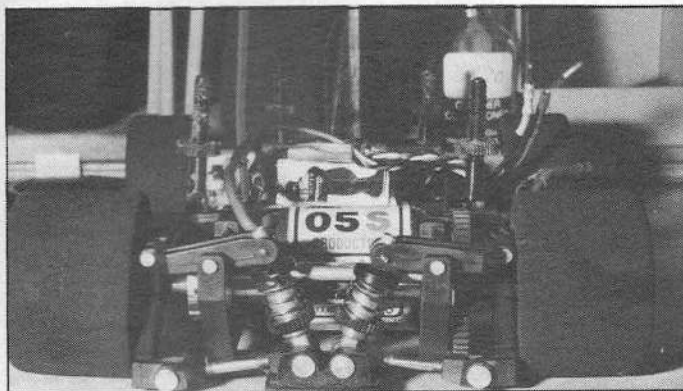
Jimmy with Fraser third and Chris Arnold fourth after a great drive through the field.

Competitors left the hall for that other great sport — how many pints can you put away and still drive on Sunday. There were some clear A-Finalists in evidence the next day!

Standard Class

Standard class used to be the sole province of *Igorashi '05'* motors, but when the *Yokomo* was legalised there was an en masse switch to this motor. These Yoko's were run on completely different ratios equating to 47 or 48mm per rev. But the '05' has made a comeback, winning this event and the 'East Midlands Grand Prix', but now pulling around 40 to 42mm per rev. This is equivalent to 13.46 on the old silicone type tyres of 48mm diameter, a ratio almost unheard of in those days. Chassis efficiency and cell quality has improved a lot in two years.

Heat 9 of Standard Class was the one to watch, Nigel Hale featuring twice in excellent dices with first Les Pipe and later David Gale.



Above; *AYK* suspension rear end on the Roger Darby car. Roger did not race his masterpiece in anger at this meeting but has done some testing with favourable results.

of Pete Jones. The move seemed to work on Saturday, when both Grahame Davies and David Gale made the A-Final, but as if to prove there's life in the old devil (sic) yet, Nick made the A-Final with David on Sunday. Poor Pete couldn't do a thing right all weekend, the

Dobson and Les Pipe. After their trip to the World Championships and empty handed return (relatively) they all looked a bit jaded, there being no changes to the cars apart from the introduction of a 2.5mm thick rear strap, said to improve rear roll stiffness adjustment. Andy

Racing Round-up

For the first time the Standard motors meant less laps than Modified. Andy Dobson drove brilliantly for 30 laps but went flat. Jimmy took FTD with 31 laps in a very smooth and fast drive which disguised the amount of work he had to do to keep the car pointing the right way.

The A-Final lined up around six o'clock and as the starter went, Jimmy Davis set off into the lead, but was soon passed by Fraser Smart. Jimmy struck back quickly and pulled out a lead of reasonable distance. The field jostled for position behind those two, but at around four minutes Fraser started to close the gap. As he drew up on Jimmy's tail

there were some hesitant steps by Jimmy which eventually let Fraser through. But back came Jim to lead again going into the final minute. Fraser refused to give up this time and kept the pressure on. Then Jimmy hit the hose going onto the main straight and Fraser was into the lead on the last lap. Jimmy, almost glued to the back bumper of Fraser's car, tried to pass on any side he could at each corner, nearly making it on two occasions. But Fraser kept his cool, his power and his lead to cross the line two inches in front. The applause was deafening and Fraser Senior looked quite drained! That was the best final anyone had seen since Jimmy's European

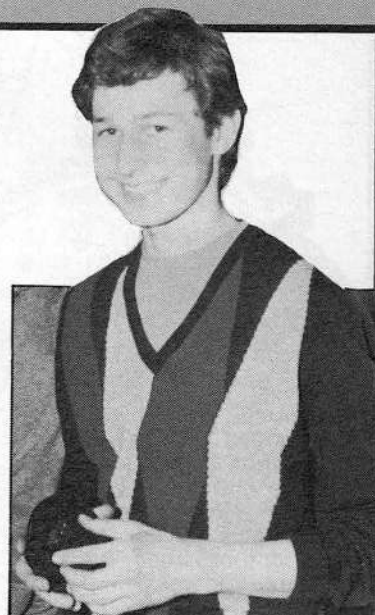
championship win of '82. Trophies were presented and everyone went home with talk of the Final on their lips.

Another well run meeting, for which thanks must go to Dave Towell and his army of helpers. Many congratulations to Fraser Smart whose calm and skilled drive belied his youth. I cannot remember anyone having to work so hard for their first National win, and with a chassis only put together the previous week.

See you all at Leicester.



Right: the latest Parma Protegé Martin Allen from London who beat a good few notables in the C and D Finals driving the new 'Panther Euro'.



Results

Modified

A	B	C	D
1. A. Dobson	1. T. Wells	1. L. Pipe	P. Winton
2. J. Davis	2. T. Dakin	2. N. Adams	2. J. Davis
3. F. Smart	3. A. Benson	3. M. Allan	3. P. Farmer
4. C. Arnold	4. B. Jones	4. P. Hobbs	4. D. Foster
5. F. Hatfield	5. P. Jones	5. J. Robson	5. P. Goodyear
6. G. Davies	6. P. Handley	6. G. Cutler	6. C. Kent
7. P. Davies	7. A. Blakeman	7. G. Peglar	7. E. Hawkins
8. D. Gale	8. N. Hale	8. S. Walker	8. T. Crofts
9. P. Olson	9. P. Angus	9. D. Towell	9. J. Spencer
10. T. Biggs	10. C. Evans	10. T. Dutton	10. P. Lakin

Standard

A	B	C	D
1. F. Smart	1. L. Pipe	1. P. Jones	1. M. Allan
2. J. Davis	2. P. Davies	2. L. Raybould	2. J. Davies
3. A. Benson	3. P. Handley	3. P. Riley	3. E. Hawkins
4. A. Dobson	4. T. Dakin	4. G. Davies	4. G. Cutler
5. D. Gale	5. B. Jones	5. C. Evans	5. P. Goodyear
6. N. Hale	6. M. Jones	6. P. Lakin	6. G. Griffiths
7. P. Olson	7. D. Attewell	7. T. Dutton	7. J. Fairman
8. C. Arnold	8. T. Biggs	8. P. Farmer	8. M. Doughy
9. N. Adams	9. P. Angus	9. G. Peglar	9. D. Foster
10. T. Wells	10. J. Spencer	10. —	10. D. Towell

Team

1) Parma 2) Schumacher 3) JDM 4) Demon

Team

1) JDM 2) Schumacher 3) Parma 4) Demon

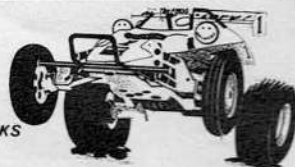
STANDARD CLASS TECHNICAL CHART

Name	Car	Motor	Cells	Speed Control	Steering Servo	Radio Tx	Tyres Front	Tyres Rear	Rear Dia.	Ratio	Ultimate Ratio	Body
Jimmy Davis	Associated 12iS	Reedy Igorashi 05	Associated Sanyo OF	Demon 2D Special	Novak	Multiplex Multiplex	Associated Green	Associated Green	49mm	13.50	40.02	Assoc. TOJ
Nigel Hale	Associated 12iS	Reedy Yoko 05	Associated Sanyo OF	Demon 2D Special	Novak	Futaba 3EG Futaba 3EG	Associated Green	Associated Green	47mm	15.48	46.14	Assoc. TOJ
David Gale	Demon MF 83	Demon Yoko 05	Demon Sanyo	Demon 2D	Novak	JR FM JR FM	T. Tyres 07	T. Tyres 07	49mm	14.44	48.98	Parma Osella
Andy Dobson	Schumacher 'C'	Trinity Yoko 05	CS Sanyo	Laser Compact	Novak	Fut. 2GLX Fut. Special	Associated Green	Associated Green	50mm	15.50	47.13	Alpha Shadow
Fraser Smart	Schumacher 'C'	Parma Igorashi 05	Sanyo ML	Laser Compact	Futaba FP132	JR JR	Associated Green	Associated Green	48mm	13.46	42.62	Alpha 956
Phil Olson	Parma Euro Panther	Parma Yoko 05	Parma Sanyo OD	Laser Compact	Futaba FP132	Futaba 2M Futaba 2M	Parma Med.	Parma Med.	55.5mm	14.46	50.20	Parma Osella
Andy Benson	Alpha Omega	Demon Yoko 05	Demon Sanyo NJ	Firefly GT	Futaba FP132	Futaba 3EG Futaba 3EG	T. Tyres 07	T. Tyres 07	50mm	14.46	48.87	Alpha Shadow
Chris Arnold	Parma Euro Panther	Parma Yoko 05	Parma Sanyo OD	Resistor 0.3	Novak	Kraft Futaba	Parma Med.	Parma Med.	51.5mm	14.46	49.20	Parma Osella
Nick Adams	Demon MF83	Demon Yoko 05	Demon Sanyo NJ	Demon 2D	Futaba FP-132	Futaba 2M Futaba 2M	Demon	Demon	50mm	13.44	46.41	Parma Osella
Tony Wells	Associated 12iS	Reedy Yoko 05	Associated Sanyo OF	Demon 2 CES	Futaba FP132	Fut. 3EGX Fut. 3EGX	Associated Green	Associated Green	52.5mm	13.44	48.73	Assoc. TOJ

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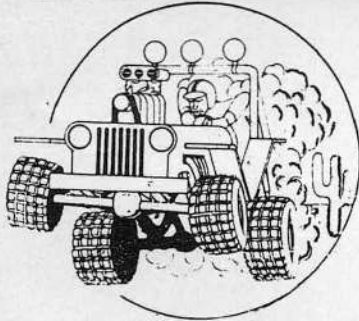
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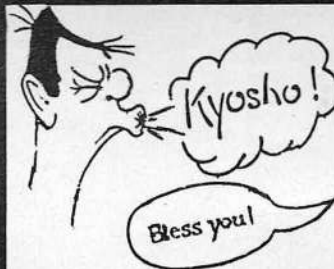
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