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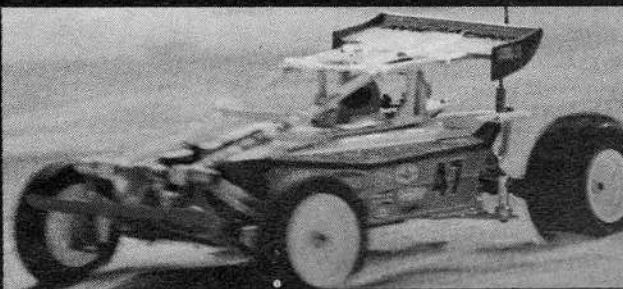
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Model Cars Monthly

November 1984
Volume 4 Number 10

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Cover

Our main picture this month shows a gloriously decorated Parma 'Lancia' Group-C bodyshell painted by Walt Bailey of Elite Models. The lower half of the covers some very scale-like 1/32nd slotcars produced by Gary Cannell.

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Seen & Heard

BRCA Conference and AGM

The dates and location of this year's gathering has been set as November 4th at the Park Hall Hotel, Goldthorn Park, Wolverhampton. Last year's event agreed that conference and AGM would be held on the same day, meaning that members would only be able to attend one section. The timetable runs as follows:

9am-2pm — Conference
Lunch £2.50 a head (buffet style)
3pm-6pm Annual General Meeting

Hopefully this will mean that more people will stay on and attend the AGM making it more representative of what the membership wants. All proposals for the conference should be prepared now and sent to the appropriate secretary.

Model Engineer Exhibition

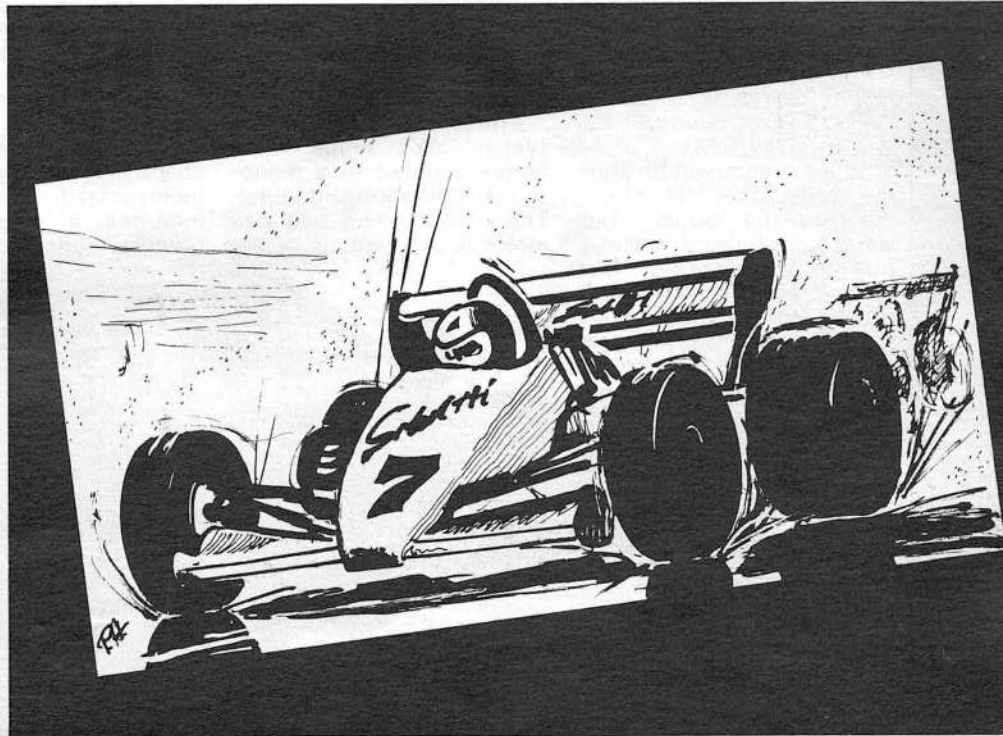
Once again this year's event will be packed full of model car racing with the usual competitions plus a couple of new items. First though, the dates: 31st December to 6th January. (Tuesday, 1st — New Year's Day — is of course a Bank Holiday.

Apart from the usual 1/10th and 1/12th scale R/C racing, Slotcar racing will also be making a welcome appearance with racing for the enthusiast and public alike. Electric Stockcar racing will also be featuring.

More details of the competitions will be available from November onwards.

Club Chat

Every now and then we get to hear some news of a model car racing club which although new to us, has actually been in existence for some time. Such is the case with the **Baggeridge Buggy Club** which has been racing for over three years. The club however, has only just recently obtained a piece of land to build their



own track at the Baggeridge Country Park. This is an ideal site as they can avail themselves of the parks many facilities. The track surface is grass which is already wearing away due to the dry weather and enthusiastic usage.

They race every Sunday at 10am through to 2pm with an 'Open' event held every month.

For more details contact Richard Lamsdale, 117 High Park Crescent, Dudley, West Midlands DY3 1QS.

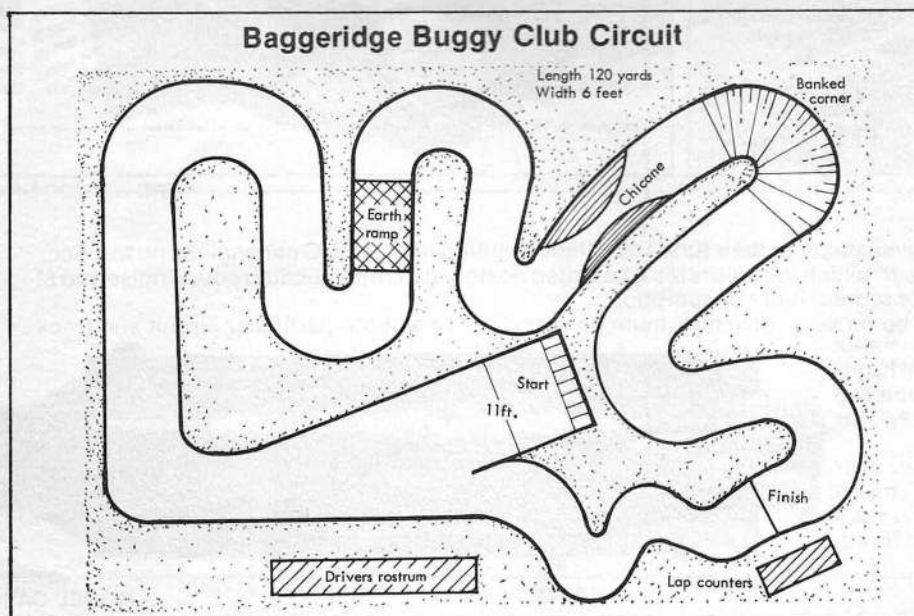
Mark Turner of 10 Cowland Close, Launceston, Cornwall PL15 7EQ has included some details of his local club with his reader's query letter.

The Launceston Off-Roaders formerly known as the 'Launceston

College Rough Riders' was founded in 1983 by Adrian Pearce of *Southwest Models*, Launceston. At first the club raced indoors at the college with racing for 1/10th scale buggies and 1/12th scale cars every Wednesday evening until circumstances forced them outdoors.

A local farmer has offered them the use of his orchard and racing now continues every fortnight on Sunday afternoons from 3pm-6pm. Although the membership dropped with the move the races are still closely contested on a tricky circuit. Interested visitors should contact Mark at the above address or phone Launceston 4715 after 6pm.

The Crewe and Sandbach RCCC have an already established 1/12th scale racing section which meets every Tuesday, 7.15pm at St. Barnabas Hall, West Street, Crewe. The club has recently started up a 1/10th scale racing section and is now seeking as many new members as wish to attend. They are indeed fortunate having acquired the ideal location for the building of their purpose built track at 'The Vine', Rope Lane, Shavington, Crewe, Cheshire. The agreement with the site owners is 'do what you like so long as you keep it tidy and buy a pint on a regular basis'. A good size grass and dirt track is already in use although facilities will be expanded as they go along. The club is keen to attract any new members and arrange inter-club events against any other local clubs. So, give either J. Spencer or Kenneth Lee a ring on Crewe 69051 or 663067 respectively. □



Gearbox

Marui 'Hunter'

Following on from their recent introduction to the R/C Off-Road clique — the 'Super Trail,' Marui have produce a competition style machine the 'Hunter.' Whereas the 'Super Trail' was a basic fun and 'Wheelie' buggy the 'Hunter' has positive potential on the Off-Road racetrack. Basically the 'Hunter' utilises an injection moulded chassis trough

onto which the suspension systems bolt and inside which the R/C equipment is housed.

The rear suspension system uses single wish-bones coupled to a mono-shock coil-spring damper. The kit contains a '540' size motor which puts its power

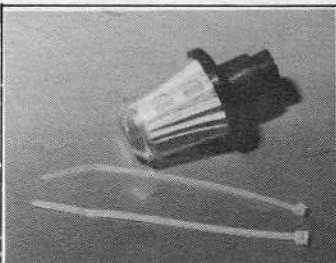
through the geared differential, via universal joints to the rear wheels.

At the front the twin wish-bone suspension is sprung by coil-spring shock absorbers, no damping is incorporated. The kit also includes a forward and reverse speed controller,

servo saver suitable for most manufacturers' types and a polycarbonate clear body-shell.

A full Track Test of this car will appear in the next issue of 'Model Cars.'

The 'Hunter' is imported by Amerang UK Ltd. and should be widely available in toy and hobby shops, price approximately £50.00.



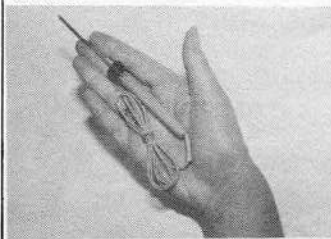
Irvine filter

One of Irvine's many products is this air filter specifically designed for R/C car use. The filter comprises of a paper element protected by a tough plastic casing and rubber connecting boot.

Irvine Engines products are available through Irvine Engines stockists and the price of the air filter is £4.00.

MFA iron

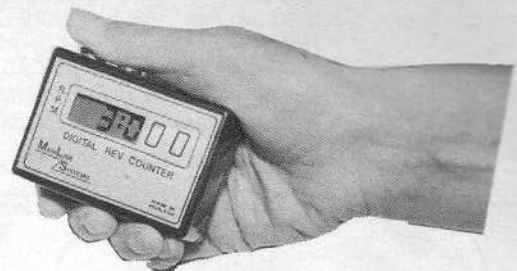
A 12 volt soldering iron is an ideal tool to have around any pit to make a quick running repair to R/C equipment or otherwise. A loose connection or dry soldered joint can put paid to that qualifying time or even FTD. Make sure that you include some solder in your box. The MFA soldering iron costs £4.99.



Mainlink tachometer

The opportunity to test motor RPM, either IC or electric, does not often present itself to R/C car racers. However a close look at such can give productive results. This particular item from Mainlink is an optical unit incorporat-

ing a digital display readout. Any motor being tested will need to be fitted with a propeller to ensure an accurate reading. The digital display has a display which encompasses a few hundred revs to at least 70,000. The Mainlink tachometer costs £35.50. Contact your nearest model shop for orders.

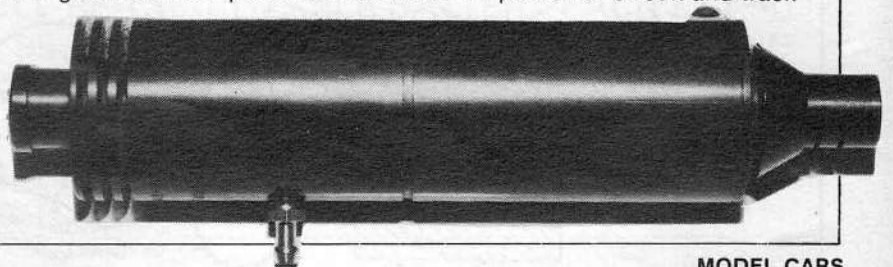


Air-logic silencer

Air logic have recently announced the availability of their tuneable silencer suitable for all R/C car engines up to 3.5cc. Air logic claim that their 'Varitork' silencer, which incorporates a patented design, can dramatically reduce noise and at the same time increase performance plus reduce fuel consumption.

The benefits are obvious, engines can be tuned to give maximum performance to suit the particular circuit and track conditions. By moving in and out the adjustable tailpipe to obtain the correct engine performance. The 'Varitork' silencer is manufactured from anodised alloy to fine tolerances for optimum performance.

Further tests on the Airlogic 'Varitork' silencer will be carried out by Mike Billington our engine test expert. Cost of the unit is £19.95. Contact Airlogic Ltd., 3 Medway Buildings, Lower Road, Forest Row, E. Sussex.



As seen in the national press



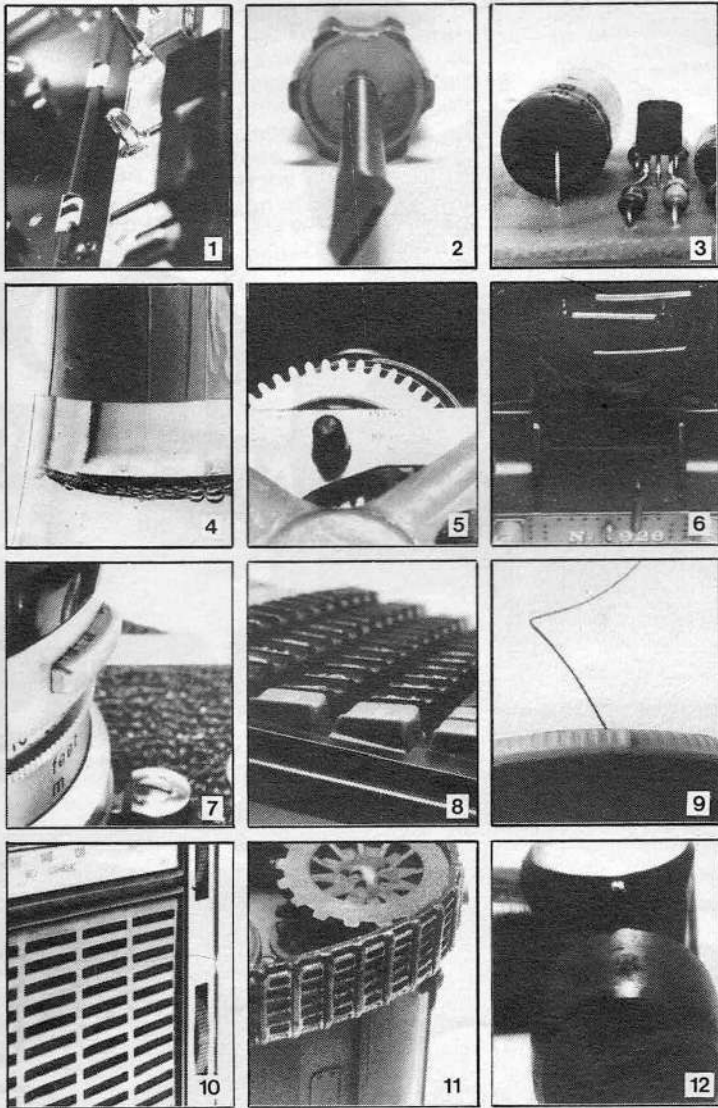
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and write your (one-word) answers in the spaces provided on the coupon. For instance, if you think that number 9 is a record, write 'record' in the space next to 9 on the coupon and so on. Then tell us in up to 20 words why **MAGAZINES MAKE IDEAL HOLIDAY READING**. Complete the coupon in BLOCK LETTERS, and send it to: *DREAM HOLIDAY COMPETITION, Argus Specialist Publications Ltd., No 1 Golden Square, London W1R 3AB*, to reach us no later than 31st December 1984.

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- 2 As long as an original coupon from the magazine(s) of your choice is used for each entry there is no limit to the number of entries per person. Photocopied coupons will not be accepted.
- 3 All entries must be postmarked before 31st December 1984.
- 4 The prizes will be awarded to the first four entrants who identify the twelve objects correctly and whose completed sentence is judged the most apt and original.
- 5 No correspondence will be entered into about the competition results: the judges' decision is final.
- 6 Winners will be notified by post and the results will be published in a future issue of this magazine.



The 12 objects are

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Magazines make ideal holiday reading because (up to 20 words)

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Track Test

by John Cundell

Toyota Land Cruiser

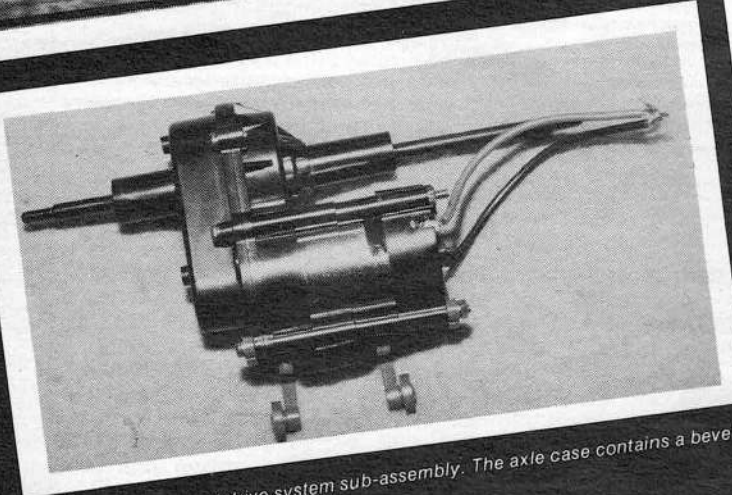
John Cundell has some fun with this 1/10th scale electric Off-Road stunt machine



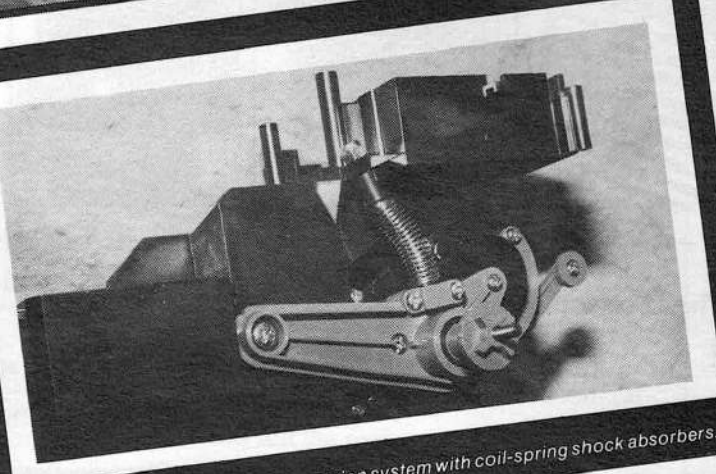
マルチプラホビー
3/11

AMERANG

S



Above: rear axle and drive system sub-assembly. The axle case contains a bevel geared differential.



Above: rear trailing arm style suspension system with coil-spring shock absorbers.



Right: steering servo-saver arrangement with servo in place.

AT FIRST SIGHT of this model car kit you might be forgiven in asking the question, 'Why have "you-know-who" brought out another stunt and Off-Road vehicle?' A closer inspection reveals that the company is not who you think it is, but the *Tokyo Marui Plastic Model Co., Ltd.*, and that the model is the 'Toyota Land Cruiser Stunt and Off-Road Radio Control Race Car' at the usual 1/10th scale. The full colour box, instruction manual and internal component packaging is an undisguised copy of the successful Tamiya format — the sincerest form of flattery?

So how does the 'Land Cruiser' measure up to the opposition in terms of construction and operation? The overall answer is very well indeed, and there are a number of nice touches that demonstrate considerable design thought which facilitate building and running of the 'Land Cruiser'.

Making a Start

The Editor, as usual, wanted the review two weeks before the kit was in my hands, so I made the grand, unanimous gesture of agreeing to take the 'Land Cruiser' on holiday. Apart from making a welcome diversion from

lazing in the sun, this scheme offered the chance to evaluate how complete the instructions were in regard to the list of tools required over and above the spanner, adhesive and grease supplied in the kit. The usual items were screwdrivers, pliers, and knife. Nothing else was suggested, and nothing else was required, not even a soldering iron to connect the motor wiring to the speed controller. How? — later.

I had sorted out a *Futaba 2 Channel Receiver* and a couple of servos and battery box — oh, and threw in brushes and paints. The latter are not absolutely necessary as the body moulding is a tasty off-white and roll bar, etc., is in black. However a touch of colour on the add-ons is very worthwhile and indeed practically mandatory on the driver who is otherwise very anaemic looking.

Front suspension, servo saver

All metal components such as stub axles, washers, screws, etc., are depicted full-size at the start of every assembly section, and all other parts

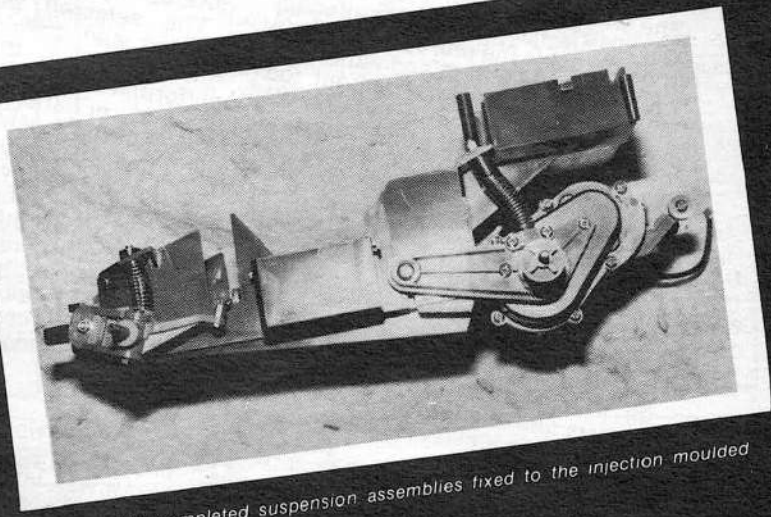
are numbered, so there is no problem in finding the correct parts as required. The front suspension is the standard swinging arm, damped by springs. All components attach to the sturdy plastic chassis and assembly of the king-pin/steering arms is made very easy with two jigs provided. A steel front shaft across the chassis provides a strong fixing point for the front suspension and is protected by the chassis and substantial sprung metal bumper which is added at a later stage.

The servo saver is moulded from nylon and was straightforward to assemble and install using the piece of piano wire thoughtfully provided to retain the spring pressure whilst tightening the restraining nut. A small point but an area which could otherwise be a little frustrating. Top marks for considering the not so adept or well equipped modeller who may not have a junk box of bits and pieces to assist. The servo saver does not fit onto the servo but onto the chassis, allowing a

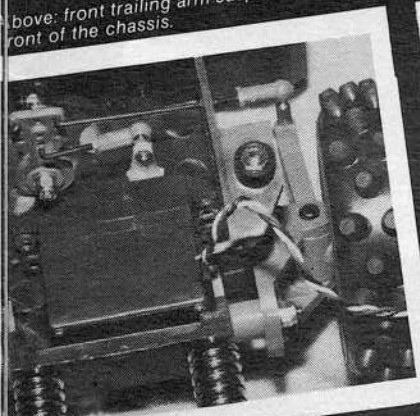
Super Wheelie!



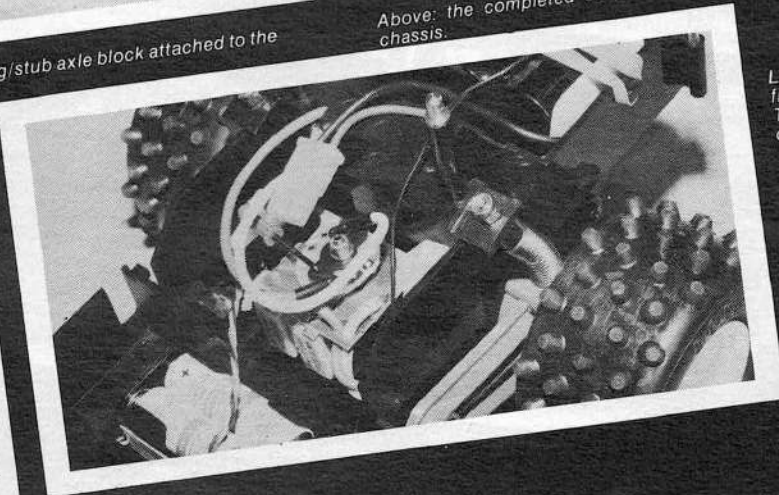
Above: front trailing arm suspension and steering/stub axle block attached to the front of the chassis.



Above: the completed suspension assemblies fixed to the injection moulded chassis.



Left: circuit board style speed controller fits into the centre of the chassis trough. The controller gives three forward and one reverse speed actions.



Track Test

variety of servos to be utilised. I was using normal size servos and there were no problems at all, with plenty of room to play with.

Motor and gearbox

The 'Land Cruiser' kit can utilise either a '380' or a '540' type motor, however the British distributors include a 540 type with the kit.

The motor and gearbox assembly forms a solid axle drive unit clamped between nylon rear suspension arms swinging from the main chassis and again damped by springs. A differential using plastic gears is included in the gearbox. Assembly of the gearbox is straightforward and all the necessary tolerances and clearances are accommodated in the accurate machining of the supplied components. No difficulties were experienced and a satisfactory running test using a single pen cell battery was carried out before final installation of the sub-assembly to the chassis. The assembly also features a nylon, anti-tip and wheelie support. Another thoughtful touch is moulded nut boxes for the rear suspension arms to facilitate tightening without special spanners — only the screwdriver is required. The rear hubs are nylon mouldings and are keyed to accept cotter pins which themselves are inserted into the metal lay-shafts with a pair of pliers.

Wheels and tyres

The wheels are assembled from the usual plastic halves, with a stiffening rim to go inside the rear tyre. This can be a difficult operation and although I managed to insert same without too much trouble, if you experience difficulty, try dipping the insert and tyre into soapy water before assembly. The tyres are studded with round studs which give all-round grip on a variety of surfaces. Both front and rear wheels are secured with Nyloc nuts.

Servos and speed controller

The steering servo is secured by means of double-sided adhesive tape on its side right at the front of the chassis and is connected to the servo saver by a supplied wire link and ball socket.

Speed control is achieved by a resistance type wiper unit which comes ready wired and simply needs to be attached to the servo mounting plate,

Right: the completed 'Super Trail' topped off with Baja 'Jeep' bodysell complete with spare tyre, dummy winch and petrol can.



again using servo tape. The unit is compact, yet not difficult to assemble and the instructions are extremely concise, not only with regard to assembly, but also with setting up the three forward and one single reverse speed actions.

At this stage it is necessary to connect the wires from the speed controller to the motor. The ends are bared and twisted together, after sliding a length of supplied heat-shrink tube over the wires. The application of heat from a hair dryer or hot air fan rapidly shrinks the tube over the joint and produces a satisfactory join. Of course, if you have access to a soldering iron then use it for a more secure long term join.

Receiver, batteries and drive source

The receiver is servo-taped to the steering servo and the various wires run through convenient slots and holes in the chassis and secured by vinyl covered wire.

The selected positions for the receiver and drive batteries decides whether or not the car will easily perform wheelies. The latter occur with the receiver battery located amidships and with the much heavier drive pack mounted at the rear over the motor/gearbox assembly. The batteries are secured with rubber bands.

For normal off-road driving it is simply a case of reversing the positions of the packs. Incidentally, the car requires a 5 cell pack of 1.2 volt, 1.2 ampere/hour cells. This is available from most model shops.

Body

All that remains is to complete the body by addition of items such as roll-bar, driver, lamps, winch, spare wheel, petrol cans, etc. If you intend to paint

these, it is advisable to carry out painting before assembly. The model certainly benefits from a spot of colour.

The body tongues into slots at the front of the chassis and is secured at the rear by spring clips through chassis mounted body posts.

Operation

There is a very useful help sheet and fault finding chart with regard to checking out the model before hitting the dirt. Follow this and the first runs should be fault free. Our pictures were taken on the model's first outing. It is very easy to pull a wheelie, if in that battery mode, simply by hitting the stick forward. It is not necessary to reverse the vehicle first. Indeed such an action is not recommended and would soon prove very detrimental to the speed controller.

Turning circle is very good and excellent control was achieved on both grass and tarmac surfaces, with no inherent roll-over tendencies. However if the latter do occur, the substantial roll-bar will protect the body and even the apparently vulnerable lights are sprung and can be returned to the upright in case of headache driving.

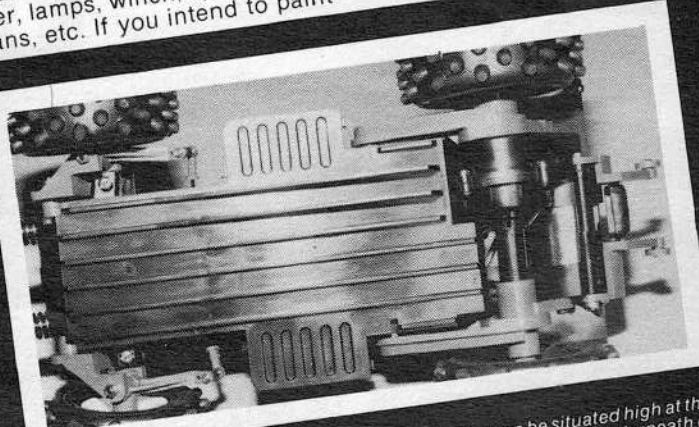
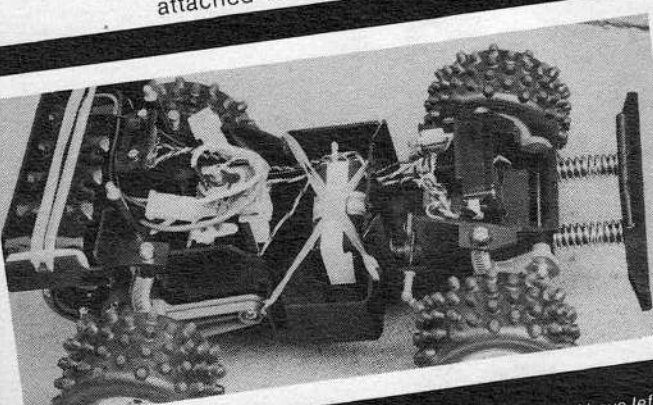
In the Off-Road mode the 'Land Cruiser' will compete quite favourably with other, basic, '540' motored vehicles and may even be at a little advantage with its good handling characteristics.

All round the 'Toyota Land Cruiser' is an excellent buy, is easy to build with no hidden extras needed, apart from the R/C and drive battery, of course, and is great fun to drive for fun, for demonstration and for competition.

UK Distributor: Amerang UK Ltd.,
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Price: approx. £50.00.

Above left: the completed rolling chassis. The 7.2 volt, six-cell Ni-Cad pack can be situated high at the rear for wheelie operation or in the centre of the chassis for normal racing use. Above: underneath of 'Super Trail'.



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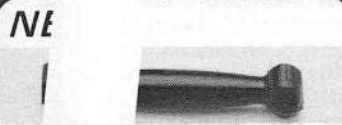
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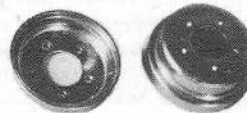
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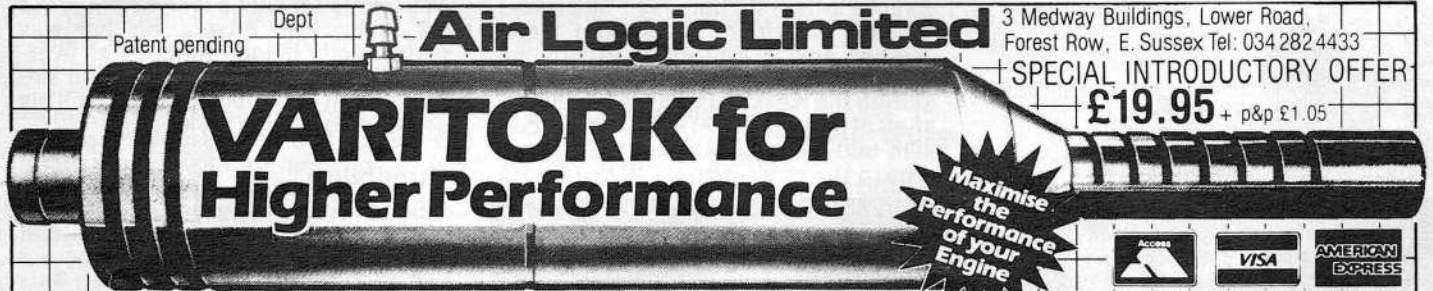
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Racing Report

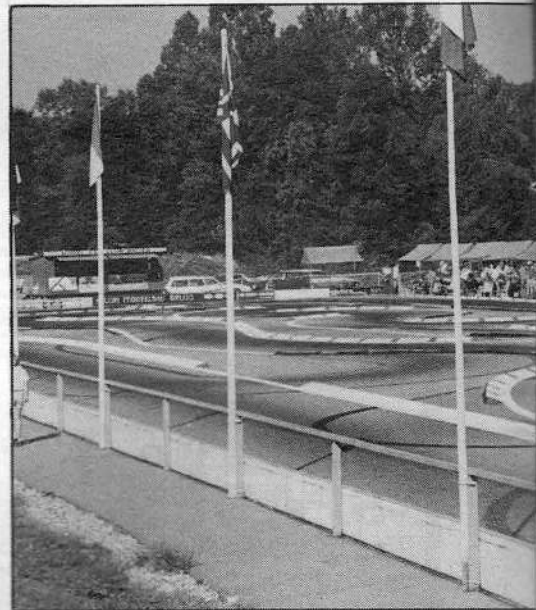
ONCE AGAIN THE best drivers in Europe gathered for the annual European Championship to be held this year in Switzerland. The notable exception being Ermes Tadiello, reigning Euro Champ, who we believe has now retired from racing after all the fracas of last year's World Championship.

The Brugg circuit looked daunting, not so much because of its size (330 metres) but more for the method of track marking. This was the first time for me that a championship had been run on a permanently marked tarmac area. The markings looked substantial to say the least, in that they resembled 6in. high, one-sided *Toblerone* strips placed all around the circuit. This meant that in the very tight section a slight mistake would roll you over whereas on the high speed parts an error could start you off on an Appollo mission! Result: a great desire for precision on the part of all the drivers.

Practice

During the early practising sessions of Wednesday and Thursday several drivers were noted as having mastered the layout. Stefano Calpista of Italy driving his SG car was probably the smoothest and had a best recorded lap of 20.7 seconds; Rody Roem of Holland with his *Serpent* 'Quattro' was not far behind although the car seemed to vary in performance between runs. Calpista, satisfied with his performance stopped practising by 2pm on Wednesday only to return for a quick run late on Thursday afternoon. On reflection I think that this was probably a mistake as the circuit changed characteristics during each day as the temperature rose, this in turn produced slower lap times.

Chris White from Britain had the good sense to acquire a spare bed-sheet from his hotel to drape over the polythene pit covering thus preventing



Euro-champs

Bob Errington reports on the premier 1/8th racing event in Europe. Brugg - Switzerland - August 4-6

Below: super cool and so laid back he's fallen over! Steve White adopts a low profile after winning the European Champion title by the barest of margins.



himself from being grilled under the intense heat of the mid-day sun. This heat brought out several biting insects which immediately attacked Phil Greeno causing him great concern.

Phil showed a great desire to reveal to everyone, every 10 to 15 minutes, exactly where he had been bitten and to ask whether he should seek medical advice. Phil was to experience a great many strange occurrences during the weekend such as the loss or theft of his hotel room key which forced him into sleeping with his feet placed against the door. Wardrobes

mysteriously appeared outside his room which immediately fell apart when the door was opened. On another occasion his wardrobe door was locked during the night and the key mysteriously lost.

Back at the circuit and everything was wrong for Giulio Gherzi one of the SG team's top drivers, his car was permanently being rebuilt by an ever-changing team of mechanics all endeavouring to perfect the car to suit his demanding driving style.

Qualifying

Saturday morning and the start of qualifying was upset by the rain that had fallen overnight thus causing the first round of heats to be slower. This meant that Dave Dixon (heat 1), John Russel (heat 3), Phil Greeno and Phil Hague (heat 5) all had heats classified as wet. By this time the track was drying out fast and in heat 7 Steve White set FTD with 14 laps in 5 minutes 6.5 seconds which set the ball rolling.

Heat 8 looked potentially faster with



Above: flags of the assembled nations surround the Brugg circuit. Note take-off ramp type of track markers.



Above: three cars chase each other through the chicane during the dry qualifying rounds. Note extremely high elevation of the drivers relative to the circuit.

Rody Roem (Holland/Serpent), Colin Strauss (Britain/PB), Vittoriano Orazi (Italy/SG), Luca Bergonzini (Italy/SG), Michael Mielke (Germany/SG) and Bob Errington (Britain/SG) all having shown promise in practise.

Rody Roem got the start he had been looking for with an opening lap (not quite full distance) of 19.35 seconds which must have been the fastest of the weekend, followed by Bergonzini, Errington, Strauss and Orazi. By lap 7 Bob was in the lead followed by Roem and Orazi the latter's engine was the fastest in Switzerland and he was able to take 10 metres off of anyone along the straight, subsequently on laps 7-9 we saw him put in an incredible string of 20.85, 20.85 and 20.95 second laps to catch the leading pair although the positions remained the same. The

scores at the end of the heat were, Bob, 14 laps, 00.08 and Rody 14 laps, 1.9. Orazi, Berganzini and Colin Strauss also scored 14 lappers.

Heat 9 saw David Lecat (France/PB, reigning World Champion) pit his talents against Dominico Calce (Italy/SG), Pieter Bervoets (Holland/Serpent), Roberto Bartolomasi (Italy/SG) and Gary Culver (Britain/PB).

Heat 10 had Stefano Calpista, Chris White (Britain/PB) and Paul Pagdin (Britain/PB). Both heats were fast and clean but were slightly slower than the previous heat leaving Bob Errington holding FTD after round 1.

Round 2 remained dry throughout and whilst many improved their times it appeared equally clear that many were experiencing problems which meant that Bob's FTD stood firm at the end of the round.

Round 3 and whilst heat 7 was in progress rain began to fall and many drivers, finding the conditions steadily deteriorating, pulled off. Heat 8 came out for practise but never started as the organisers took the strange decision to

Round four only got into the early heats before heavy rain started to fall. So, after a short delay it was announced that qualifying was halted and as the rain didn't look like stopping no further qualifying would take place. All drivers had had three dry runs and so the qualifying list was posted and how nice it was to see the first three places being held by British drivers.

As you can see the top four were separated by 1.0 seconds, the top ten by 3.25 seconds and the top 18 by 8.0 seconds. Incredibly 52 drivers were on the same lap!

Well the rain eased off to allow us to pack up but during the evening it started to rain very heavily again. In fact it rained all night and was still pouring when we arrived the next day for the finals.

Qualifying list

Pos./Name	Country	Car	Laps
1 R. Errington	GB	SG	14 5/00.80
2 C. White	GB	PB	14 5/01.00
3 S. White	GB	SG	14 5/01.60
4 J. Buehler	CH	Serpent	14 5/01.80
5 R. Poem	NL	Serpent	14 5/02.90
6 V. Orazi	I	SG	14 5/02.65
7 P. Luccesi	I	Mantua	14 5/03.90
8 L. Bergonzini	I	SG	14 5/03.30
9 S. Calpista	I	SG	14 5/04.55
10 G. Culver	GB	PB	14 5/04.05
11 K. Hoschen	D	SG	14 5/04.30
12 D. Lecat	F	PB	14 5/04.60
13 M. Bernard	F	SG	14 5/04.90
14 P. Hague	GB	PB	14 5/06.95
15 F. Poldi	I	Mantua	14 5/07.25
16 P. De Carro	SW	PB	14 5/08.10
17 M. Constantini	I	SG	14 5/08.50
18 C. Strauss	GB	PB	14 5/08.80
34 D. Preston	GB	PB	14 5/14.35
43 P. Greeno	GB	SG	14 5/18.00
50 K. Plested	GB	PB	14 5/21.40
53 P. Pagdin	GB	PB	13 5/00.00
70 D. Dixon	GB	Mantua	13 5/09.90
92 J. Russell	GB	PB	12 5/24.75
95 D. Preston	SG	PB	11 5/15.85

Finals day

The first finals to be run were the 1/32nd finals and these were really in terrible conditions. Dave Dixon struggled to score 11 laps in 15 minutes to 72nd place overall, whilst two Frenchmen made it into the 1/16th and then the 1/8th finals. Norbert Mayrhofer of Germany, who always drives well in the wet went right through to the 1/4th finals.

The 1/16th final had Paul Pagdin and Keith Plested but as both of them decided not to run they were placed 62nd and 64th respectively.

The 1/8th finals featured Phil Greeno and Debbie Preston both of whom struggled to score 6 laps leaving them in 49th and 50th position, Romano Garbani (Switzerland) and Michael

Racing Report

Salven (Germany) meanwhile both went right through, eventually all the way to the main final.

By the time the 1/4 finals had started the rain had stopped, the track however was still very wet. No British drivers were featuring at this stage but 30 plus laps were needed over the 15 minute

decide, even to the extent that on is public introduction lap he changed tyres first. Be warned, never stand next to Gary during a Final (*I'll try not to... Ed.*) unless you are really into 'vibro-massage'. His legs manage to oscillate due to the excitement such that the rostrum actually trembles.

good half lap lead. Then Steve called to his pit crew that his tyres had gone off and his car slowed enough for Bob to reel him in slowly. At the 12 minute mark both Steve and Bob came in for fuel and whilst John Russel attended Steve's car, Charlie Dudfield did one of his famous fuel stops to put Bob out first and into the lead. Bob held the lead until his next fuel stop when on his last lap his car ran out of fuel, leaving it stranded on the circuit. Steve was a little bit luckier as his own car gave a couple of gasps before the straight and only careful driving got it back into the pits for more fuel. Bob, although now with fresh rubber was a couple of laps down and so out of contention.

Gary Culver had by now worked himself up to second place and managed to take the lead from Steve at the next fuel stop. This he held for some minutes until disaster struck and he too ran out of fuel after just crossing the lap-counting line.

Now Jakob Buehler was in second place on this his home track and was desperately trying to hold onto Steve. However, Steve's pit crew had shortened the fuel stops to 4 minutes and so he was called in with only 2 minutes left to run. Steve passed comments on several items (all unprintable) as Jakob Buehler sailed through into the lead very hotly pursued by Steve.

Jakob seemed to be able to hold onto the lead but as the end got nearer the pressure got greater until finally he made a mistake at the end of the straight and that was enough to let Steve through and there was no way that Steve would commit an error. So Steve won the 1984 European Championship by just 5 seconds from Jakob after 45 minutes of concentration and superb driving. Congratulations were forthcoming from all quarters on a well-deserved win. How nice it is to see Steve White's persistence pay off at last with a big win for Britain. □



Above: general view of the Brugg circuit a very tight shape demanding a high degree of driver precision. British drivers proved their superiority on a real 'drivers' circuit.

period to go any further.

Over the one hour lunch break the track began to dry out — not a lot, but a little. So when the 20 minute semi-finals commenced conditions had definitely improved.

Gary Culver did what was required of him to gain entry into the Final so did Klaus Hoschen (Germany/SG) and Garbani, Mielke, Roem and Salven. Calce of Italy was left in 11th place with 45 laps with one-time favourite, Calpista a further lap down. Neither Colin Strauss or Phil Hague could come to terms with the damp conditions leaving them with 23/32 laps and 24th/22nd positions respectively.

The Final

So to the 45 minute race to decide the 1984 European Champion, the circuit still felt slightly greasy but improvement was hoped for during the run.

Every type of tyre was tested with none showing any real advantage, Steve White found a set of UFRAs 'Specials' to be best, so to did Bob Errington albeit of lesser diameter and was therefore scheduling for a tyre change. Gary Culver just couldn't

The start for me was a disaster as the car spun off of pole position and had Chris White's car sat on top of it whilst Steve shot off into the lead. This is how it stayed for the first 10 minutes as Chris' car suffered critical radio interference and Steve pulled out a

Final

Pos./Name	Country	Car	Laps
1. S. White	GB	SG	112
2. J. Buehler	CH	Serpent	112
3 K. Hoschen	D	SG	110
4 G. Culver	GB	PB	110
5 R. Errington	GB	SG	110
6 R. Garbani	CH	Serpent	109
7 M. Mielke	D	SG	105
8 R. Roem	NL	Serpent	96
9 M. Salven	D	Serpent	96
10 C. White	GB	PB	90

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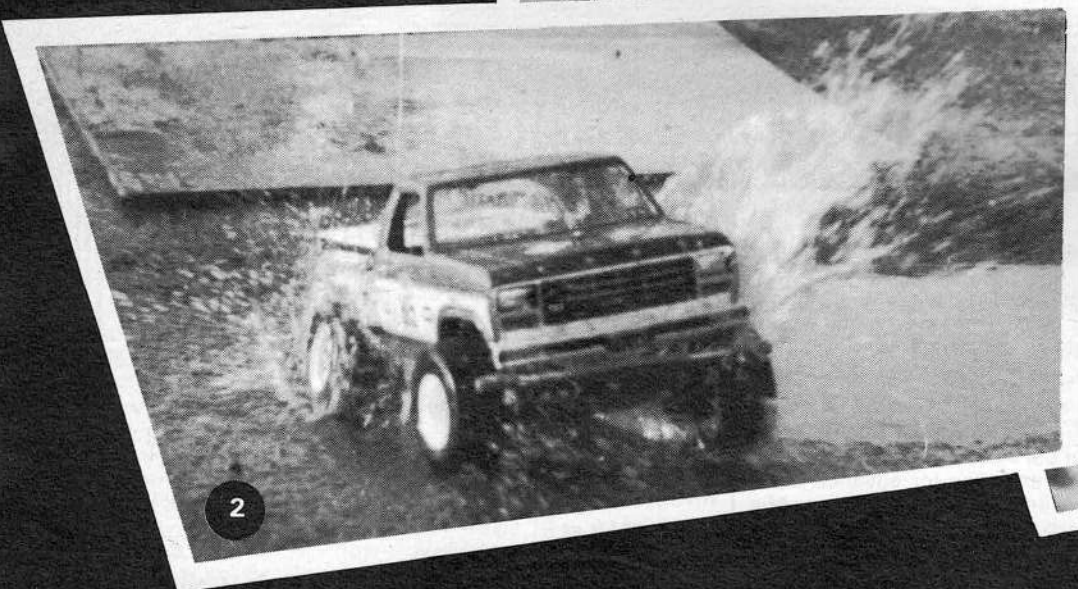
Photo-Action Competition

PHOTO 1: James Keating of Riseley in Bedford took his Zenit 35mm camera along to a 'World's End Off-Road Club' meeting and managed to snap this 'Scorpion' doing its stuff.

PHOTO 2: Adrian Ironmonger, this Tamiya Ford Ranger and his Praktica Super TL1000 camera combine to produce this fine action shot. Adrian comes from Spilsby in Lincolnshire.

PHOTO 3: Yeeeach! Martin Spencer from Sandown, Isle of Wight used a Chinon XII camera to portray a very bogged down 'Rough Rider' making heavy weather of a piece of rough ground.

PHOTO 4: A hint of nostalgia for once with an atmospheric shot of this 'Yu-Can' 1/8th scale MG TC. A Swindlehurst of Bradford took the picture using a Minolta XG-M camera.



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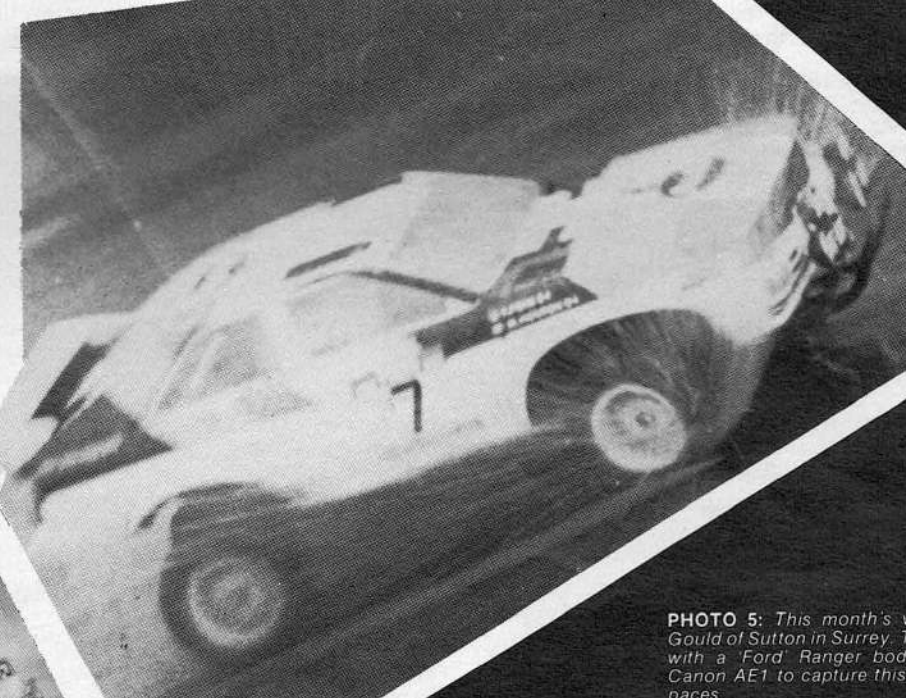




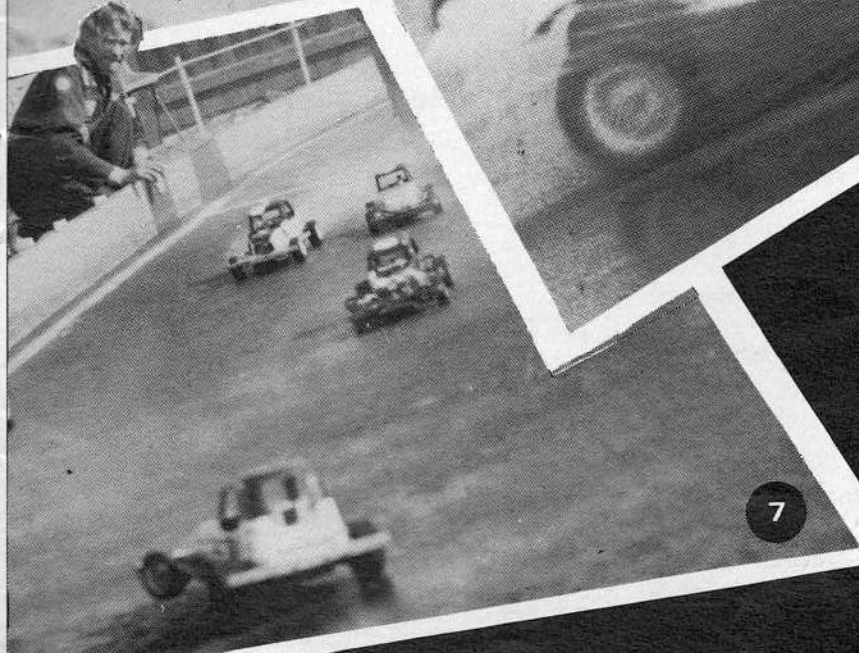
WINNER



5



6



7

PHOTO 5: This month's winner is from Jason Gould of Sutton in Surrey. The car is a 'Frog' fitted with a 'Ford' Ranger bodyshell. Jason used a Canon AE1 to capture this car going through its paces.

PHOTO 6: Realistic rally action from P. Crane of Hatfield, Herts. A dual effort as he drove the car and developed and printed the film after his brother had taken the shot. The camera used was an Olympus OM 10.

PHOTO 7: Alan Blakeman of 'Alpha Track Parts', producers of 1/12th scale racing products, has obviously taken an interest in 1/8th stock car racing. Alan took this shot at the Leicester stock car club track using a Praktica Super TL1000 camera.

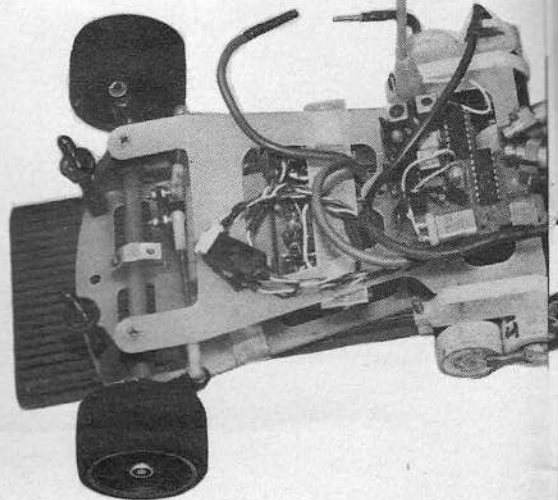
1/12th Racing

News and views on the latest developments by Peter Winton

THINGS ALWAYS go in cycles. 1982 was Schumacher dominance, 1983 an Associated benefit and 1984 sees Schumacher back on top, although Parma, Alpha Track Parts and Demon are now providing the main hurry up to the Schumacher team. Since no chassis design stands still, time to bring you up to date on some furious activity in some quarters as we approach the end of the racing season.

Demon

Nick Adams of Demon Products has been trying to develop some more rigidity into the rear end of the 'MF83' car, and two modifications have been tried. One is a 'U' shaped strap attached to the rear pod with two holes situated at the base of the 'U'. Two screws pass through the chassis, compressed by nuts on the screws which allows roll stiffness adjustment to a certain extent.



This modification has not spread to other team members, so perhaps it's a dead end.

The other change is the duplication of rear dampers in a 'V' formation between motor pod and shaker plate. This modification has been spreading, the car pictured belongs to Pete Jones. Whilst neither of the above has reached the production stage, the full length shaker plate previously shown is now

Comment

THIS PIECE is to be found under the 1/12th scale racing heading only because I have submitted it as my copy for this month. I hope all regular "On the Carpet" readers will bear with me, it is important to reflect on our situation once in a while.

Firstly . . .

There exists a concern amongst some people that their particular branch of R/C racing is on the wane. We are all at it right now, 1/8th performing about-turns over tyre additives, but rightly worried about the cost of tyres;

1/10th trying to attract all the "back garden racers" into clubs;

1/12th feeling interest is on the wane because of the sophistication and skill factors involved in competing.

1/8th Off-Road seem to be the only branch unconcerned with their lot!

Radio Controlled car racing in the U.K. is administered by the British Radio Car Association (BRCA). Within the objectives of its constitution the BRCA does an excellent job overall through the voluntary efforts of its forty officers. But, regretfully if we held our breath for an original promotional idea to boost participation we would all be pushing up daisies by now. There are lots of brave words at the A.G.M.'s, but little hard action. There is a

reason for this of course. All these volunteers have a 'real' job to do, and that together with BRCA business leaves little time for anything else. It is therefore the responsibility of all of us who benefit from their hard work to repay these volunteers by encouraging more people to participate, and join the BRCA!

Where 1/12th is concerned our biggest single problem is, in my opinion, total lack of awareness by the general public of the existence of this branch of the sport. Why? Well, try this one:

And now . . .

Where do you buy the majority of your equipment? The chances are, over 50% of you will not say at XYZ's Model Shop. Certainly in London there is an extensive trend toward buying the bits required direct from distributors and importers who attend local and National race meetings. Now comes the chicken? or the egg? The reason people buy at trackside is because the model shops no longer stock the things racers want. The reason for this is mainly because the pace of development in the last 12 - 18 months means that the only way to keep up is by buying direct at trackside. Then of course people found it easier to buy not only the latest chassis parts, but their consumables as well (tyres, cells, motors, treatments etc). Thus the model shop is deprived of this revenue as well as the original kit revenue.

As a shop owner you must be conscious of 'cash flow' and 'profit

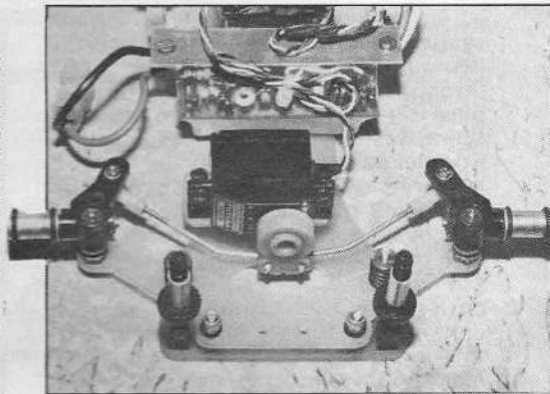
margin'. 'Cash flow' is the use of funds to buy goods, and recovering the funds by sale of the goods. Obviously the time between purchase and sale must be kept short otherwise the owner has to borrow to finance more purchases. 'Profit margin' is self explanatory, an item must generate enough revenue at the point of sale to cover its purchase price, the overheads, the VAT, and still leave enough profit for the owner to dispose of as he wishes (to re-invest in the business or pay for promotion and advertising perhaps).

At present we have reached a situation where the shops fail to stock any reasonable quantities and variety of 1/12th scale car kits, so that people going into the shops with their hard earned cash only see buggy's or Tamiya racers. Little wonder then that no new blood turns up at the clubs, some of which have recently closed. Shortly Tamiya will release their new 1/12th car. Many shops will take it because they know the Tamiya sales record. Tamiya can afford to promote it, and Richard Kohnstam the U.K. importer have never been slow to promote sales and support racing.

This is a chance not to be missed. At the next club meeting make up a poster and take it along to the local shop. Ask if it can be placed in a prominent position in the window. Ask the owner to point out the poster to anyone who buys any 1/12th parts from his store. Next, if the shop is low on 1/12th parts agree that all of you in the club will buy say, tyres, exclusively from the shop. Ask the

Left: Pete Jones' Demon Car now fitted with twin dampers at the rear in a 'V' formation along with the now standard full length chassis plate. Below: another rear end modification by David Gale using a Schumacher friction damper and single oil-damper.

available. This is a direct replacement for the old one, but you will need to drill holes in the front axle beam support blocks, or ready drilled blocks can be supplied by *Demon*. The effects of these changes had not come to fruition for the *Demon* Team until the East Midlands Grand Prix, when David Gale took FTD and *Demon* (Nick, Grahame and David) won the team prize. After the depths of the Euro Champs, *Demon* are on the up again, and nothing breeds confidence like success. Shaker Plate £3.95, Front Blocks £1.75, from *Demon Products*, 79 Northumberland Avenue, N. Harrow, Middx.

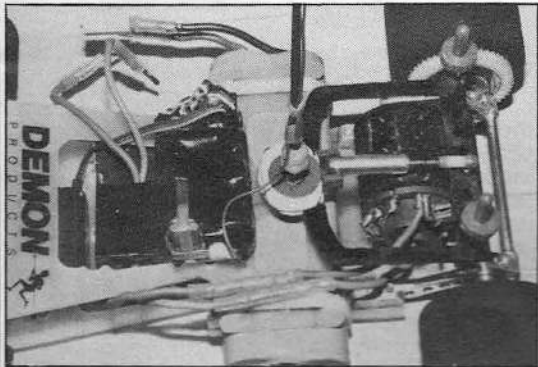


Above: the new Schumacher 'Clubmans-B' chassis and front beam arrangement which negates the use of Associated sprung steering blocks.

Schumacher

Worry that Andy Dobson actually has to watch his car in a race because it had become so nervous in the handling department (really!) has prompted some in depth work by Cecil. I won't bore you with the gory details, but 'C-Car' users now have a new chassis to try which has been found to substantially reduce the longitudinal pitching and lateral flexing of the car. In 2.5mm thick fibreglass sheet it is available for £5.30. Should you notice that an extra

pair of holes have appeared in your thick chassis plate, this is because a new front end set up has been developed. Due to a shortage of *Associated* sprung front-end kits, sales of the 'Clubmans' chassis have not been as rapid as expected. However, Glynn Peglar has invented and Cecil developed, a very simple front trailing beam arrangement which utilises many existing parts. As you can see from the photo, the current 'C-Car' spring



owner to stock them, tell him what is used in your area; generally encourage him to stock items like tyres, treatments, wheels, cells and motors, all of which don't vary very often. Shop owners might like to note that it is very convenient for racers to be able to buy goods on a club night. Since the club meets once a week it may well pay you to put a selection of goods in a small case and go down yourself for a short time or allow a trusted club member to represent you. Promotion and suitable products will draw people into the shops, make sure they end up at your club.

Lastly, a resolution for this year's 1/12th BRCA A.G.M.

That importers, manufacturers and distributors be discouraged from selling goods at BRCA meetings, and that retailers be encouraged to provide this service:

Perhaps it may get discussed who knows?

The price of things to come

Accept that on two major items there are price limits within the BRCA rules. As a result some equipment is being limited on choice, and if circumstances continue, then certain of these items may dry up altogether. In 1982, when the BRCA price limits was £3.00 per Ni-Cad cell, a set of six cells in the USA was \$36.00 or £18.46 (at \$1.95/£). The reason I mention this is that *Associated*, *Parma*, *Trinity* and *Delta* get together and buy large quantities of cells direct from Japan to keep the price down. These cells are brought

into the U.K. by their importers.

Today, the price limit is still £3.00 per cell, but at \$1.30 the Sterling price is now £27.69. There is one source who could perhaps continue to supply below the price limit, but has restricted availability in the best interest of 1/12th racing. The same problem exists with motors, and today (1.8.84) there is one importer bringing in motors and selling them at a loss and another not importing at all.

The exporters argument is that for years that have given special terms of sale (extra discount, longer settlement dates etc., etc.) to the U.K. because of our price limits. But we are the only country in the world with this restriction, and the exporters say they can sell all the motors and cells they want, to Europe and Asia without any special terms, so why worry about the U.K. Sponsored drivers who succeed, promote sales, but get their stuff free, so supply them and publish their results in countries where price limits don't exist, and you get the best of both worlds.

I don't suggest that price limits have not been beneficial to 1/12th, merely that they are no longer having the desired effect. Let it be clear that the Sterling/Dollar exchange rate is the major culprit and an improvement to 1982 levels would substantially cure the problem. This seems less likely at the time of writing and therefore the BRCA committee must act to restore margins for retailers and thus the choice for racers. It is impracticable to set and monitor a

price in Dollars, so there seems to be two options.

The first is a price hike to £12.00 for a motor and £24.00 for a set of cells. Price limits have a danger which is that people will charge this price anyway. It becomes not a limit but a norm. This is what happened last year when motors already in the shops went up from £7.50 to £9.00 just because the price limit went up.

So, I suggest a second resolution to be voted on at the Committee. "That price limits on cells and standard motors be withdrawn for a trial period of twelve months".

To those who say, (or laugh) that there is no point in doing this since there are supplies available within the current limit I can only point out that raising the price limit will not guarantee that these people keep prices down to 1984 levels because of the "norm" factor explained earlier. However if there is no price limit, prices can be not only higher, but lower as well. I would invite these people to buy their cells and motors only from those who will supply at 1984 levels if they fervently believe that the sport will only survive with low prices.

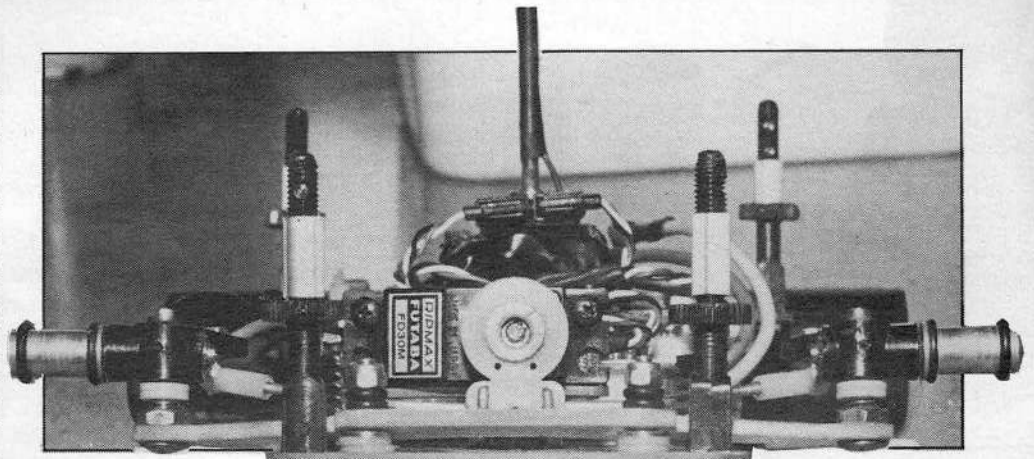
Whatever the BRCA does is up to its members. But what it does in this area affects everyone in the modelling world. If you are a member, get to the AGM for your branch of the hobby. Remember that 1/12th set the cell and motor price, and 1/10th have their own motor price limit but follow 1/12th on cell prices (up until now that is!) If you want to have a say BE THERE.

On The Carpet

system is used and the beam pivots on two uprights at the front, which fit through those two new holes. The king pins are extended in length, and by fitting washers in the correct sequence, ride height adjustment at the front is featured. The main reason for producing this simplified front-end is to replace the *Associated* front blocks with the added advantage that it is half the price! The complete car is christened the 'Clubmans B'. To compensate for the added weight of the new thick chassis plate, (approximately 5gm more), the rear tyre sleeves have been thinned down to only 60% of their original weight, a saving of 5gm.

Lastly, Cecil is now importing cells from Christian Sterr in Germany. CS cells are individually selected, computer matched and highly thought of by the Team drivers. The costs of keeping up with the herd are set out below, send your money to *Schumacher* or bang on the counter of your local model shop.

2.5mm Chassis for 'C-Car' or 'Clubmans B', £5.30; 'Clubmans B' front end (adaptable to existing 'C-Car'), £6.50; 'Clubmans B' conversion chassis, £39.90; CS Ni-Cads, £17.95; New king pins, £1.20 per pair; Sleeves 30p each.



Above: end-on shot of the new Schumacher front beam. The stub axle/steering blocks are spaced above or below to give variable ride-height. Castor is adjusted by raising or lowering the leading edge of the beam.

receiver shrink wrap, connector Shrink tube and a large rectangle of servo tape to mount the 'GT' into your chassis. All these were nice touches. Setting up is aided not only by the instructions (this is not always true!) but by an LED, which goes out when you have selected neutral on the preset pot. Additionally there were exposed contacts for the wires which reverse the mode of operation for use with *Acoms* and *Sanwa* radio gear. These exposed contacts allow reversal of the soldered

connections without having to remove the protection shrink wrap. Both the LED and these easily to reach solder joints were very well thought out features unique to the 'Firefly GT'. I used the 'Firefly' in conjunction with the 'Proto X-2' review. To be fair, the 'X2' is no featherweight and pulling 14:48 gearing on a Yokomo in a 2lb. 3oz. car would test any speed controller, currently available. The 'Firefly' performed extremely well. The full power relay was adjusted to come in in the first third of the stick throw, giving it a lot of work to do in passing current whilst the car accelerated.

The brakes were good enough to throw the car into a corner, but, again, not as good as my *Demon*. Reverse comes in quicker than the *Lazer*, but, again, not as quick as the *Demon* (!). After a six-minute heat the unit was warm, which surprised me. However, this did not detract from its performance, which was competent throughout. Competitively priced at £34.95 and available from Intronics, at Beechdale Challow Close, Hassocks, Sussex. Tel. 07918-3263. □

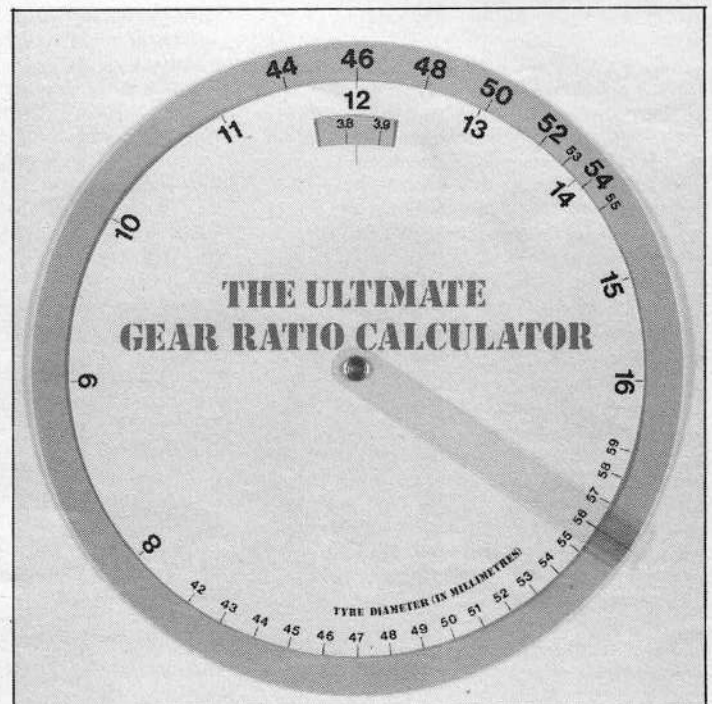


Left: the Intronics 'Firefly GT' speed controller, a must for the weight conscious racer. The photograph shows the unit oversize.

Intronics — in touch

Since our article on placing the speed controller low down in the chassis, there has been a great deal of interest in the matter. Ian Spashett of *Intronics* has subsequently sent me a 'Firefly GT' controller for review. This is a very compact unit, mainly due to the smaller than usual relays for full power and reverse. Because of this it is 1/4oz. lighter than my faithful *Demon 2C*. Setting up is simply a case of following the instructions supplied within the neat bubble pack container. Also in the bubble pack are the usual stickers,

Right: the ultimate gear ratio calculator produced by Mathew Whitehead for £1.50. A neat and easy to use unit.



Schumacher

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IT MUST BE some time since a chassis was released onto the market with a pedigree of results as mixed as those of the *Parma* 'Panther Euro'. Despite failing to win a single National Championship event to date, the 'Euro' has featured often in A-Finals and has collected a team prize. Yet its form was proven by Phil Olson's magnificent win in the European Championships, from which it gained its title, plus first and fourth place in the World Championships.

At the beginning of 1984, *Helger Racing* got together a team of drivers



Above: two views of the 'Panther Euro.' Rolling chassis (left) and complete (right).

Panther Euro

Pete Winton gets his paws on a 1/12th scale world beater

to contest the National Championship. However, the car was not as good as it needed to be and so team driver Chris Arnold set his fertile brain to an extensive development programme and along with Buddy Bartos of the mother company (*Parma International USA*) produced the 'Euro'. Most of the differences between the new car and the old 'Panther' (particularly the chassis design) are a result of Chris' persistence in the face of much pressure for results and much credit should go to him. There is only the broad similarity of cell layout to compare the old car with the new, the plastic rear pod is now replaced with a metal channel, the shaker plate removed and the front axle blocks substituted for a fibreglass beam to support the front wheels.

Now, where's my screwdriver?

All the parts are supplied in the ubiquitous plastic bag which has become the fashion these days (unfortunately) inside which are three more bags of bits, an instruction sheet and the chassis plate. The quality of all the components is good but not of the highest order. Particular let-downs are the rear aluminium body posts and fibreglass axle pod top plate.

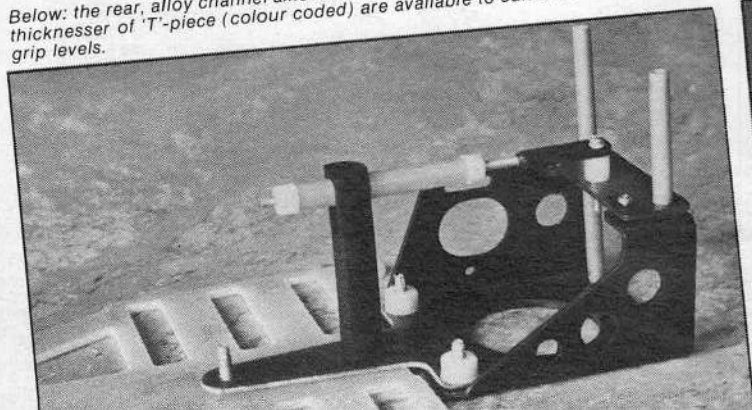
The instructions are good and assembly is straightforward once the appropriate screws are identified. Since *Parma* quote the screw sizes in the American form (6-40, 8-40, etc.) be careful that you use the right ones in the right place.

The front axle is mounted upon two plastic spacers and angled

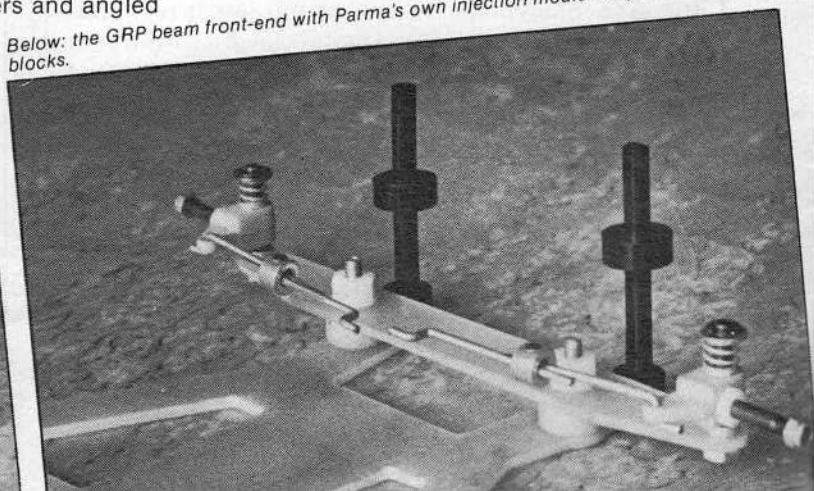
wedges to give an adjustable castor angle. The white plastic wedges have to be cut in half, leaving a thick and thin wedge which can be used to give adjustable ride height at the front. I used 3° wedges to start with. The instruction sheet recommends polishing the kingpins but I found this to be unnecessary. Fit the steering to the beam blocks and then position a large washer over the spring before clipping the circlip in place.

The rear axle pod assembly is easy, except for the two self-tappers which hold the top pod plate. In my kit the two screws supplied were too large for the holes in the pod which caused me much head scratching and an eventual search for an

Below: the rear, alloy channel axle and motor pod, damper and 'T'-piece different thicknesses of 'T'-piece (colour coded) are available to suit different tracks and grip levels.



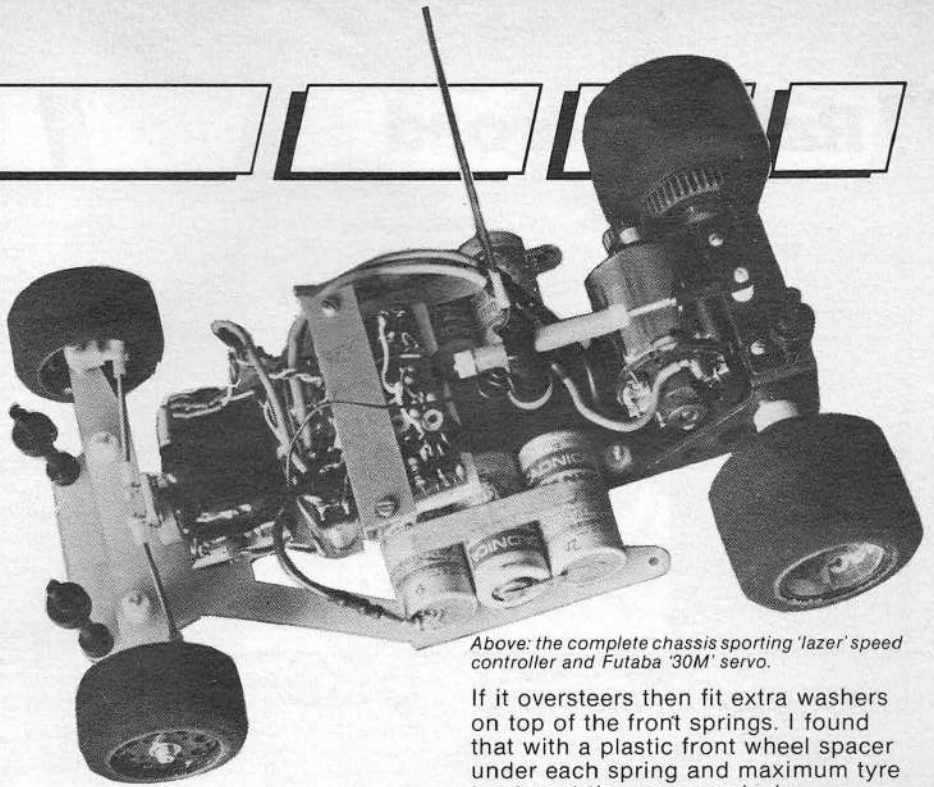
Below: the GRP beam front-end with *Parma's* own injection moulded nylon steering blocks.



alternative. However, *Parma* assure that this slight problem will be overcome by the time you read this.

If you decide to fit an electronic speed controller you will have to make a small plate on a post to screw onto the front 'T'-piece screw. Use an old body post and mount the controller just above the Ni-Cads. Fitting the steering servo (*Futaba '30M'*) and receiver (on top of the servo) was the next operation and again no problems were encountered. There is no rollover mast supplied but a small 18SWG piano wire item can be fixed to the damper post.

Any type of 1/12th motor and differential can be fitted, as can all the currently available front wheels. To round things off (sic) I fitted *Parma* medium tyres (what else?!!) front and rear.



Above: the complete chassis sporting 'lazer' speed controller and Futaba '30M' servo.

If it oversteers then fit extra washers on top of the front springs. I found that with a plastic front wheel spacer under each spring and maximum tyre treatment the car was nicely balanced on the local club circuit.

This car is so docile it's almost soporific! It is a basic understeerer until the grip is high, then it whistles round. On turn-in it gives the impression of wanting to spin out but if you keep the power on it holds a good line. Once committed to the corner, keep the power on and steer round, but if you need to greatly tighten the line then a momentary lift off the throttle will produce instant results. Using a combination of steering and power this car is made to respond well to changes in direction.

The 'Panther Euro' scores high for its simplicity, strength and low maintenance factor. It is average in construction and cost. There is front and rear ride height adjustment although the minimum rear tyre diameter is limited by the axle pod and not the chassis.

You cannot fault the handling but it does need good grip to give its best on *Parma* tyres (maybe *Tru-Tyres '07'* or *Associated 'Greens'* would cure this). It is not in the least bit twitchy nor does it exhibit any hidden vices; as I said it feels docile but not slow. Definitely recommended for beginner and expert alike and full marks to Chris Arnold for all his hard work.

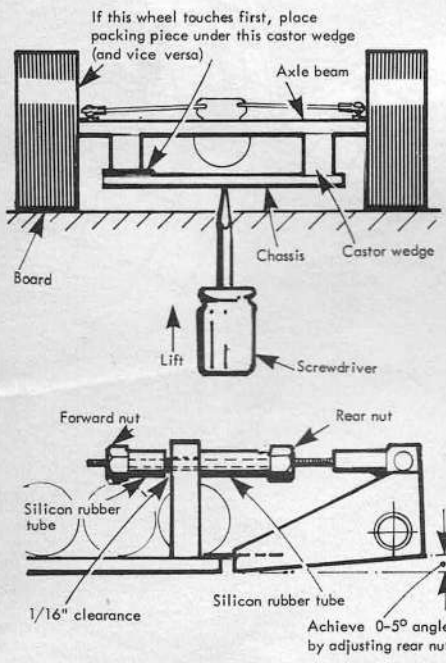
(preferably a new set) place the car on a flat surface. With the front wheels near the edge lift the front of the car in the centre of the chassis using a screwdriver so that the wheels are just clear of the surface. Spin each wheel and then lower the chassis slowly. Both wheels should touch together. If one wheel stops before the other, place a thin packing piece (old Lexan from a bodyshell is ideal) on top of the castor wedge. See **fig. 1**. Try the process again and hopefully both wheels should stop together.

If not, try again. If more than two pieces are required, something else is wrong, so re-check the chassis assembly.

Now fit the cells and place the chassis back on the flat surface and undo the forward pod damper nut to the end of the thread. Do up the rear damper nut until the axle pod is almost level with the chassis. See **fig. 2**. Now do up the forward damper nut until there is approximately $\frac{1}{16}$ in. clearance from the damper post.

Now, where's the track?

Treat the rear tyres full width and the fronts $\frac{3}{4}$ width with your favourite additive and drive the car. If you have understeer, then increase the treatment width on the front wheels.

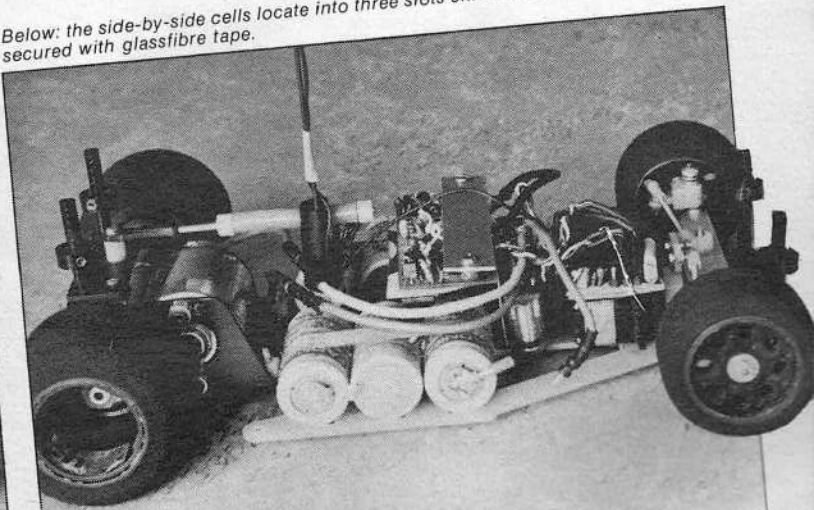
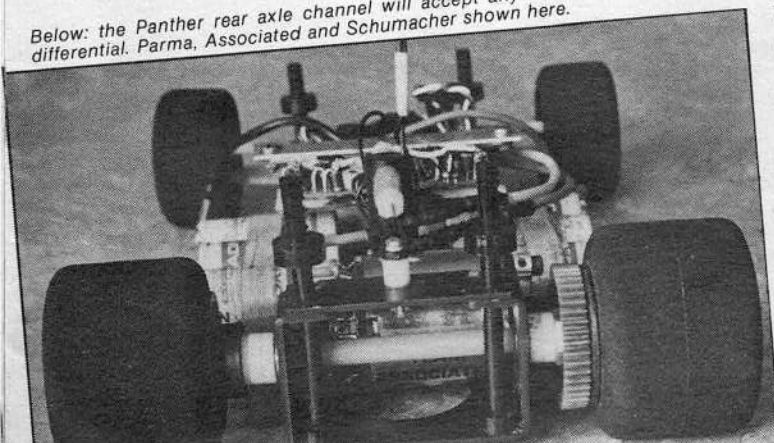


Now where's my tweak plate?

The initial setting up of the car is fairly easy. Build up the chassis less the cells and using a set of tyres which are exactly the same diameter on each side of the two axles

Below: the Panther rear axle channel will accept any commercially available differential. Parma, Associated and Schumacher shown here.

Below: the side-by-side cells locate into three slots either side of the chassis and are secured with glassfibre tape.



Racing Abroad



Canadian Club

Pat Doherty from Halifax, Nova Scotia is our Canadian contact and once again we were able to help him with a query, this time concerning the Dutch automatic lap counting system.

"Radio Control car racers on Canada's East Coast look with envy to their European counterparts. With large distances between major population centres and people pretty thin on the ground in any case, the concentration of much racing activity in a small geographical area is not possible.

Regional pockets of enthusiasm do appear, although very few Canadian races are ever over-subscribed. On Canada's west coast, British Columbian racers are well organised and benefit from an equally active R/C car community in the north western corner of the US, just south of them.

Another major centre of racing activity is Montreal, Quebec, whose legacy from the recent Olympics is the racing venue shown in the composite photo. Adjacent to the Olympic Stadium, this excellent track is a focus of Central Canadian activity.

Some 3,500 miles east of British Columbia, and 800 miles from Montreal, we on the east coast form another little island of activity with

Below: the Montreal racing circuit situated adjacent to the Olympic Stadium. These excellent facilities compare equally with some of Europe's finest.

very few visitors racing from out of the region and with the prospect of a 1,600 mile round trip to compete in 'races with strangers'.

Happily, this situation does not mean that intense activity is not possible and in the province of Nova Scotia organised racing takes place in 1/8th Circuit, 1/8th Off-Road and 1/12th Electric.

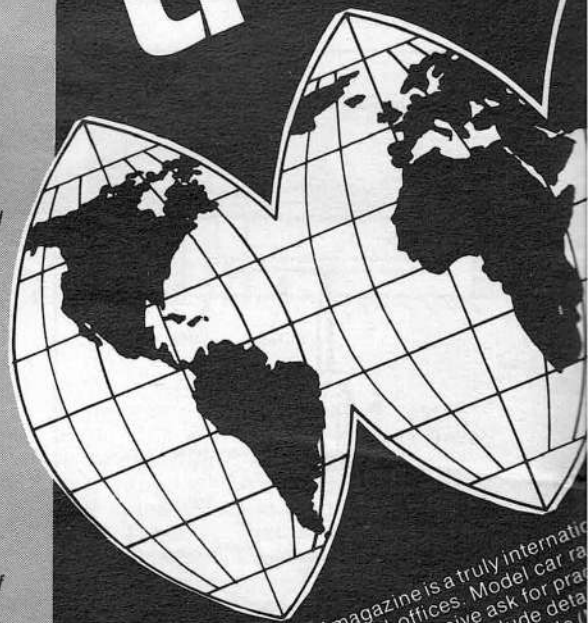
Facilities provided through (RC)²ANS (the Radio Control Race Car Association of Nova Scotia) include an 800ft. car park paved road race course that is open to members twice weekly from April through to November, a 155ft. course for indoor electrics, and two courses for the newly introduced 1/8th scale Off-Road cars.

Race format conforms to that generally seen in other jurisdictions, however, the electric road race course is for 4-cell cars and consists of latex painted concrete with an abrasive overlay instead of the popular carpet covering.

Most of our up to date information is supplied by the growing number of excellent magazines that feature R/C race cars coverage, especially 'Model Cars'.

Equipment in use is mostly Futaba (wheel transmitters) radios, Picco and K&B engines, SG and Delta 1/8th suspension circuit cars, SG and Japanese dirt cars and Delta 1/12th electric indoor cars.

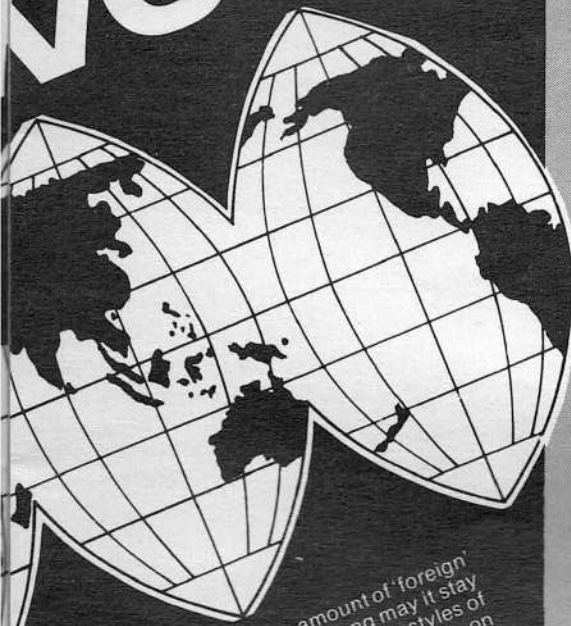
Around the World



Proof that 'Model Cars' magazine is a truly international mail we receive at our editorial offices. Model car racing that way. Many of the letters we receive ask for practical racing. Frequently these same letters include details from Tony Stott's 'Off Road Down-Under' article to you too.



nd World



Original publication is proven by the amount of 'foreign' racing is truly international sport and long may it stay. Technical help or else information on the British styles of models of what is happening back home and following on (MCM May) we thought the details would be of interest

Rocking down to Rio

Well São Paulo actually, which is where Peter Gogarten hails from in Brazil. Peter wrote to us originally about a fuel filter problem which we were happy to help out with. In return we asked for some details of racing, Brazilian style. Over to Peter . . .

"First of all, congratulations for having been able to turn 'Model Cars' into a monthly magazine.

Here you will find several photos showing our Off-Road racing activity (it would be better said training activity) here in São Paulo, Brazil. As you can see, most of the cars are Kyoshos 2X4, into which we have put many hours of development. Due to the fact that spares are almost impossible to be bought in our country and everything we need has to be brought in either by incoming



Above: a happy bunch of racers at the third round of the Brazilian championships. Incidentally this meeting took place in the middle of winter.

friends or by means of tricky mailing procedures.

We were already about to produce very good quality dampers, rear tyres, tuned pipes (copy of Picco) and spike tyres.

Recently we ran our very first 1/8th Off-Road race in Brazil. We had a total of 16 entrants who used the following cars, 10 Kyosho, 4 x 2, three Micro Racing 4 x 4, one Garbo 4 x 4, one Garbo 4 x 2, and finally one Kyosho 4 x 4. Most of the engines being Picco with four OS, two K&B and one OPS. As we had a low entry in 4 x 4, all the cars were raced together with separate classification heats, with ten cars finalising the race. The winner was a Kyosho 4 x 2 with OS side exhaust engine. The 4 x 4 winner being a Garbo, OPS

powered car, although only 8th in the final run. Anyhow, we believe that for the first venue we had a very pleasant and competitive race and we hope to have more participants in the future.

Also shown here are some photographs of the 3rd round of the Brazilian championship for R/C 1/8th track cars. The race was held during the weekend of June 24 with a record entry of 43 cars.

We were able to run four classes, A, B, C, and D. Our classifying system is rather different from the European one, with qualifying times being achieved based on the best lap time obtained during three 5-minute qualifying heats run by three cars at a time. The resulting ten best will run in class A, the second ten in class B

Right: racing action from the Francisco Carillo farm circuit a superb track. The photo shows action from the first lap of the Class B final. Obviously the Latin connection between Brazil and Italy is shown in the concentration of SG cars and Italian engines.

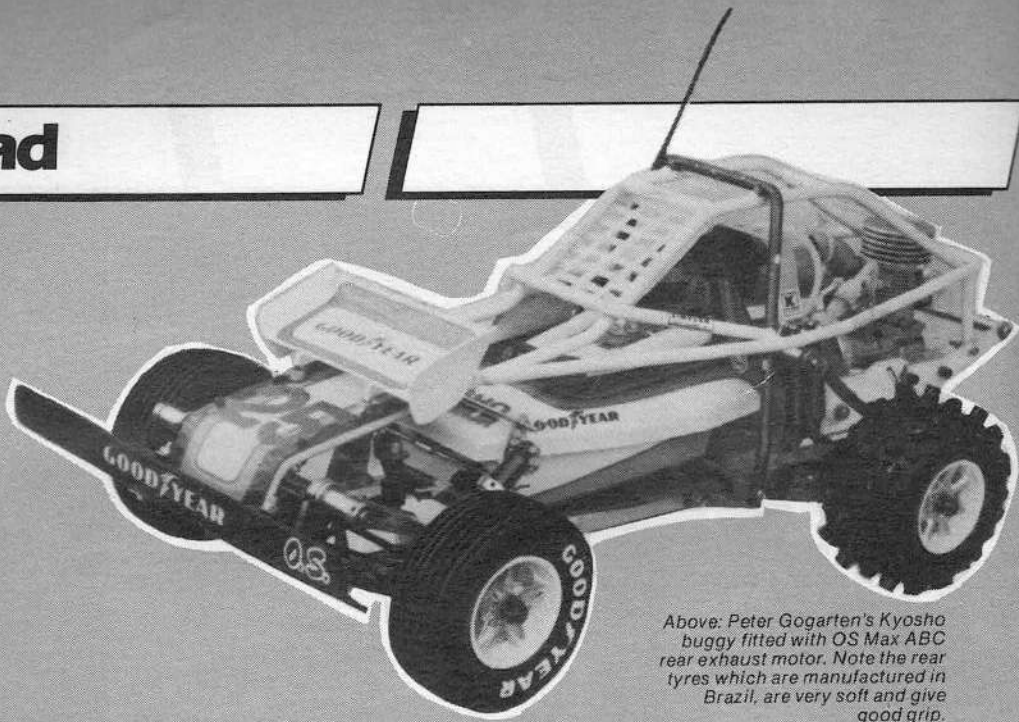


Racing Abroad

and so on. As you might see from the pictures, the track is located within a magnificent site, built on a farm owned by Mr. Francisco Carillo, one of the founders and probably the most enthusiastic of R/C racers in Brazil. Mr. Carillo is presently building a new track at the same farm, with its inauguration scheduled for early November. He is actually thinking of inviting several European teams to take part. The racing results show the heavy influence of the Italian SG cars, the Italian Picco and OPS engines."

Hopefully we will be receiving more news of the Brazilian racing scene from Peter in the near future.

Below: truly a beautiful setting for a race meeting, palm trees, green slopes, sunshine and no rain.



Above: Peter Gogarten's Kyosho buggy fitted with OS Max ABC rear exhaust motor. Note the rear tyres which are manufactured in Brazil, are very soft and give good grip.



Above: view of the start line at the Rio Off-Road Meeting. The track is of the European specification, i.e. very loose dirt which lessens car breakages.

New Zealand

John Dale wrote to us some time ago complimenting our first 'Monthly' issue of 'Model Cars' (February). He also went on to detail the activities of the Southland R/C Car Club in New Zealand.

"I raced Slot cars a few years ago and remember the expense incurred in trying to keep up with the technology and the top racers. It seems to me that we must cater more for the ordinary R/C Clubman (there should be a class for him in World Champs). Apart from Off-Road racing being fun it is a great driver equaliser and consequently is gaining in popularity faster than circuit cars. (In our club anyway).

Some news for Mike Chilvers: Our club has started a stock car project, at this stage we are scratch-building cars but kits will be imported in the future. More news and photos soon.

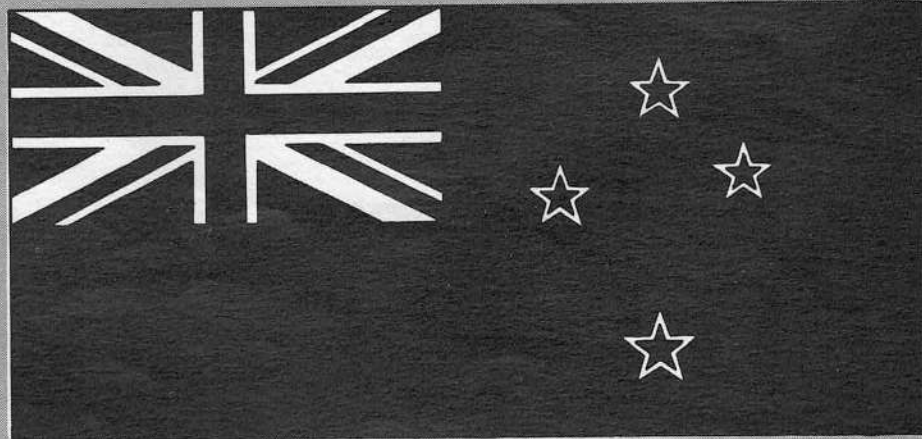
Recently we have been toying with the idea of fitting I.C. engines into 1/12th scale circuit and stock cars.

The reasons for doing this are: Longer race times, more economic than 1/8th, the smaller size suits the area we have to race (this includes an indoor venue with a smooth bitumen surface). More realistic sight and sound.

I am the race co-ordinator for the 'Southland R/C Car Club' which has an increasing membership of approximately 45 and still with a strong family activities group. A lot of our club days involve trials and driving skills as well as racing.

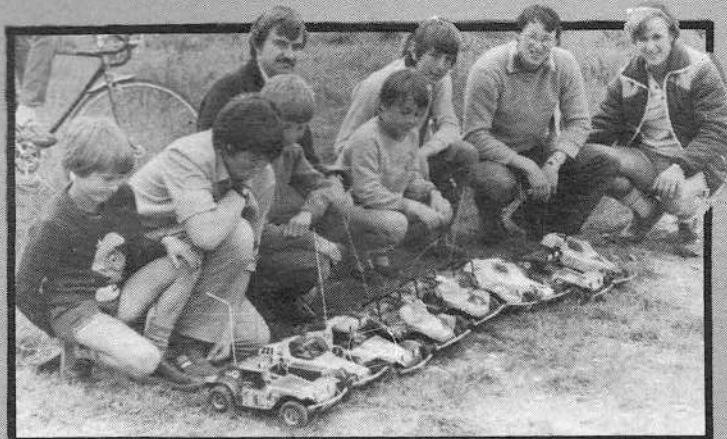
Off-Road is taking over in popularity and no new 1/12th circuit cars have been seen for some time.

Some of us were involved in slot car racing years ago and as the more competitive bought modified parts and became faster others tried to stay competitive. Some were sponsored and won consistently, others lost heart and gave up. Eventually slot racing lost popularity. We are trying to prevent this happening with R/C racing and have the experts competing among





Left: a good family interest is shown in the Southland Club activities. Father/son team, Todd and John McDonald prepare to race and the Morris family watch their car on the track. Right: drivers line-up with their Tamiya cars.



themselves. We try to always have trophies for juniors and beginners. From what we have read of the World Champs the sooner the professionals and sponsored works drivers have their own races the better and the humble clubman allowed to compete in these race meetings the better also.

The Off-Road group (over 26 last count) is growing steadily and almost taken over all activity. As cars are modified, the trend is for more dirt track style of racing with more smoother circuits than the slower Off-Road ruff-stuff. Off-Road racing classes are as follows:

1/10th scale: Standard - out-of-the-box kits, divided into 380 or 540 motors.

Modified: 6 cells, modified motors and diffs allowed.

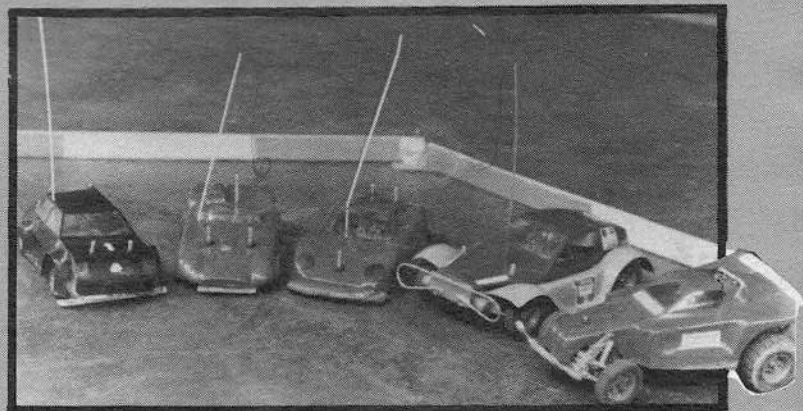
Open Class: any number of cells, no restrictions, anything allowed within the realms of 1/10 scale racing.

It works with our club with no-one winning consistently.



Left: the Southland Club Off-Road circuit is on a farm near Invercargil. The tame bull is a family pet and a regular spectator. Richard Burtenshaw and Robin Kerr put in some practice.

Right: four scratchbuilt cars line-up at the indoor racing venue with a Rough Rider at right, sporting a hand-formed bodyshell.



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1.
The 1984 World 1/12 Championships were held at the Congress Hallen, Herning in Denmark. The top drivers from all over the world were invited to attend this, the most prestigious event that can be held for 1/12th racers. The Hall was large, with a well laid out track on needlefelt carpet. Track markings were of unforgiving timber, with occasional bot-dots which unfortunately were grey, same colour as the carpet.

Lap counting was fully automatic, each car having a small transmitter fitted before each race, which sent a signal via a receiving lead taped to the track to a computer. Times were 100 per cent accurate to 1/100 second. Two of these systems were in use to make doubly sure of no mistakes. One system was supplied by IFMAR, the world governing body, the other by the Danish Association. The cost of this unit is £1,200-1,500, and is essential for a meeting of this importance.

Before the main events started, a 'warm-up' event was held. This was a two-day 'modified' event with each driver having four qualifying heats, then two semi-finals and the final. This was won by Andy Dobson in a convincing manner. Other British drivers in the top ten were Tony Wells, Les Pipe, Glyn Peglar and myself.

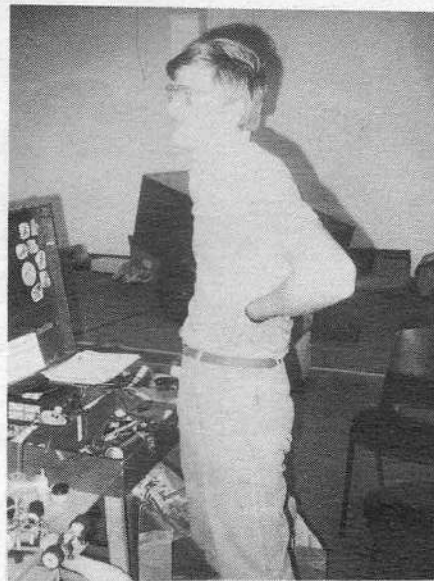
This event was followed by three whole days of practise. During this period the most notable

2.
experiments were carried out in the Associated pits. Cars were re-designed, re-built, re-designed again and changed in many ways. One of the most dramatic alterations was to shorten the wheelbase in an effort to make the car turn more tightly. This was initially done by re-locating the rear screws of the front blocks on the sprung front end. By turning the rear of the rear of the steering blocks inwards the cars were transformed from the stable, easy to drive car we all know into a tight turning racer which could be turned on a sixpence. Almost all the Associated drivers built cars to this specification only to find the wheelbase was too short, making the car illegal. Back to square one! The next move was to lower the rear axle by using Parma nylon cams in the rear blocks. This allows the use of much smaller rear tyres which appears to make the car handle considerably better on tight turns with the power on. Very few Associated cars used the new independent front end, most drivers discarding it in favour of the old sprung front end coupled with the very old steering blocks from the '12E,' which gives shorter wheel base.

This method has been used by Nigel Hale for the last

1/12th World Championship

Bill Jones reports 'from the notepad' on the series held at Herning, Denmark, August 10-18



Left: Buddy Bartos of team Parma just after having won the Standard Class World Championship final. Above: Jimmy Davis qualified for both semi-finals, but was unable to take his Associated car any further towards the Standard and Modified Championship finals.

British drivers

The British team consisted of Nigel Hale, Jimmy Davis, Wayne Davis, Mickey Booth, Tony Wells, Fraser Smart, Bill Jones, Andy Dobson, Les Pipe, Phil Davis, Glyn Peglar, Phil Olsen and Chris Arnold. None of the team could make both main finals and only Nigel, Mickey, Andy and Chris made either of the 'A' Mains. Fortunately they all drove well in the A Main Finals, finishing second, third, second and eighth respectively. Of the rest of the team, Tony Wells, Jimmy Davis and Glyn Peglar all qualified for the

3.

two years. In the Schumacher pits most attention was on which motors to use. Andy Dobson started with Trinitys, then to the new 29 MGs, then to the new Trinitys sent over for this meeting. None of these motors was really competitive and he finally settled for Parma 'Ferraris' loaned to him by Gerry Goldberg of Helger Racing. So too did Phil Davies and Glyn Peglar. Les Pipe started out with a motor he'd built himself, but this was excluded from the meeting, not being legal under IFMAR rules.

The Japanese contingent caused some interest with their cars which are considered uncompetitive in the UK, these being the Kyosho four-wheel drive and the AYK with normal rear wheel drive. Their biggest problem seemed to be battery duration for eight minutes, somethin which they managed to do by the

4.

end of the two weeks, when their top driver, Junichi Koma, qualified ninth in the Modified event. The Parma camp seemed quiet and confident, as Gerry Goldberg took on the role of camp cook, frying bacon and makin coffee on portable gas stoves in their pit area. Their confidence was proved well-founded by Bud Bartos' superb performances in both Stock and Modified events.

The Italian contingent did not seem as confident as usual at big international events with their top man, Marco de Marchi, not as competitive with his Schumacher car as he was with his Associated in the past. Apparently the car has not been overhauled from new, and this is essential with the 'C' Car. New 'O' rings, new rear 'T' plate and new springs at regular intervals must be fitted to keep the car in tip-top condition.

The two top Danes, Finn Gjersoe and Henrik Carstens, had totally different stories to tell. The 'Great Dane' Finn had a superb World Championships, finishing eighth and third, while Henrik crashed out in both events. The 'Crazy Cabbie' - Erik Hansen - finished where expected.

The organisation was superb, with ample pit space, excellent PA system and friendly faces everywhere. The people who put in so much effort for this event should be congratulated for their hard work. First-class commentaries were done by Americans Mike Toland and the deep-voiced, Frank 'Knock-'em-dead' Killam.

The two big bosses of Associated, Gene Hustings and Roger Curtis, were at the meeting with their wives. Both men are very approachable, willing to offer help and advice when asked. The famous Mike Reedy was, of course, in attendance, working on motors and batteries all day every day.

Championships

Second World Championships

2.

semi-finals in both events. Probably the most disappointed team member was the reigning European Champion, Phil Olsen, who admitted to being very upset at missing out in both Stock and Modified.

The British team stayed in different places in and around Herning, not even travelling together on the same day. The Schumacher team, plus Tony Wells, all stayed at a local youth hostel, where Anne Pipe became head chef. She also made some super coffee at the hall, which was always offered to ALL the British drivers. Mickey Booth and Phil

3.

Olsen stayed at the nearby motel, as did all the American and Japanese drivers. Chris Arnold and Jean, after a couple of rough nights in a tent, moved to a hotel opposite the hall. Fraser Smart and his parents took their caravan, which most of us have seen around our own national circuit. Nigel Hale, Jimmy Davis, Wayne Davis and myself shared a large tent on a local campsite and roughed it for the two weeks, with no complaints about the noise, smell or lewd comments which were regularly emitted from beneath the canvas.



Right: Bud Bartos' Parma car sits next to the Standard Class trophy. The modified trophy is as big, both finalists also received a wreath, Silver Salver and a Magnum of Champagne.

Racing Report

Standard Motors ... ?

The Stock motors were brand new Igorashi '05s' unlabelled. All were zapped beforehand in an attempt to equalise each driver's chances. Every racer could draw two motors with the option of buying a third, which almost everyone did. On the track, these motors were far from equal, ranging from the near modified performance of Buddy Bartos' to the pathetic trio of 'dogs' handed to poor Chris Arnold, who still managed to drive his way into the 'D' final. Various methods were tried in an attempt to make these motors go faster. Thirty second water dips were popular, as was running the motor in reverse immersed in water. Many types of additives were

applied, from 'Mr. Cool' to 'Reedy Spray.' In the end, if you had a slow motor, you were out. If you had a flyer you only had to drive well to succeed. This idea of drawing motors from a box has been suggested several times for our own National meetings, and has been tried with some success at the Stafford League. However, after seeing it in practice at a big meeting I cannot see its worth, as the luck of the draw plays as big a part in winning as does skilful driving. I say this even though my own motor was pretty rapid, much quicker than some drivers who would normally qualify above me although, in this event could not compete equally. □

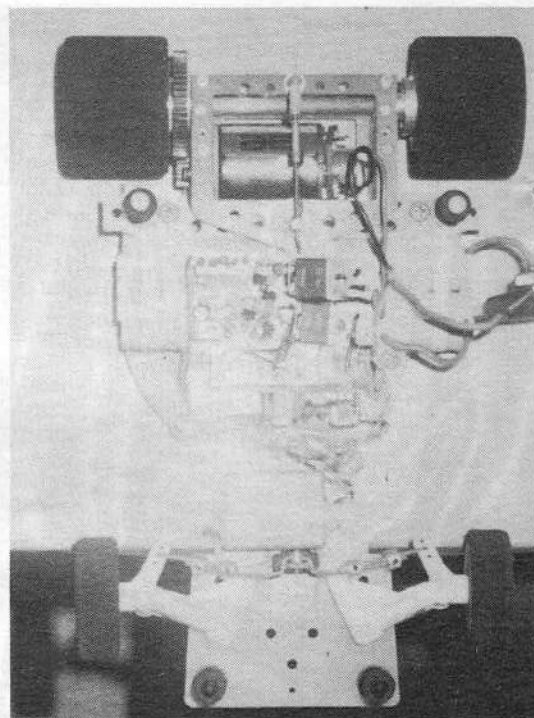
Modified Motors

Many different brands of modified motors were on display, Reedys, Trinitys, Parmas, Kyoshos, MGs etc. On the track there were more Reedy/Yokomos than any other, mainly because of the very large number of Associated cars in use plus the presence of Mike Reedy himself. The next most successful motor was the Parma 'Ferrari,' which appeared consistently fast

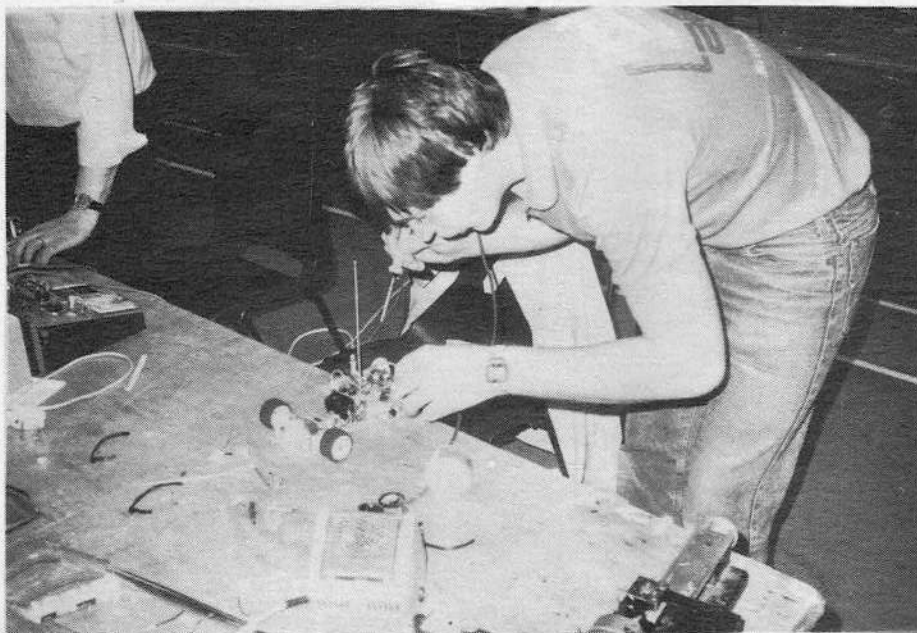
whoever was driving. Finn Gjersoe made good use of his Trinitys, but Andy Dobson rejected his in favour of the Parma. I could find no-one able to make an MG go quickly, though several top drivers tried. The fastest motors on display were the Reedy's of Lavacott, Kiel, Clausen and, of course, Niesinger, followed closely by the Parma's of Bartos, Dobson and Chris Arnold, and the Trinity of Gjersoe. □

Transmitters

Before the heats started, every transmitter had to be checked by race control. Here we had Andy Dobson, Glyn Peglar, Les Pipe, and Phil Olson being told that their equipment was not accurate enough for this type of event. After much discussion and a series of telephone calls back to England, George Land was flown over with new Futaba transmitters for these drivers. It was cheaper this way than to buy them in Denmark where their retail cost is much higher. Only Phil Olson appeared to have problems coping with a strange transmitter and perhaps this goes a little way to explaining his lower than expected results. □



Above: the Associated 'outlaw' which proved highly successful on the track but illegal on the scrutineers' table. The front blocks have been pivoted inwards to shorten the wheelbase for better handling. Unfortunately the wheelbase was too short.



Left: Nigel Hale, Associated team driver lunges at his car with a hot soldering iron. Nigel came second in the standard class final but failed to make it past the semi's in Modified.

Tyres and additives

The most widely used tyres were Associated 'Greens' and Parma 'Mediums.' Tyre additives ranged from WD40 through Wintergreen, Trinity and 'Tracktite.' The most popular by far, and overall the most successful, was 'Tracktite.' Those of us who took supplies for sale sold out in the first day or so. The large American contingent were especially keen to lay their hands on as much as they could. It's good to see people from all over the world clamouring for a British product which is available at low cost everywhere.

Right: prototype all-in-one charger and motor checker currently being tested by Mike Reedy of Associated with a possible view to production in America. Below Left: the 'Great Dane' Finn Gjersoe who gave the home crowd something to cheer about as he came 8th and 3rd in Standard and Modified respectively. Finn now drives a Schumacher 'C Car'.



Speed controllers

A lot of interest was shown in the 'Laser Pulse Charger' by the Americans. It's almost certain that these excellent units will shortly be on sale in the States under the Reedy/Associated banner.

Speed control was very varied, with the well-known Demon and Laser controllers in the minority, but still successful. Many racers used resistors with no reverse, which was not needed on the circuit. Also showing up for the first time in large numbers were the all-transistor type controllers from Novak, Delta, CS and others. These use no relays, have no reverse and are very light. They are also extremely

expensive. On circuits which are big, and if you can drive well enough not to need reverse, they do give a small advantage. They are also supposed to be more reliable than controllers that use relays, however, my own Novak burnt out twice in 18 races. If anyone fancies buying one, it might pay to contact either Glyn Peglar or Nick Adams, who are both able to build such a unit at a lower price than an imported item to special order. Personally, I'm going back to my Demons and Lasers. Nigel Hale, Jimmy and Wayne Davis all used resistors for this meeting only, but are reverting to their Demons for British racing.



Veery interesting, but ...

Some top American drivers found a use for the Danish 25 ore coin, which is about $\frac{5}{8}$ in. in diameter with a $\frac{1}{4}$ in. hole in the middle - it looks like a washer. They glued this coin to the inside edge of their pinions to act as a flywheel for more top end speed. Whether it works or not is debatable, personally I think it was a psyche-out with the advantage of bringing their cars up to weight.

On the subject of psyche-outs, there were several

doing the rounds. One was for a driver's mate to stand by him during practice holding a stopwatch and calling out his individual lap times. Average lap times for top drivers were in the 14.5 to 15 seconds range. One non-driving sponsor was regularly to be heard calling 13.8 to his drivers as they went round, in an attempt to demoralise other drivers. He was still calling this figure when the automatic lap counter was used and printouts were displayed in the pit area showing the times much the same as everyone else's.

Qualifying

In each event, Stock and Modified, each driver competed in six qualifying heats. The top four positions automatically progressed to the Main 'A' final, with the next 16 progressing to two semis. In the semis the winner of each went straight to the final plus the next four fastest from both semis, thus making a ten car final.

Standard class results

Stock semis

In the Stock event the top four qualifiers were Clausen, Bartos, Nigel Hale and Ralph Burch Jnr.

In the first semi Mike Lavacott led from the start and had an easy win. Andy Dobson jump started, Les Pipe's batteries went flat before the end, Jimmy Davis held third but his time was not good enough for the final.

In the second semi Christian Kiel had a similar run to Lavacott and won easily. Terry Rott had a one lap penalty for jump starting.

Stock final

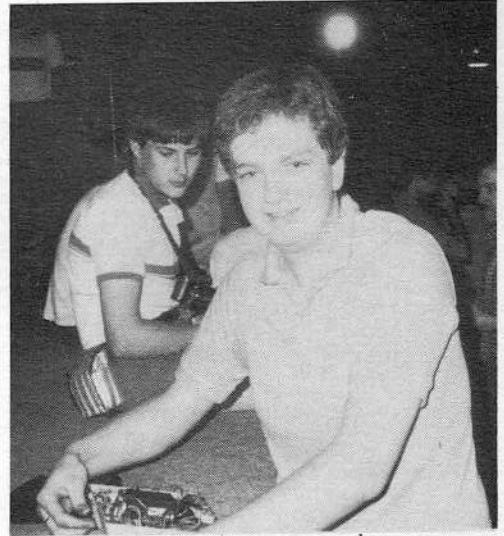
At 4pm on Tuesday the tension could be felt as the ten finalists were announced individually to great applause and blinding camera flashes. After a long wait for the photo call of both drivers and cars, the track was cleared and the cars were lined up on the grid. As the lights changed from red to green, all ten cars charged up the straight to the first corner in one group. The inevitable pile-up on the first turn took out seven cars, leaving Buddy Bartos in the lead, followed by Nigel Hale and Mickey Booth. Bartos, with the fastest motor, looked as if he was clear, but he blew it and dropped to third behind the two English racers. While this was happening, it was announced that Christian Kiel had been given a ten second penalty for jump starting. At the halfway point it was still Nigel Hale in front, but Bartos had passed Mickey Booth to take second, and had closed right up on Nigel. As they came through the infield,

Buddy made his move. As Nigel swept into a tight right-hander, Bartos dived down the inside and 'T-boned' him off the track. The boos and jeers from the packed auditorium were deafening as Buddy did not wait, but shot off with a clear lead. Nigel recovered in time to stay in front of Mickey Booth, but was now a long way down on the new leader. A lap later Bartos touched a dot and rolled his car on the entrance to the main straight. Although this error only cost him two seconds at the most, it allowed Nigel to close up a little. For the next minute or so the gap between first and second narrowed as Nigel gradually made up ground, but it was obvious that, unless Buddy made another mistake, or his cells dumped, there was no way that he could be caught. At the eight minute mark the first three positions were the same, with Buddy Bartos being acclaimed as the new Stock Class World Champion, Nigel Hale second and Mickey Booth third. The pre-race favourite and reigning World Champ, Kent Clausen, could not climb higher than sixth position. It seemed a great pity that Bartos' victory was marred by one very unfortunate incident during a close and exciting race, as he drove very well for the rest of this final, and certainly had the ideal motor for the job, and a car that handled perfectly. As the results chart shows, the top race was dominated by American built cars, with seven Associated, one Parma, one Delta and the sole British built model of Finn Gjersoe's Schumacher 'C'-Car.

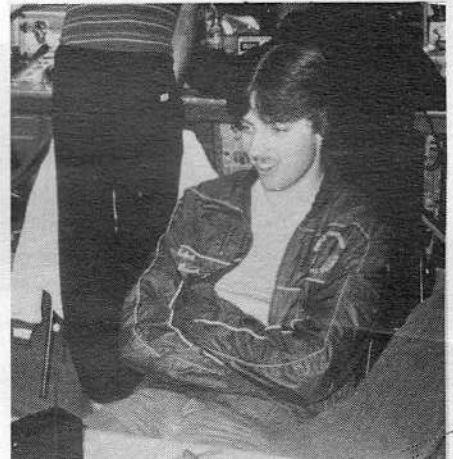
Stock Final result

- | Position/Name |
|------------------|
| 1. B. Bartos |
| 2. N. Hale |
| 3. M. Booth |
| 4. R. Burgh Jnr. |
| 5. E. Zagati |
| 6. K. Clausen |
| 7. M. Lavacott |
| 8. F. Gjersoe |
| 9. C. Kiel |
| 10. R. Howart |

Nationality	Car	Laps
USA	Parma	32 + 03.3
USA	Associated	32 + 06.5
GB	Associated	32 + 10.9
GB	Associated	32 + 13.3
USA	Associated	31 + 02.1
Italy	Delta	31 + 05.8
USA	Associated	31 + 07.7
USA	Associated	31 + 11.4
USA	Schumacher	31 + 23.7
Denmark	Associated	26 + 08.1
Germany	Associated	
USA	Associated	



Above: Micky Booth, unlucky in the Euro-Champs ended up 3rd in the Standard Class World Final and only six seconds behind the eventual winner. Below: Ralph Burch Jnr, yet another Associated driver has now proven his ability in both 1/8th and 1/12th racing with a result in both finals.

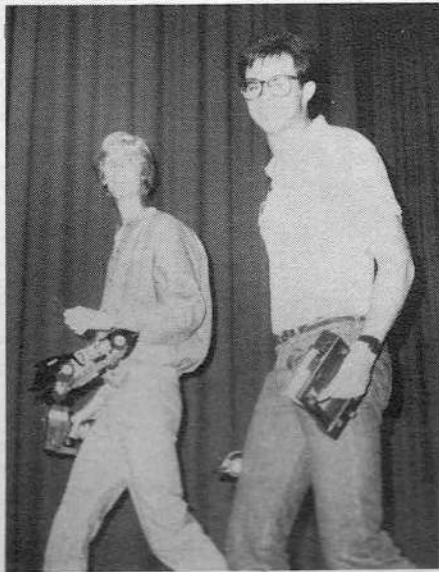


Aftermath

During the evening, after the racing had finished, a banquet was held in the hall where the magnificent trophies were presented. The food was pretty rough, as was the wine, but a good and noisy time was had by all the drivers. The usual good fight was carried out, with no winners. Then almost everyone went off to a disco at the Ritz, just up the road, where the unexpected sight of Glyn Peglar doing some amazing dancing, which included carrying assorted females off to dark corners, surprised even those of us who know him very well.



Above: the young German super ace Christian Kiel, contemplates his Associated as he waits for the start of the final.



Above: the two Mikes, Lavacott left and Toland right, both from the States both Associated drivers and both reasonably successful at these Championships.

Conclusion

Upon reflection, this has to be the most efficiently organised meeting I've ever attended, as of course a World Championship should be. The automatic lap counter must surely be purchased by the BRCA for our own National rounds, as it immediately stops all arguments and lets drivers get on with their racing. Congratulations must go to the two champions, Bartos and Niesinger, who carry the titles for two years until the next Championships are held in Japan. There was much talk about the Japanese event, where it is almost certain that Stock will be dropped, and a single World Championship will be held for Modified motors only, thus eliminating the luck factor involved with taking motors from a communal box and hoping for a good one. □

Modified semis

In Modified the top four straight through to the final were Keil, Gjersoe, Lavacott and Mike Toland.

In Semi-1 Andy Dobson had one of his familiar runs and led all the way with Niesinger second and Klier third. Jimmy Davis, Phil Davies and Glyn Peglar all failed to qualify from this semi.

In Semi-2 Terry Rott repeated his performance in the stock event and incurred a one lap penalty for jump starting. Clausen won this race from Chris Arnold and Zagatti. From Britain, Nigel Hale, Tony Wells and Mickey Booth fell at this hurdle.

Modified Final

As the drivers were announced for the last race of this World Championship the hall buzzed with excitement, as the Modified final is regarded as the 'Big One.' After the usual routine of the photos being clicked off by the hundred, the ten drivers were ordered to turn on their cars for the start. Kent Clausen immediately made his now familiar call of 'interference,' as his Novak receiver once again seemed to pick up signals from transmitters other than his own. After several minutes, and several crystal changes, the problem was solved, however, by now the tyres on all cars were too dry and a short break was ordered. The cars finally came to the line 15 minutes later.

As the race started, the first bend melée left Tony

Niesinger in front followed by Christian Kiel, Kent Clausen and Bud Bartos. On lap two Kiel blew it and Finn Gjersoe took Bartos. By lap four Andy Dobson had moved up to sixth and was charging. At the halfway point it was still Niesinger in front, driving a near faultless race with his fast and superbly handling car. Clausen was still second, Gjersoe third and Dobson up to fourth. Andy soon took third from Finn and these placings stayed that way until the final 1½ minutes, when Clausen dropped to fourth and then fifth at the end. Bartos moved into fourth, proving that his success in the Stock Motor event was no fluke. At the end Tony Niesinger crossed the line to deafening cheers as the Americans celebrated yet another World Champion. He certainly deserved his win on the day, having looked very impressive in his semi-final in the morning, and then making just one driving error in the main final. Although his driving looked cool during the race, he later stated that nerves had him shaking throughout, and no wonder, considering that he was in front for the full eight minutes.

The glory was shared a little more evenly among the manufacturers in this final, with five Associateds, three Schumachers and two Parmas. Motor-wise it was all American with five Reedy/Associateds, three Parmas and two Trinities. □

Modified Final results

Position/Name	Nationality	Cars	Motor	Laps
1. A. Niesinger	USA	Associated	Reedy/Associated	33 + 5.0
2. A. Dobson	GB	Schumacher	Parma	33 + 8.1
3. F. Gjersoe	Denmark	Schumacher	Trinity	33 + 8.5
4. R. Burch Jnr.	USA	Parma	Parma	33 + 10.8
5. K. Clausen	USA	Associated	Reedy/Associated	33 + 11.8
6. C. Kiel	Germany	Associated	Reedy/Associated	33 + 17.4
7. M. Lavacott	USA	Associated	Reedy/Associated	32 + 0.8
8. C. Arnold	USA	Associated	Parma	32 + 2.7
9. M. Toland	GB	Associated	Reedy/Associated	32 + 13.1
10. J. Klier	USA	Schumacher	Trinity	32 + 14.6

Dry lubrication

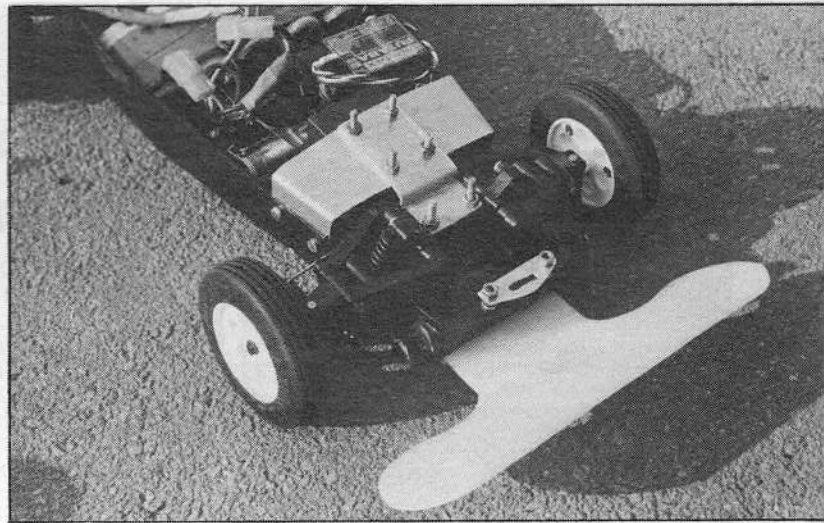
One of the problems encountered with all types of Off-Road buggies is that of lubrication. If you decide to apply just any old oil to exposed drive parts the all-pervading dust tends to adhere to the oil turning it into a very effective grinding paste. On the other hand, use the car with no form of lubricant at all and the wear rate can be terrifying!

A very good answer in the form of a Rocol product is available that gets over the problems. This aerosol contains a highly evaporative solvent that carries a graphite type lubricant. Once the solvent evaporates a thin dry coating is left on the parts which is very effective. This is an industrial product that may be a little difficult to find in normal model shops (and it's quite expensive too) but should be found in good toolshops.

Half-century for 1/8th Off-Road

The BRCA 1/8th scale Off-Road national meeting held at Remote World, Goring-on-Thames, on the 12th August attracted an entry of 52, the magic Half Century beaten for the first time. After some three years of plugging the sport it is personally gratifying to see the big increase in numbers at race meetings during the course of this season. I don't think that I.C. power racing will ever have the large entries that the electric classes attract, it is just that much more expensive and technically more difficult to do than the electrics (and I hasten to add I

Right: one of the Holiday Buggy conversions currently doing the rounds at the Milton Keynes Model Car Club. This one belonging to John Cundell. The metal cross bracket strengthens the chassis where extensive cut-outs have been made to fit the 'Apache' front end.

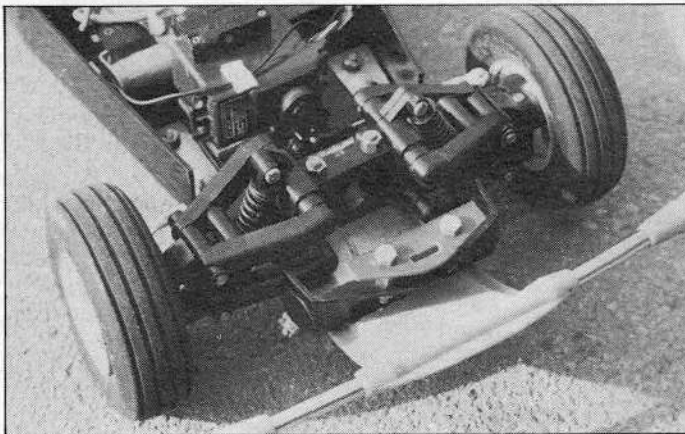


Holiday Buggy Update

A simple conversion for the popular 'Holiday Buggy' has been dreamt up by Richard Brawn and Barry Capp of the Milton Keynes Model Society car section. Basically it involves bolting the front suspension system of the Mardave 'Apache' onto the existing 'H/B' chassis. Quite a lot of trimming of the chassis has to be done and to avoid a very weak unit a metal brace has to be incorporated.



Left: a much neater looking example of the modification is shown here on Barry Capp's 'Holiday Buggy.' The metal brace is located along the bottom of the chassis. The bodyshell tongue slot has to be raised up so that the bodyshell will clear. The cost of the 'Apache' front-end is approximately £9.00.



Off-Road Buggies

News and views on the Off-Road racing scene

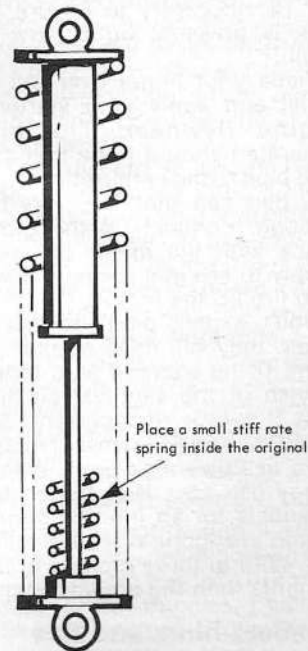
refer to the engine side of the sport, not the driving or even the preparation). Although I have missed out on one or two of the recent meetings, I did meet both Ted Longshaw and Keith Plested at the July Remote World Club meeting where they both appeared to be enjoying the racing immensely. Ted is, of course, Life President of EFRA (European Federation of Radio Autos) and Keith the *PB Racing* boss and importer of the *Garbo 'Gepard'* Off-Road racer and both could have been thought to have simply been promoting *PB Products*. But no, they have subsequently turned up at a further three meetings and really do seem to be enjoying themselves. Welcome chaps, it's really great to have you with us and I hope that your interest will make one or two of the more scornful of the circuit racing boys see that it is a specialism in its own right

be on the downward stroke. This conclusion was arrived at by considering production damper systems on motor cycles. On just about every single modern telescopic fork produced there is a mechanical provision for less damping to be used on compression than on extension. The technical explanation for this is that the spring action is greatly impaired by upward damping. However, slight upward damping is advantageous as it does prevent bottoming out.

If only downward stroke damping is used then bottoming out can be prevented by multiple rate springing. This can be achieved as shown in Fig. 1.

Alan's (I hope it is Alan!) comments are contradicted by **Chris Holliday** writing from Leeds (and I must say, my own views tend to follow Chris' line of thought). He says:

Fig. 1



Left: revised damping system on the 'Holiday Buggy' as per the 'Model Cars' modification articles (MC August/September 1982 and February/March 1983). Kyosho 'Scorpion' adjustable coil spring shock absorbers have been used here to replace the GRP leaf spring.

out damping on the return stroke there will be some bounce as the spring extends in the same way as in the undamped case. The effect will be reduced though as the spring is not storing as much energy remember.

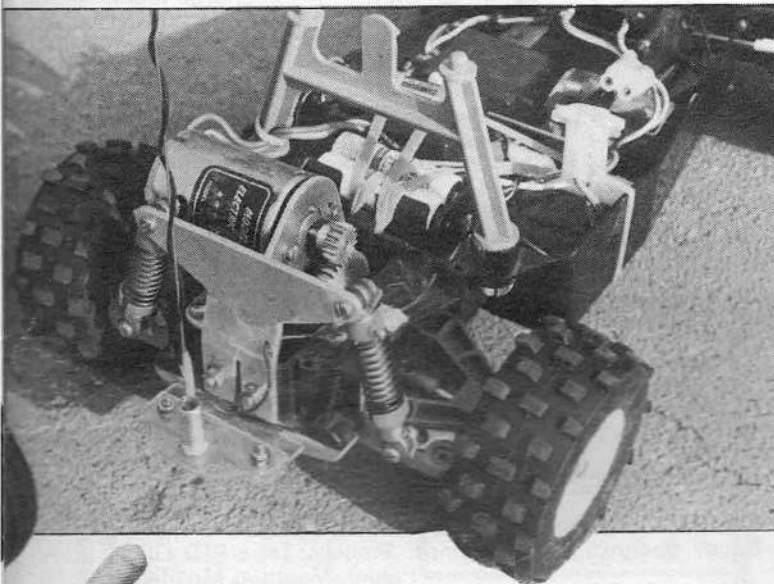
So, damping is needed on the return stroke too, but not as much as on the compression stroke since less energy has to be dissipated.

By my reasoning, an asymmetric damper is ideal, with the greater effect on the compression stroke than on the return. I suspect that one way dampers on some kits may well provide this effect since they will not be fully one way.

Any clearer, folks? Perhaps we ought to remember that the suspension systems on full-size passenger carrying vehicles are designed with the comfort of passengers in mind and that there is actually someone sitting inside whilst it is moving able to give proper feedback to the designer. I hate to think what it would be like to be riding in some of the buggies I have seen on the track! My advice to you is: Try out the ideas by all means, but don't be surprised if you can't tell the difference, and only believe in better racing times or improved driveability.'

Engine starting and batteries

Despite regular publication of bits and pieces concerning engine starting, the biggest hurdle to getting an I.C. powered buggy on the track is still getting the engine to run. One problem that seems to recur is actually getting fuel from the tank to the carburettor. If you have not fitted a pressure nipple to your silencer for fuel tank pressurisation



and some of the established Off-Road drivers are not half bad!

One way damping

Several readers spotted my 'deliberate' mistake in the September issue of 'Model Cars' where I commented on one way dampers seeming to have little effect when inverted. Of course they were absolutely correct, the dampers are being compressed as the suspension moves up whichever way up the dampers are fitted! Prize must go to Russel Buckner who was first to tell me, only because he happened to be in my office as the editorial copies were delivered!

Some correspondence has been received including the following letter from **A. J. Lerner**. He writes:

'Your comments on one way dampers prompted me to sit down, think, and consult reference books, something I have not done since leaving school!

My conclusion is that with single acting dampers the damping should

'As every buggy driver will have discovered, undamped suspension is a bad thing and very noticeable. Damping is needed. A damper dissipates energy which has been imparted to the wheel to which it is connected by say a bump. Since we are thinking in terms of a suspension unit, a spring is also present. When the wheel hits a bump, the spring is compressed. If no damping is present, the spring stores all the energy resulting from the bump (if it is not stiff enough then the suspension will bottom out and the remaining energy will be absorbed by the car). The spring will then extend releasing the stored energy. Unfortunately this causes the 'kangaroo' effect.

If a damper is present this will dissipate some of the energy and the spring will compress less and be storing less energy. Thus with correct choice of damping quality (hard, soft, etc.) and spring, the wheel movement will be controlled on the compression stroke. However, with-

Rough Riders

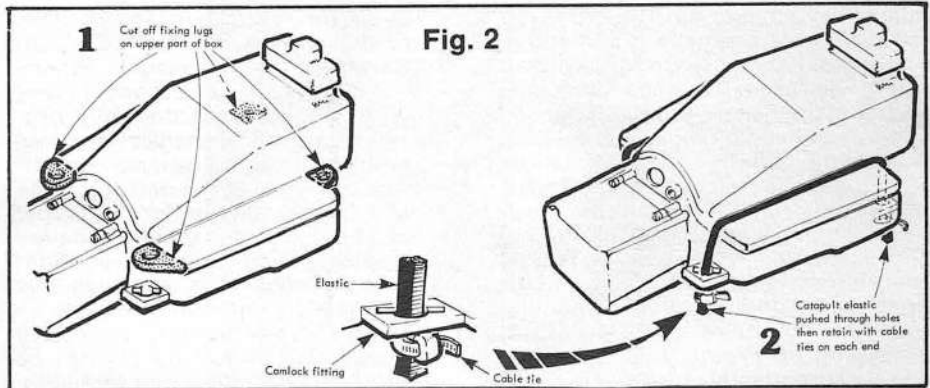
ation then do so right away. Of course it will be necessary to ensure that the tank is pressure tight! Now we can begin.

Place your finger over the exhaust outlet and apply your starter to the engine flywheel. The pressure generated should force fuel down the feed pipe to the carburettor. As soon as you can see that fuel has travelled through, connect up the glow plug, check with the meter on your glow supply to see that the plug is working, then fire up the motor.

Don't expect plugs to last forever either, they will need regular replacement. If the element plug looks at all greyish or the slightest bit distorted, then it needs replacement. My own experience has shown that *Rossi, OPS, Enya* or *Powermax* plugs stand up to buggy use best. Remember the three essentials for an internal combustion engine are ignition, compression and fuel. With all three present in the right amounts then the engine ought to go.

Readers hints and tips

After a lull in the flood of readers' hints and tips for buggy modifications, the ground is once again fertile with more than we can currently handle. Please don't be put off though, we will find space for them all in time. This month we start off with a very simple



idea from **Paul Barrett** for holding the radio crate lid onto a *Tamiya* buggy. Paul's idea is as follows:

'This simple modification uses two pieces of catapult elastic available from good fishing tackle shops), this replaces the original Tamiya camlock devices with something much simpler and quicker to operate.

First remove the top camlock fittings from the lid of the crate and file to the shape shown in Fig. 2. Now take a 60mm length of the elastic and feed it through the holes in the bottom part of the crate and secure it with tie-wraps pulled tight around the end. Fit a similar elastic to both sides and a quick release top will be

the result.'

Problem No. 2 concerns charging both glow driver and 12volt starter batteries. It is very unwise to simply connect such batteries up to a trickle charger designed for charging the family car battery. It will charge them, yes, but a 6-8 ampere hour starter battery or a 2 ampere hour glow battery are likely, nay certain, to be destroyed very quickly.

Either purchase a purpose designed charger or fit a dropping resistor into the circuit to bring the charge rate down. If you are using a trickle charger, a resistor of about 1ohm will do for the 12volt battery and if the charger is capable of a 6volt output setting the

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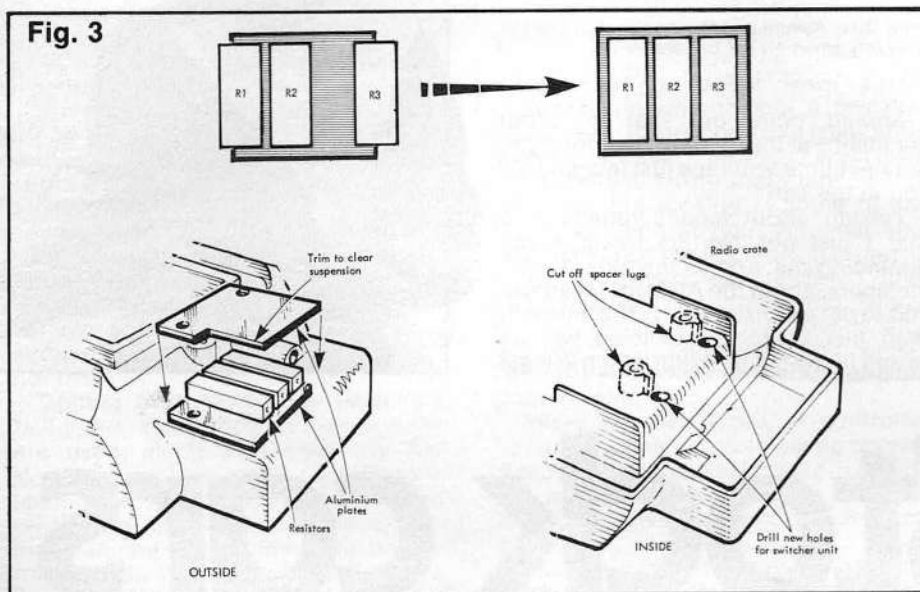
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Fig. 3



same for the glow battery. The Radio Spares 25watt style of resistor should be used and it needs to be mounted on a heatsink (which will get quite hot).

Idea No. 2 this month relates to the Kyosho 'Scorpion' speed controller which is designed to work with the standard kit motor, but may not suit the modified motors that many people wish to fit. **Mark Hepburn** has been

using a *Demon/Yokomo* motor and feels that his easy to do mod will offer significant benefit over the standard unit.

*'I have fitted one of the cheapest resistor speed controllers on the market, the **Mardave** 'Apache' type, with distinct performance benefit. The configuration of the unit must be changed to conform with Fig. 3. You*

will need a soldering iron.

These resistors can then be bolted; sandwiched between two aluminium plates (the lower of which must be trimmed a bit so that it does not catch on the rear suspension) to the bottom of the radio box near the exit point for the wires.

To mount the circuit board, the plastic stubs inside the radio crate that supported the original controller must be removed and two new holes drilled further towards the front of the crate. The 'Apache' board can then be mounted spaced out with small lengths of aluminium tube.

I found that the large soft plastic disc on the top of the speed controller melted under race conditions so replaced this with the top of the 'Scorpion' unit."

1985 Euro Buggy meeting

Since mentioning that I would like to hear from clubs interested in hosting a European Championship or British Grand Prix for 1/10th buggies, I have had written applications from two clubs and verbal enquiries from three more. I look as though the requests will have to go to the vote at the BRCA Off-Road Conference. Anyway, it looks certain that there will be an Off-Road International next year and a good chance of the Euro Champs as well. □

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Taking Stock

TRAVELLING AROUND the clubs you get to hear the odd moan about some aspect of the sport that the speaker feels has let him down. It may be something to do with the organisation, or something that has failed on his car but, if you listen carefully, it is never 'him'. We are all guilty of doing this on occasions, but I wonder how many of us think about our moan later, and as a result put it all into perspective. Things do break on stockcars — they do on mine anyway! But how often is it our fault rather than the components' fault? First of all there should be the

Right: Andy Fulford and Mardave chassis looking especially smart for the camera.

I should point out that he often complains at the treatment he does get, but next time you race just imagine it's you in the car!

Talking about moans reminds me that I just got 'Nerfers News' today reminding me, and all the other RSCA members, about the AGM in December and to get proposals in. By the time you read this I expect members will be voting in the postal ballot which at least



R/C Stock cars

Mike Chilvers details the 1/8th and 1/12th oval racing scene

careful preparation of the car prior to its arrival at the track. When all the parts should be checked for wear, being replaced if necessary, and tightened with suitable adjustment. Then there is the pre-race check between the heats. Find the time to do this and some of the moans will never take place.

Another important aspect is the way the car is driven on the track. Some drivers do not seem to realise they are driving — *I emphasise driving* — a car, and not propelling a guided missile. Chassis' will bend if crashed into the track boards at 40mph or cartwheeled down the track. They will bend if involved in a head on with some idiot going the wrong way round the oval or whalloped in the side by someone 'T-boning' you. The problem in most cases is not the car, but the driver(s) involved. I always try to think that there is a little 1/8th scale driver sitting in my car — a little me — who likes to feel all four wheels on the track, and wants to avoid contact with the outer barrier or too solid a contact with the opposition.

gives everyone the chance to vote. Wonder what we'll be deciding on this year? I'll let you know in a later issue.

Driver Profile — Andy Fulford — RSCA No. 208

I can not really remember when Andy Fulford first came to my notice, but I can remember the name being mentioned by Dave Grocock when he was the Leicester Secretary. Probably during one of our frequent phone conversations when he was talking about drivers who were going well, sometime in '82. Since then I've seen him several times in the company of Steve Talbot and Cliff Emms, and *always* going well.

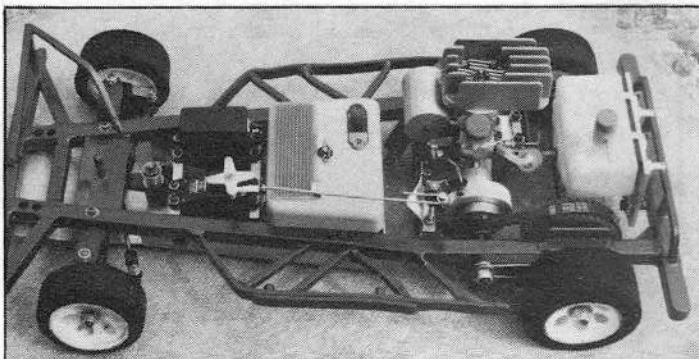
Andy is a 17-year-old apprentice at Jaguar cars, presently attending full-time college prior to becoming an experimental bodymaker. He still claims to be single, and comes from Chapelfields, Coventry. He is a member of both Leicester and Coventry Clubs, but says that Coventry is his favourite track.

His interest in racing began when one of his metalwork projects at school



was to build a chassis. This was linked with a visit to the Coventry Model Car Club which resulted in him becoming a member and starting racing in 1981. For a short time his car was powered by an *Enya* '19BB', and then for '82 a very good *Veco* '19'. At the start of the '83 season an *Enya* '19X' was used, but he was disappointed with the performance of this and so changed to a *Super Tigre* 'X21' mid season. A change for the better he says.

Like many drivers Andy always seems to build a new car at the end of each season ready for the new year. This season he has used a modified *Mardave* 'Mk.1', previously having used 'Mk.11s'. One aspect that Andy considers important when designing and building a new car is to make it so that it comes apart easily and quickly, both for cleaning and working on during meetings. At the end of each meeting the 203 car is stripped down to the chassis, and all parts are washed down in petrol, special attention being paid to the engine. This Andy feels is



Andy Fulford's Mardave car displays superb race preparation and attention to detail. The Mardave power plant is a 'Super Tigre X21' fitted with standard barrel carburettor.

the only way to find damage or worn parts that may let him down in the next meeting.

Andy would like to thank Clive James for all his help since he started racing with welding problems and engine sorting and also to *Three Spires Electric*. As a 17-year-old Andy has been very grateful for all the lifts he has been given to meetings, but now that he has just passed his driving test that should be no longer be a problem. In common with many drivers, Andy's ambition is to build a chassis that does not bend!

Getting back to the car itself, SG ball-joints, track rods and servo saver are used, along with *Kingsway Kar Komponenten* moulded nylon axle beam. *Associated* '2402' tyres are used on the rear in the dry, with an assortment on the front depending on the track conditions. As with most drivers the radio gear used is *Futaba*.

For the last two seasons at Coventry Andy has been a 'Super Star' driver, and at present is second in the grading list to that well-known character Cliff Emms. Andy considers his best results to be a first in the 'Track Masters Trophy' at Coventry in '82 a first in the

Below: Andy's 'special' bodyshell displays proudly his RSCA number and sponsorship logo's.



'Harts Trophy' at Nottingham in '83, his ninth place in the European Final at Leicester, and second place in the British Championship at Bournemouth behind Cliff. Apart from his stock-car racing Andy also enjoys photography and watching the full-size F1 cars at Coventry and Leicester following Danny Clarke in particular. Andy is a very quiet young man, but once out on the track watch out for the 203 car. I'm sure that Andy will capture one of the major titles in the sport in due course, especially as he travels around the ovals and appears to go as well on all of them. So keep an eye on Andy Fulford car.

NOVEMBER 1984

1/12th Scale

No meeting report from Chris Loughran this month, but a few tips about how to get the best from your speed controller. The speed controller is, obviously, a very important part of your car, but looking at some of the examples seen at both National and Club meetings the impression is that to a lot of drivers they're fitted and forgotten, until things go wrong. This is not only a waste of money, but usually a waste of a race meeting too, which can cost you a new roof grade or club trophy.

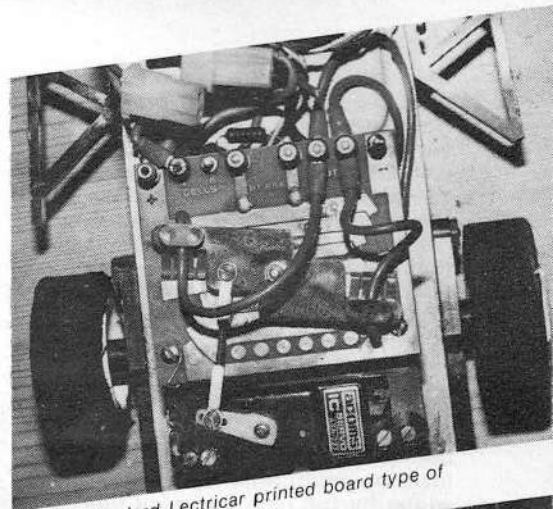
There are two types of controller used, switched resistors giving several fixed speeds such as *Mardave* or *Lectricar*, or variable resistors such as *Parma* or *Tamiya*, giving a proportional speed control.

The main reasons why things don't work are broken wires or bad connections. Any connections to the speed board, either from the batteries or to the motor, should be soldered wherever possible. If screw terminals are used they should be done up tightly, with threadlock to keep them tight. Also any wires that are partly broken, or with the insulation split or melted should be replaced with new wires that are flexible enough to allow movement without breaking. This is especially important on wires which connect to the wipers of the speed board, as they have to move freely with the wiper arm.

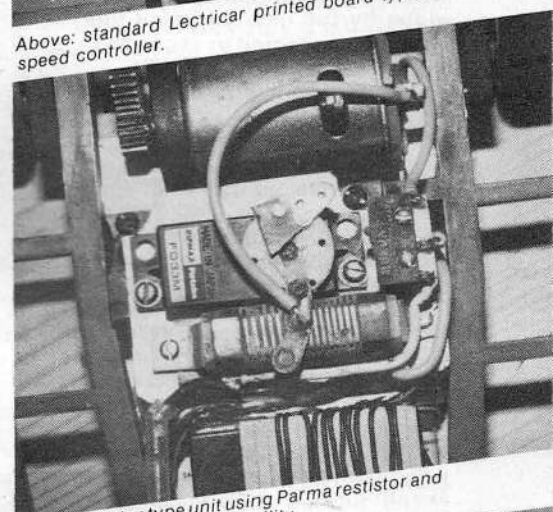
The next worst enemy is dirt. The speed control works on the principle that the resistance to the motor is varied when the wiper moves along the speed control. Any time you are using less than full power, the unwanted power is lost as heat through the resistance on the board. Dirt and grease increase the resistance, resulting in more heat, which will eventually burn the conducting surface of the speed control. The burnt area then fails to make proper contact which results in arcing. At its worst the sparks can easily be seen when the car is being driven and the speed board has black areas scored into it.

All this can be avoided easily and cheaply. Polishing the board regularly, with *Duraglit* will get rid of any grease and dirt, then a small modeller's paint brush can be used to dust off the board after each race without taking the car apart. Petrol type lighter fluid is also good for cleaning the board, but make sure you wipe off any excess before you drive the car again. Finally the wiper arm, or contacts, should also be cleaned, again on a regular basis, and when the wiper is refitted make sure to tension it properly. The easiest way to set the tension is to get a piece of paper and put it under the wiper contacts,

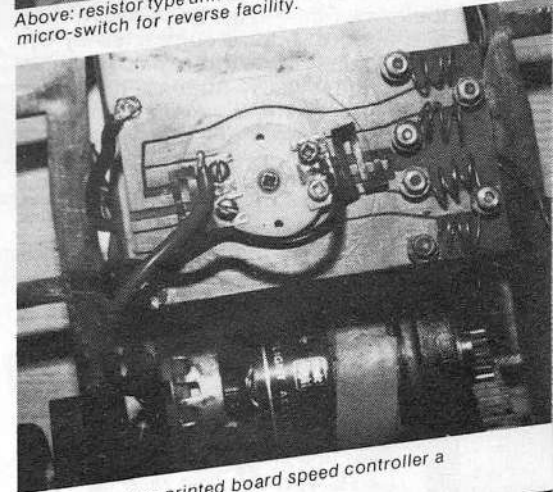
Right: Tamiya type, speed controller, easy to install and set-up and very reliable.



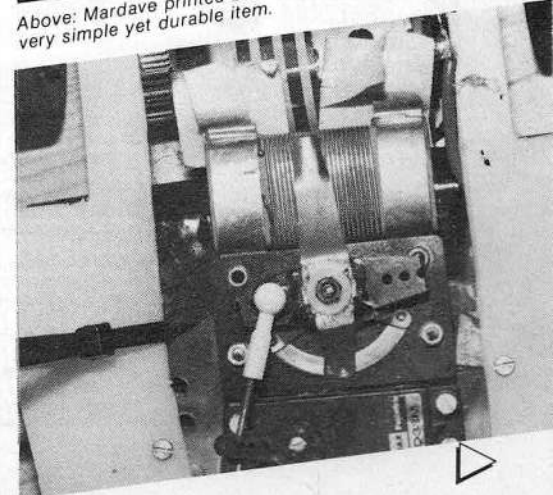
Above: standard Lectricar printed board type of speed controller.



Above: resistor type unit using Parma resistor and micro-switch for reverse facility.



Above: Mardave printed board speed controller a very simple yet durable item.



Taking Stock

then adjust the tension till it is quite hard to pull out. When all that has been done, just have a quick look to make sure that nothing fouls the wiper arm when it moves across the speed board; servo leads and connection wires are the main causes here.

If all the above have been checked then you should keep moving next time your race.

Around the Clubs

The Chessington Club are continuing their search for a new location, and I hope will have found a venue by the time you read this. This has been prompted by the forthcoming closure of their present site. They of course would like a place to build a permanent facility, though this is difficult in their area. A possible location has been found for a portable track to be placed with what appears to be good 'fringe benefits'. The club will have made their decision in November after they have held three trial meetings on the site. Whilst on the subject of Chessington they are losing Paul Grace who has been in charge of publicity as promotion takes him into the Cambridge area (good publicity?) and to the Lilford Club. So all enquiries that were directed to Paul should now be directed to Dave Glasscock at 8 Heathfield Road, Sevenoaks, Kent.

The Sussex Club started work on their new venue at the beginning of July and hope to have it completed by the end of September. From the comments heard so far (early August), it appears that as always the work is being done by the willing few. I hope their efforts will be appreciated by the many.

Southern Drivers Championships — Brighton — July 22nd

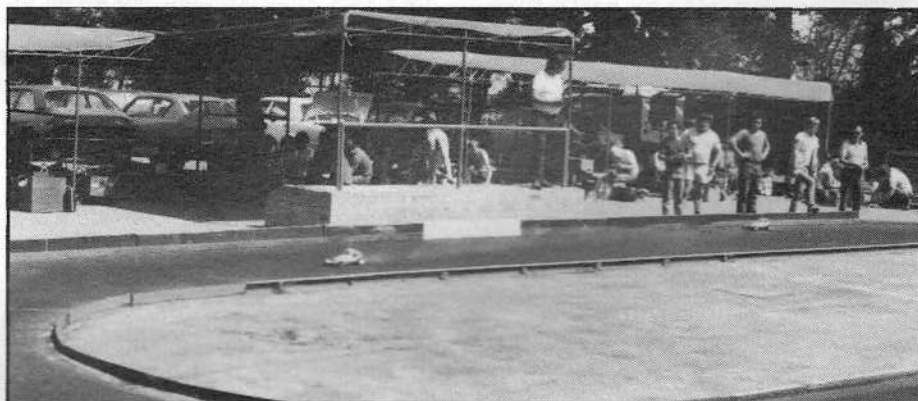
The Sussex RAC were host for this meeting which attracted 35 drivers representing all the Southern Clubs, including the newly formed Thanet Club. The weather was hot and remained fine all day. Practice began at 10 o'clock with the first race at 11:30. Amongst the entry were World Champion Les Calder and Series Champion Graham Lawrence. After the first round of heats Nick Bunn and Graham Lawrence were showing the way with 37 laps, followed by Russ Kearn on 35 and many others in the low 30s. The second round was also headed by two drivers with 37 laps, this time Graham Lawrence was joined by Russ Kearn, whilst Peter Micheli and Dave Perou both scored 35. Graham showed his consistency by heading the third round, again with 37 laps. Les Calder's heats had been dogged with problems, resulting in scores of 28, 23

Right: Cliff Emms receives his winner's trophy at the Coventry RSCA series Round Four.

and 20 laps, but in the fourth round he got it together and put in the FTD with 38. Unfortunately this was not enough to get him into the Consolation Final.

The four drivers to make it through to the Final were Graham Lawrence (111), Russ Kearn (108), Nick Bunn (106), and Dave Perou (105). The six to fight it out in the Consolation Final for the two remaining places were Tony Bunn (102), R. Bowden (101), Peter Micheli (99), P. Crowe, John Elliott (98) and A. Matthews (98).

The Consolation was a very close, fairly clean race except for one major pile up on the straight which involved all cars, but they all got going again. R. Bowden emerged as the victor with 36 laps, but the closeness of the race can be gauged by the fact that the next three cars all completed 34 laps, the verdict on split timing going to Tony Bunn from P. Crowe with Peter Micheli in fourth. In fifth place was John Elliott with 32 laps and A. Matthews took sixth with 30.



So to the Final, a good race, with very little contact but plenty of speed. Nick Bunn was the only driver not to complete the race, a pity as he had driven well all day. Again the result was very tight, with Tony Bunn and Graham Lawrence both completing 47 laps, the verdict going to Tony by less than a second. In third place was Russ Kearn with 44 laps, one ahead of R. Bowden on 43, who in turn was one lap ahead of Dave Perou on 42. The unfortunate Nick Bunn clocked up 37 laps for sixth place.

Congratulations to Tony on his win, as to Dave Phillips for sending me the report prior to dashing off to the new site for a spot of digging.

Bits and Pieces

The *Mardave* 'Mk. III' chassis is now on the market and is priced at £15.50, with the front moulded axle beam at £2.00. I seem to have mislaid the price of the axle, but please note it can only be fitted to the wider 'Mk. III' chassis. Incidentally, I have discovered that slots



can be cut into the old type *Mardave* wheels by using a hand fretsaw by first removing the blade from the saw and passing it through the hole in the centre of the wheel, then refitting it to the saw handle and cutting two slots into the wheel. If this is done with care the wheels will fit onto the new splined axle without any problem, and of course can still be used on the 'Mk. II' if required. The new full radio crate and body are also available. The whole kit is now rapidly taking shape, and it should not be too long before it can be obtained in complete boxed form from the model

shops. Contact *Mardave* for further details.

You can now more easily 'pick up a *Puma*' these days from both Paul Dudley at Moat House Works, Kings Coughton, Warwicks., or Graham Lawrence at 32 Christie Avenue, Ringmer, Sussex. These are a well made stock car, made to order, and have a good record in competition.

1/8th Series Championship — Round 4 — Coventry — July 29th

A good quality field of 29 drivers turned up at Coventry on a very pleasant and warm day for the Fourth Round of the Series Championship. Les Calder was making his final appearance as World Champion, European Champion Roy Crowson was present, as was British Champion Cliff Emms. Also in the line up were Steve Talbot, Bob Clayfield, Andy Fulford and Colin Bunyard. Two drivers missing were Paul Dudley and current Series Champion Graham Lawrence who were on their way to

Italy for the World Championships the following week.

At midday racing got underway. As usual the racing was fast and furious with 40 laps the target set by Cliff Emms in the second round. Basically though, what was needed were three good scores to qualify for the Main or Consolation Final.

The four to go straight through were Steve Talbot (116), Cliff Emms (115), Roy Crowson (115) and Colin Bunyard (114). The six to fight for the two remaining places via the Consolation

a 'coming together' resulting in some spectacular aerobatics by the Clayfield car before it quit. Trevor's car also stalled, but as it was being lifted from the track the front axle king pin dropped out, and so he was out having completed 23 laps. Meanwhile back on the track the race was still fast and close with Andy Fulford emerging as the winner with 40 laps, against Clive James' 38, and Brian Sylvester and Les Calder on 37.

So Andy and Clive joined the other four drivers for the Final, which proved

superb weather and pleasant company.

Racing Round and About

The season is just about over for the year, with the final 1/12th National Meeting being at Biddulph Moor on October 21st. Though of course the 1012th scale racing continues at club level throughout the year. I also hear rumours that there may be some 1/12th action at the Model Engineer Exhibition at Wembley early in the new year. We shall have to wait and see.

From the 1/8th point of view the main meeting this month is the Champion of Champions meeting at Keighley on October 14th. This is for those drivers who have done well during the season in major events, and figured in the National or Regional Series Rounds results. Most 1/8th scale clubs bring their season to an end in early November.

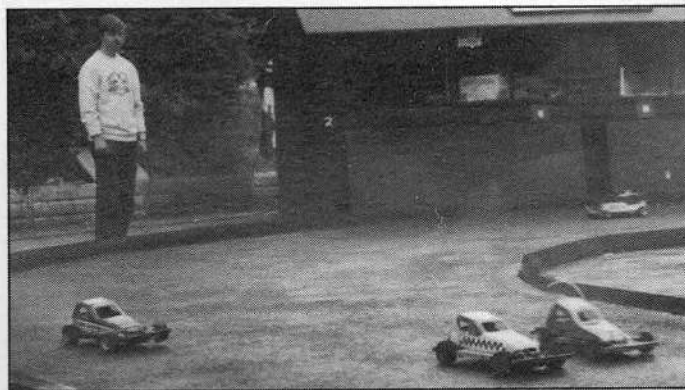
Late News

Two items have come to my attention just as I'm about to send this to the editor.

First the bad news. **The Pendle and District Model Car Club** have lost their site, and will not be racing from August of this year. They intend to be back in '85 and are looking for a suitable racing venue. Anyone who can help please contact Sandra Nicholson at 15 Gordon Street, Colne, Lancs.

Now the good news. Britons take the first two places in the '84 World Final for 1/8th scale cars in Italy. Paul Dudley is the new World Champion, Graham Lawrence was second. A good advert for *Puma* cars and British drivers. Peter Micheli, the only other Briton to make the trip was seventh. Full report in next month's issue.

Well, that's it for this month. See you ovalling around. □



Opposite page: general view of the Coventry track at Ryton, excellent facilities for the drivers with covered pits and drivers' rostrum. Left: action from the semi-finals at Coventry, Bob Clayfield lifts, Les Calder passes Brian Sylvester as Roy Crowson looks on.

were Andy Fulford (112), Les Calder (111), Clive James (110), Trevor Heasman (110), Brian Sylvester (110) and Bob Clayfield (109). A quick glance at those figures will indicate just how close the racing was when you realise that they are the results of the drivers' best three heats.

It was not long before the six drivers in the Consolation took their places on the drivers' rostrum, and the Consolation was under way. As was to be expected, this was quite a hectic race, and saw the elimination of both Bob Clayfield and Trevor Heasman before the four minutes was up. Their cars had

to be fast, frantic and close. All six drivers had their share of the tangles which made it difficult to follow who was really in the lead. Still it made for an exciting, close race and one which at the end no driver was really sure who had won. Victory, in fact, went to Cliff Emms with 50 laps, second was Steve Talbot on 48, whilst the other four drivers all recorded 48 laps, the split time being used to put Clive James into third place, Colin Bunyard fourth, Roy Crowson fifth and Andy Fulford sixth. Congratulations to all drivers concerned, and thanks to the Coventry Club for a good afternoon's racing,



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BLACKPOOL 19 Hounds Hill Centre, Victoria Street, FY14HU 0253 26461
BRIGHTON 4 B Dyke Road, BN1 3FE 0273 776626
BRISTOL 17/19 Penn Street, BS1 3AW 0272 20259
CARDIFF Northgate House, Kingsway, CF1 4AD 0222 397645
CROYDON 135A North End, CR0 1TN 01 688 1585
KINGSTON 30-32 Eden Street, KT11 1EP 01 549 5464

LEEDS 16/18 King Charles Street, LS1 6LT 0532 456611
LIVERPOOL 36/37 Dawson Way, St. John's Centre, L11 1J 051 709 0799
MANCHESTER 4/6 Brown Street, off Market St, M2 1EE 061 834 0229
NEWCASTLE 43/47 Pilgrim Street, NE1 6QE 0632 324161
NOTTINGHAM 3 Mount Street, NG1 6JW 0602 411693
ROMFORD 7/11 High Street, RM11 1JU 0708 24283
SHEFFIELD 38 Pinstone Street, S12HN 0742 77864
SOUTHAMPTON 114 East Street, SO11 1HD 0703 24843
WATFORD 70 The Parade, High Street, WD17 2AW 0923 27563

*MAIL ORDERS TO SOUTHGATE

SINCE THE COMPLETION of its Littlemoor Park circuit in 1975, the **Yorkshire Radio Controlled Model Car Racing Club** has been organising and running race meetings in Bradford. The Yorkshire club has been closely associated with the BRCA since its inception and at its opening the Littlemoor track was hailed by many as the best in the country, hosting the British Nationals as a curtain raiser. The passing of time however has seen improvements in equipment and performance which have made model car racing a rather different proposition to those heady days of yesteryear. Littlemoor has been gradually slipping away as a viable venue, for the modern day flying machine and unknown to most, slipping away into the cellars hidden beneath its surface too.

The end of an era then — yes, and the 'Bradford Club' as it is often mistakenly named is no more, but the Yorkshire RCMCR lives on, possibly to become known as the 'Halifax Club'. Why Halifax? That's obviously where the Yorkshire boys and girls have sneaked off too.



Above: carved out of the Halifax rock the new Yorkshire car club circuit begins to take shape. The leisure centre is a minute's walk across the car park.

Easy solution then! Old track too small — get a bigger one and carry on. Easy you think? — read on.

The first consideration is what do we need — answer, a new track. But there's Off-Road racing now as well — Okay, two new tracks. National meetings? We need camping space, car parking and all the facilities to entertain perhaps 200 people for a couple of days. Spectators will need a place to stand or sit — oh, and there's something else — **money**. All these things add up to a fairly daunting prospect. Where do you start with something of this size when you're only a handful of 'happy-go-luckies' and all you want to do is race model cars.

The obvious first step was to raise cash, so the club embarked on a host of fund raising activities, the most lucrative of which was perhaps the many galas and fêtes at which the club exhibited its wares and performed its

Bradford to Halifax

Or three miles in 3½ years. Ian Briggs tells the story of the Yorkshire RCMCRC

Below: the tarmac is down and run-off areas designated, these will be grassed over in due course. That wide sweeper looks fun!



Above: a twisty infield section to demand high concentration, quick reflexes and nimble handling has been devised to test the nation's finest.

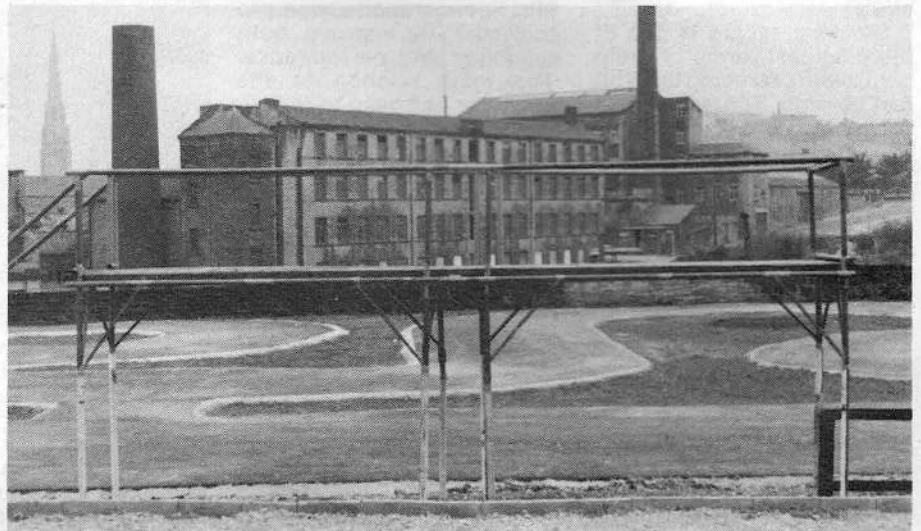
tricks. There was John Russell's 1/8th car sporting a truck body and doing enormous leaps over anything and everything and cars jumping over Chas Keeling's double decker bus and the bus jumping over the cars. What a shame model car racing doesn't seem to have the time for these fun events nowadays. Much of the organisation for these do's was done by Paul Pagdin — club secretary at the time and members travelled as far as Glasgow in pursuit of funds, raising £150 for the club at enormous travelling expense. No doubt Paul will remember the trouble encountered in procuring a pair of tights to replace the fan belt on his Landrover. The club has continued with various activities up to present day, one of the more recent being a sponsored run carried out by Brian Denton who completed 80-7 laps of Littlemoor on one tank of fuel with generous sponsorship coming from within the sport as well as the general public.

The next problem was where to build? Littlemoor was the first attempt but a big enough area was not available. Various other sites were suggested by the Bradford council but all proved to be unsuitable and they were unable to help financially. Harewood House, famous for its 'hill climb' and bird garden was tried. Kirklees council based in Huddersfield were not enthusiastic. Calderdale

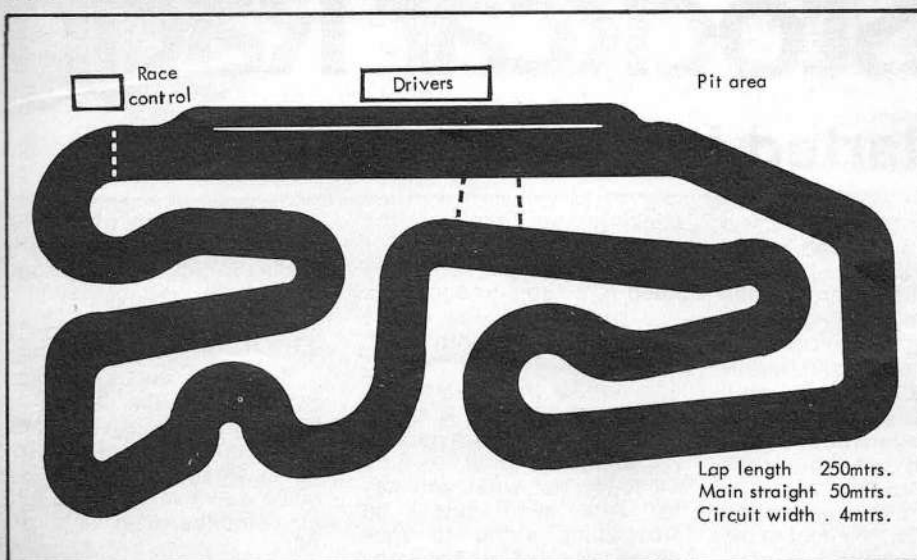
Co-ordinator' has spent a lot of spare time and much of his holidays taking time off work to meet council officials, contractors and all manner of people in an effort to make the dream come true. There were many points to iron out with the lease of land alone, which at one time included a virtual river running past the circuit some 40ft.

ways, not least of which was a very generous grant towards the cost. A voluntary labour organisation has carried out some of the work and lots of hard work has been put in by club members in digging, levelling and preparing the site.

The cost of all this is of course tremendous. The hardcore and tarmac



Above: the drivers' rostrum although not as refined yet as other circuits will provide the necessary elevation for the drivers. Below: circuit diagram, accurate within ten per cent.



council were the next step and Shibden Park (a local beauty spot) where a coach full of councillors arrived to watch model cars flash up and down the pathways. 'Sorry, too noisy' was the reply — but an impression was made which eventually led to an offer of a site at Charlestown Road, Halifax, only three miles from Littlemoor. After much discussion and negotiation the club settled on this site as its new home.

Much of the credit from here on must go to John Russell, who as 'New Circuit

below — if the river floods half of Halifax, is the club responsible? Part of the land belongs to the Gas Board and the council is still negotiating to obtain this section for us. We had to lower a wall for traffic purposes and many — and I mean 'many' more snags were encountered, which resulted in the lease to-ing and fro-ing for two years. We have had to appoint trustees to sign the lease and all kinds of things you just don't think about. On the brighter side, the Calderdale council have been very helpful in planting trees and in other

for the track alone weighed in at a cool £6,000, with turfing, hardcoring carparks, buildings and fencing, etc., on top. To finish the complex to the standards envisaged will not be possible this year due to the expiration of funds, the hoped for sponsorship and advertising revenue could not be raised until we had something to show — the old chicken and egg story again. The track surface however is rather nice due to some considerable and conscientious work by Messrs. *Frank Tucker Ltd.* of Bradford the same people who laid Littlemoor at a cost of £500 — some difference! Much of the work is now behind us, but there is still a lot to do. The one thing we can assure our visitors of is the same warm Yorkshire welcome as of old, in fact even warmer, as we have now vacated the frozen heights of Queensbury for the much gentler climes of Halifax. We can offer the shops of Halifax for the ladies, a mere 5 minutes' walk. Next door is the North Bridge Leisure Centre with all its sporting activities and *BAR* and for those of you who are into Industrial Archaeology we even have a gasometer.

Having been formed in 1971 the Yorkshire RCMRC is the oldest club in the country now boasting the newest circuit. We have never lost money on any event staged we broke even on one or two, but have nearly always made a healthy profit, and not through overcharging. Hard work and busy sponsorship hunting is the key to success. We think you'll find our new home impressive — we know you'll need your brains to get round it and look forward to seeing you try. Happy racing.

HOW MANY of you have read a 1/12th scale stockcar race report and thought: 'I'd like to have a go at that, but how do I start and what do I need?'

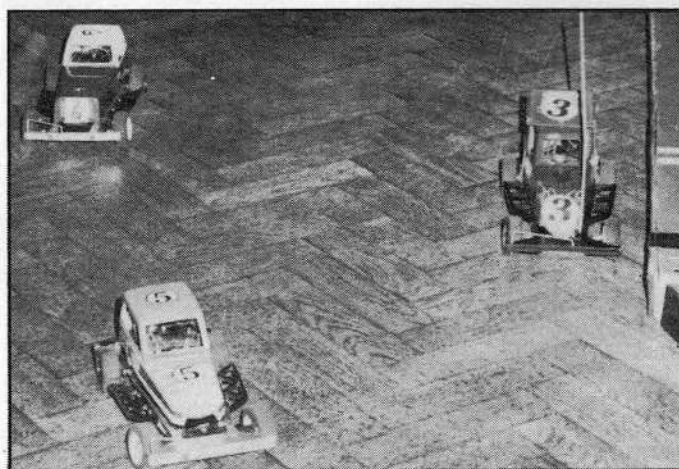
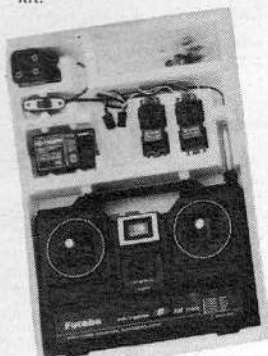
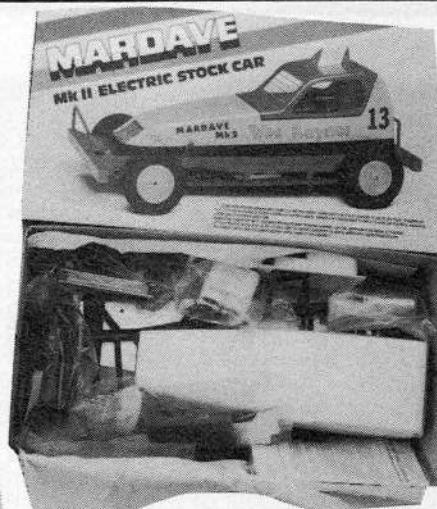
Well, this article will try and answer those questions, as well as giving practical information and details on clubs.

Stockcar racing is one of the cheapest forms of radio controlled car racing that you can get into. The whole idea of stock cars is to provide a

Since then, *Lectricar* has now moved to *Windmill Models* and *Mardave* whilst still in Leicester, have moved to an industrial unit nearer the centre. The kits have also changed, both in value and specification.

The original *Mardave*, the Mk1 has now been updated to the Mk2 to improve both reliability and performance. The main change to the *Lectricar* has been to reduce the price of the kit, although

Below right: exciting stockcar action as three cars battle it out for first place. Right: the basics of what you need to go electric stockcar racing, radio control system and kit.



will need a couple of extra things.

Firstly, you need a method of charging your car's drive Ni-Cads. The kits supply the charging leads, but you need a 12v lead/acid car battery to charge from. You can either buy a new one, or ask around and see if anyone has an old one to let you have. It doesn't need to be in first class condition, as your car does not put such a load on the battery when charging as a full-size car does when starting. You can also obtain

the kits are almost the same, with the *Mardave* at around £37.00 (plus £4.00) and the *Lectricar* at around £42.00.

Both kits are straightforward to put together by following the instructions, which are clear and well illustrated. Even if you've never built a car before, it shouldn't take more than an evening to finish. The only tools you need are a screwdriver, a sharp knife and some contact adhesive for

Electric Stockcar Racing

How to get started in this exciting sport

cheap to start and cheap to run form of car racing, which is fun for everyone and where the size of your wallet bears no effect on your results.

What's available?

Electric stockcars were first introduced just over three years ago, when two Leicester based companies *Mardave* and *Lectricar*, brought out the first 1/12th scale kits. Naturally enough, the first club was founded in Leicester shortly afterwards.

improvements to the chassis itself have also been made. The main difference between them is that the *Mardave* has a moulded nylon chassis, the *Lectricar* an aluminium one.

Both kits are supplied complete with motor, body, charging leads, and batteries, although the *Mardave* comes with only four cells compared to six with the *Lectricar*, so you need to add about £4.00 to the cost of the Mk1 for the extra batteries. This means that the prices of

sticking your tyres on to the hubs.

Now you've got a car, you need to be able to control it. For that, you need a two channel radio control set. One channel for the steering and one for the forward and reverse throttle. It is worth spending a few extra pounds on the radio gear, as you basically get what you pay for. After all, it gets a bit frustrating trying to race when your radio gear won't send the car in the direction you want it to go. Installation of the radio is, again, quite simple — both car kits give clear instructions for this.

You have now got your car and radio together. However, before you start to race, you

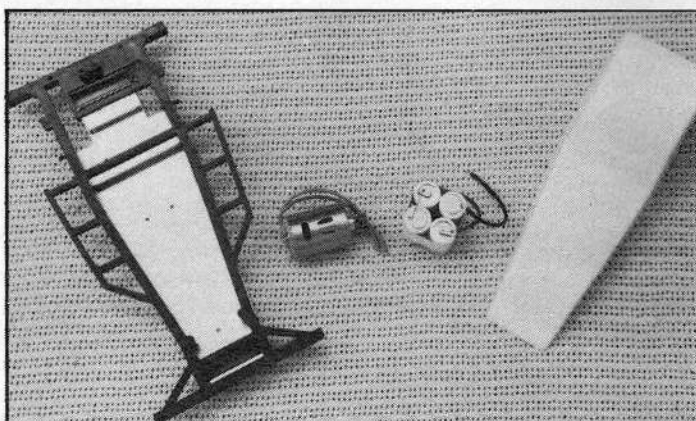
mains-powered chargers, but not every club has the facility for mains charging so check first.

The Racing

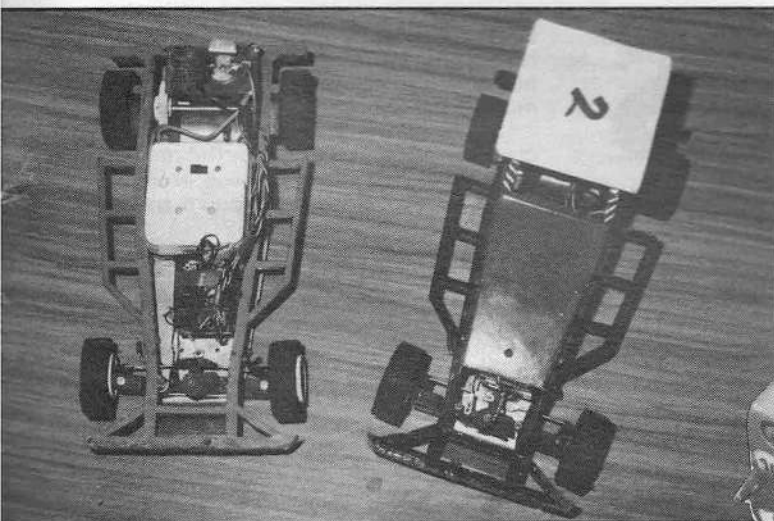
Stockcars race around an oval circuit, the length of which is strictly governed for National Championships races. Basically the oval is a scale down version of a full-size stockcar oval — 1/4 of a mile.

Contact is allowed, encouraged and enjoyed.

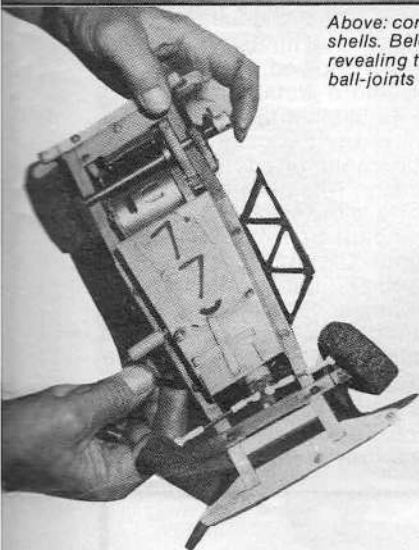
There is no room for race etiquette in stockcar racing as it is all about completing more laps than your opponents in a set race time. Naturally, then Stockcars must be built strong to take the punishment and although both *Mardave* and *Lectricar* chassis are robust, race preparation is all important.



Left: main components of the *Mardave* chassis left to right: moulded nylon chassis with alloy undershield, electric motor, Ni-Cad pack and bodyshell.



Above: completed Mardaves with and without bodyshells. Below left: underside of a Lectric Stocker revealing the drive arrangement, note also: steering ball-joints linking underneath the chassis.



Most clubs run their races on polished wood or tiled floor surfaces. With ordinary rubber tyres, the cars would be uncontrollable. Therefore they must be covered with silicone rubber to improve grip. Siliconing tyres is a fine art if best results are to be achieved and it is worthwhile consulting the local club expert for his approach to the problem. In contrast some drivers cover their tyres with table tennis bat rubber and report favourable results, depending on the type of rubber being used. Lastly, some clubs run their races on

needlefelt carpet which is a high grip surface so silicone or table tennis bat rubber is not necessary. If in doubt check with the local club to find out what surface they race on.

The Radio Stockcar Association

The RSCA is the National governing body for both 1/8th and 1/12th scale stock-

Below: Car No. 405 makes ready to do away with the opposition.



car racing in this country. They sort out the rules and promote races in Britain as well as organising the National Championship round of meetings.

Stockcar racing is a cost conscious sport and the RSCA rules take steps to keep it this way. In essence the rules only allow standard or kit items to be used such as speed controllers and bodyshells. However, there is scope for modification within the framework of the rules

and this adds to the appeal of stockcar racing.

The RSCA also grades drivers according to their driver ability and race results. Each grade is denoted by a colour which must be displayed on the car bodyshell along with RSCA racing number and driver's name. Finally, the RSCA produce a bi-monthly newsletter with all the latest news. Membership to the Association also includes 3rd party insurance which is necessary for most racing. The membership fee is £3.50 a year.

If you have any problems or need more information about 1/12th Stockcars or the RSCA contact Chris Loughran at the address given below:

Chris Loughran, 36 Glenhills Boulevard, Eyres Monsell, Leicester LE2 8UA. Tel: (0533) 777529.

Finally, have fun!

1/12th Stock Car Clubs Directory

Barnwell Radio Vehicles —

Cambridge
Phil Starling, 101 Vinery Road, Cambridge (0223) 245854

*Buntingford Stock Cars —

Hertfordshire
Roy Jones, 13 Silverfield, Broxbourne, Herts.

Coalston Radio Car Club —

Chesterfield
Martin Cooper, 16 Durham Close, New Whittington, Chesterfield (0246) 452304

Coventry Stock Car Club —

Coventry
Clive Buckler, 14 Boswell Drive, Walsgrave, Coventry.

Essex Stock Car Club —

Essex
Jim Brown, 10 Delmar Gardens, Wickford, Essex.

Kegworth Stock Car Club —

Derbyshire
Ian Johnson, 32 Pleasant Place, Kegworth, Derby.

Long Eaton Stocks —

Nottingham
Ron Hammock, 286 Tamworth Road, Long Eaton, Nottingham (06076) 67656.

*Leicester Electric Stocks —

Leicester
Chris Loughran, 36 Glenhills Blvd., Eyres Monsell, Leicester (0533) 777529.

Loughborough Stock Car Club —

Loughborough
Ted Clarke, 180 Leicester Road, Mountsorrel, Leicester (0533) 302446.

*Pendle & District Stocks —

Lancashire
Syd Hawkes, 208 Todmorden Road, Burnley, Lancs. (0282) 25051 ext. 45 (daytime).

Rugby Model Car Club —

Warwicks
John Cutts, 107 High Street, Hillmorton, Rugby (0788) 72110.

Southern Radio Car Club —

Southend
John Newton, 4 Aylesbeare, Thorpe Bay, Southend-on-Sea, Essex (0702) 585770.

*Stoke-on-Trent Car Club —

Staffs
Graeme Eardley, 8 Chapel Lane, Bidulph Moore, Stoke-on-Trent (0782) 518160.

East Sussex Stock Cars —

Sussex
Jessie Pantry, 2 Blenheim Way, Flimwell, Wadhurst, East Sussex.

*Wirral Model Stock Cars —

Merseyside
Peter Wright, 11 Fieldway, Wallasey, Merseyside (051) 6301352.

*Denotes RSCA Affiliated Clubs. Others are non-affiliated clubs with RSCA members.

Top-slots

Dave Harvey of 1-0-1 Models details the top end of slotcar racing

THIS MONTH sees the first of what hopefully will be a series of regular monthly columns by myself all about aspects of slot car racing and one which I hope will be of interest not only to newcomers to the hobby but also to the more hard core racers.

Model Cars magazine has been featuring slot racing in its pages for about eight months now but as yet I've seen very little written about the types of car and racing that goes on under the auspices of the BRSCA (British Slot Car Racing Association). Much has been said of 16D racing; indeed I myself wrote something about it some issues back and whilst maintaining the view that it fills nicely a niche in the slot racing hierarchy I would like readers to know something of the higher level. Other, more competitive classes exist and 16D racing is to these other classes what Formula Ford is to Formula 1 Grand Prix racing in as much as the former aspires to the latter.

The term slot racing encompasses so many variations that I think it relevant to start by grouping some 'types' together. Four distinct groups exist.

Firstly we have those who race at home on their own or maybe with a few friends using a commercially available 'set' system (Scalextric, MRRC, Aurora etc.).

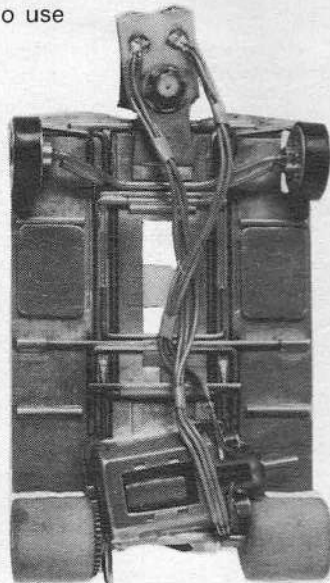
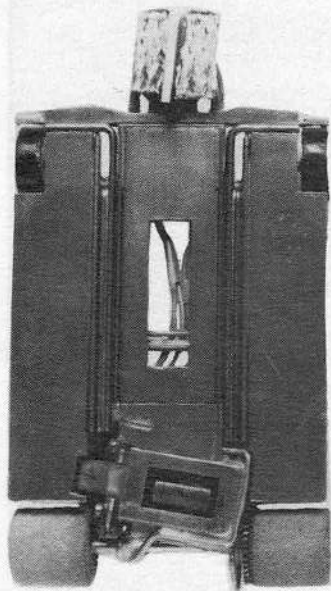
Secondly, there are those who use

the same system but run as a club and have the track permanently assembled and who perhaps modify slightly the standard type cars.

Thirdly we have those who belong to a club that has a permanent timber constructed circuit but who race scratchbuilt cars based in the main around the 16D motor and other relatively low powered, low cost cars.

Lastly there is the racer who attends a club with again a permanent timber track but which races cars to rules and standards laid down by the BSCRA. The club may in fact not actually be affiliated to the association but will adopt their guidelines for track and cars. It is at these clubs that the levels of performance of drivers and especially cars are highest. The level of technology and indeed cost is also highest (but still relatively cheap in comparison with R/C cars). There can however, be a mixing of these group-

Below: ready to run sports chassis supplied by Tim Ryan of 52 Hayes Road, Bromley, Kent, BR2 9AA. These cars can be raced in the saloon class with Mura 'Group 12' motors. See text for details.



ings in as much as some clubs in the latter category incorporate into their race nights a 16D class purely to attract newcomers. In my view this is 16D's most important role.

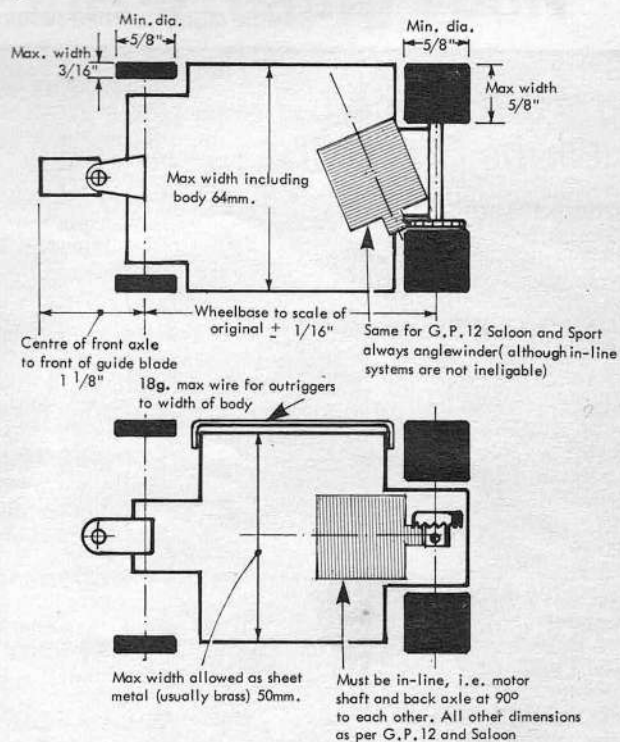
Let us now turn to the BSCRA classes. In the first instance the reason for having individual classes and car and track standards laid down by an Association such as the BSCRA is so that everybody can build and race their cars to the same rules. This means that regional and national competitions can take place with no conflict. Its stating the obvious but it would be impossible to have countrywide competitions if everyone raced to different regulations.

The classes laid down by the Association are:

Formula 1, Sports/GT and Saloons.

In the main the rules are dimensional limits (see Fig. 1) but the Saloon class cars have additional limitations on the type of motor allowed. We will now examine in more detail the Saloon class as in all likelihood this is where the newcomer or 16D racer will head for. This class quite often is just called the GP12 class. This because the only motor allowed is the MURA 'Group 12.' This is a standard MURA motor featuring the famous 'C' can type motor case, ceramic magnets and short stack 29g armature (unbalanced). It is one of the cheapest motors in the MURA range but very reliable and despite being the poor relation to most other motors by MURA it is still capable of very good performance. This is why it was chosen for BSCRA's only standard class. The

Fig. 1



only modifications allowed are:

(1) the fitting of a ballrace to the 'can' end of the motor (the end from which drive is taken)

(2) the fitting of small heatsinking plates on the endbell to ease heat problems. Chassis choice is completely free within the dimensional limits as shown on the diagrams.

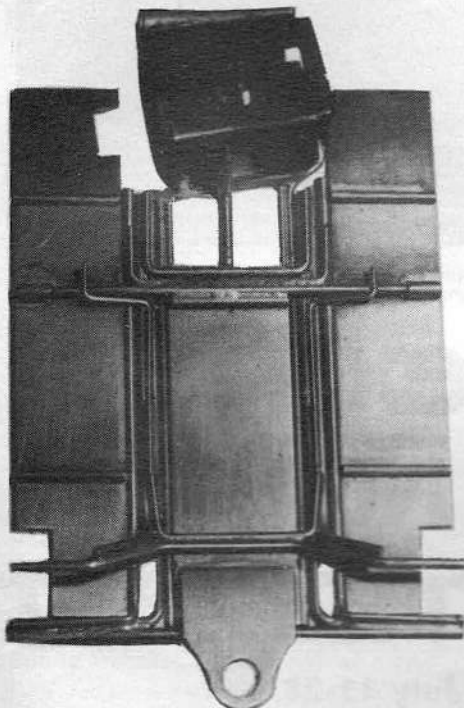
Chassis' for GP12 Saloons are invariably of flexiboard or flexi-iso, design and can be bought commercially. Costs depend upon chassis type but a flexiboard would be typically £18-

£20 and a more complex flexi-iso £25 or more. Add to this the cost of a kit of parts to complete the car of about £18 and you can be ready to go for as little as £40. Ready to run and tested cars are also available but obviously cost extra. Speed controllers suitable for these cars range from £4.50 up to £25 depending upon type and quality. More will be said of controllers at a later date.

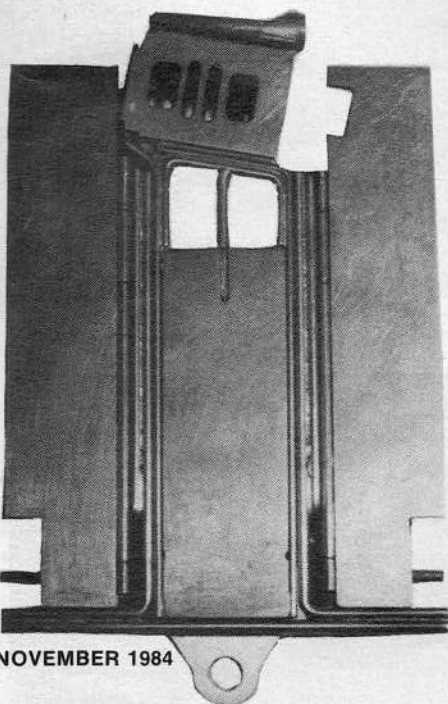
Therefore this time we will leave it. All I've already tried to do in this first article is to inform you especially those showing an interest in this hobby

what's about in slot racing. GP12 Saloons are the next logical step up if you already have a 16D car but more likely at the present time is that these will be almost certainly the newcomers first taste of slot racing if attending a BSCRA official club for the first time.

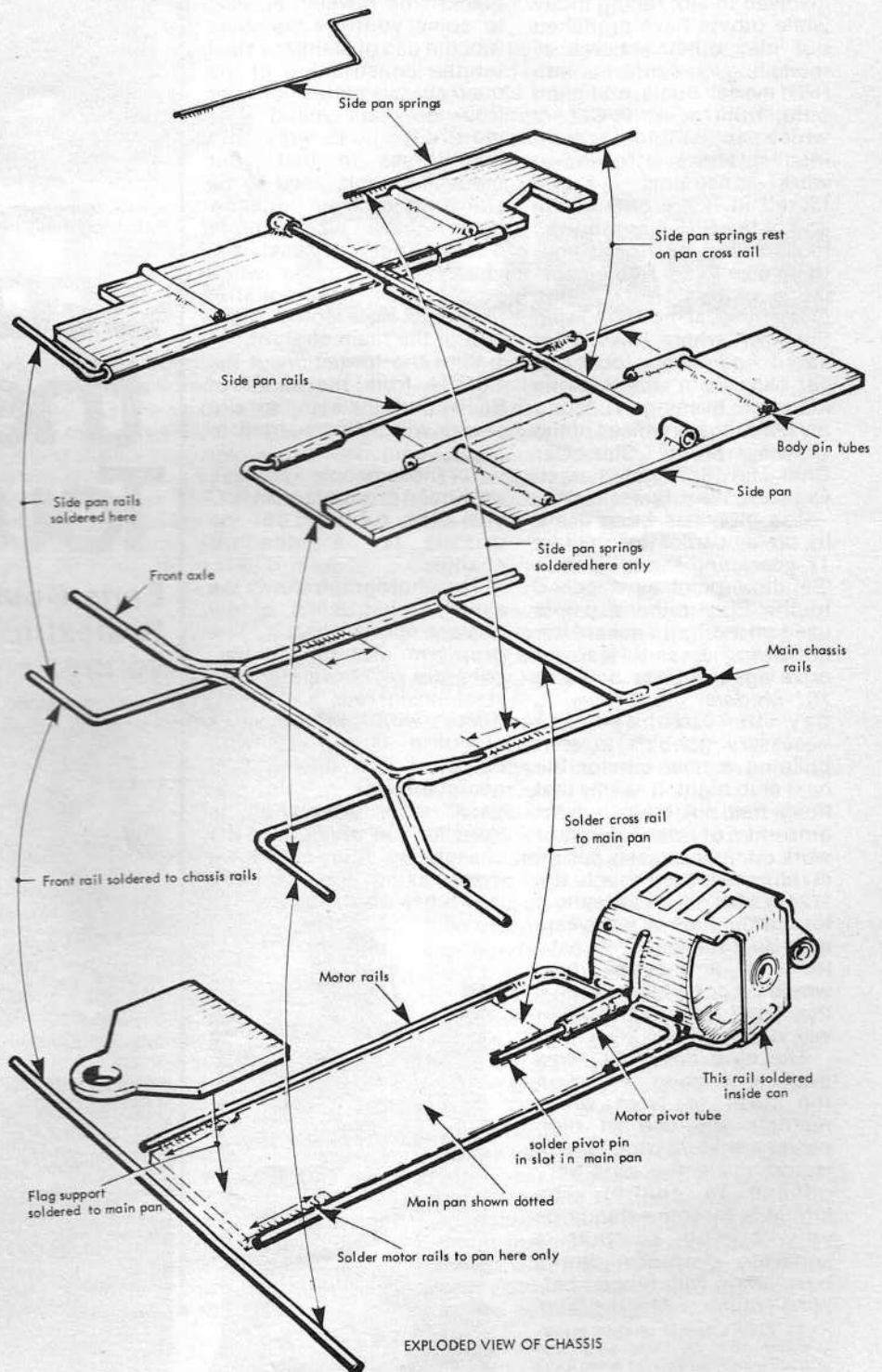
Next time I will give some hints and tips on improving the performance of both 16D's and GP12's. In addition I will be detailing the other two BSCRA classes of Sports/GT and Formula 1 to complete a listing of just about all types of slot racing seen in the UK today. □



Above and below: two views of Dave Harvey's Saloon chassis used in the 1984 BSCRA National championship. 1-0-1 Models supply ready to run cars from 52 Hawbeck Road, Gillingham, Kent, ME8 9TP.



Dave Harvey, Flexi-ISO saloon chassis.



Slotcars re-visited

by Keith Edgar

LAST YEAR I returned to slot racing after an absence of 12 years, having belonged to the Sydenham Club up to its demise in 1971. Some of those members are still involved in slot racing today while others have branched out into other spheres of modelling. I ventured into R/C model boats and then onto 1/8th scale R/C cars which is still my main interest. However, owing to work constraints I found myself at home only at the end of the BRCA season so I looked around for something else to do. Remembering a visit to an exhibition given by local model clubs in the town where I live, I set about finding my local slot car club. So it was that one Monday evening I found myself at the premises of the **Crawley Model Slot Car Club**, Hut 18, Tillgate Forest, Crawley, West Sussex.

The club has been using its present track for the last 17 years and the surface is 'Sandtex' paint as opposed to the Polyurethane paints used on modern tracks. After borrowing a car to learn to drive again, it was down to 101-Models the following day to purchase the necessary goodies to start building a new car for the next club night. It seems that there has not been a great amount of development work done on chassis design at club level, although the 1/24th chassis of today is a lot lighter than a few years ago. So it was relatively easy to build a chassis which would be competitive even if the hand controller finger was a bit rusty.

The club does not allow the use of 'goop', either on the track or tyres which restricts the use of high power armature winds which would make the cars very difficult to control. The circuit is by some standards very bumpy so that a separate drop-arm works best, along with hinged bat-pans (which is why the 'bog'

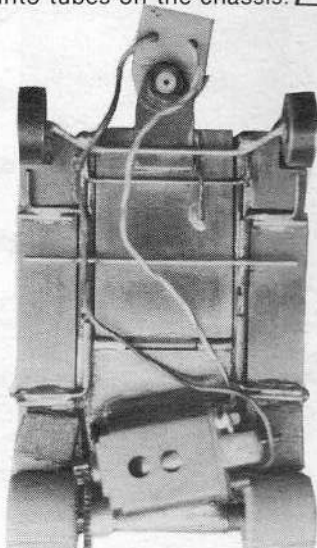
Right: Keith's sports chassis manufactured from stainless steel and providing sterling service at the local club.

chassis is popular). With the lack of super traction we can use cheaper motors and the most common being a standard Group 12, with tyre choice of 101 whites or blacks. One novelty, at least to some younger members was the use of stainless steel for the construction of the main chassis plates (left over from previous years) it is more difficult to work with than brass in that your modelling tools need to be sharp and the hacksaw blades have to be good quality, but at least the chassis won't bend when next it ends on the floor after failing to slow down at the end of the main straight.

With the formation of the BSCRA from the ashes of ECRA perhaps some ex-slot racers will be persuaded to begin again.

For those people who have only been brought up on R/C cars try running in the groove for a pleasant change.

The photograph shows the simple construction of my present sports chassis. The drop-arm and hinged bat-pans are of 16swg stainless steel, main rails are 16swg piano wire. Motor is a standard Group 12 with ballraced can driving 8:38 gears through a $\frac{3}{32}$ in. dia. back axle. Bodyshell is Porsche '956' attached to the chassis by four cut down dressmaking pins inserted into tubes on the chassis. 

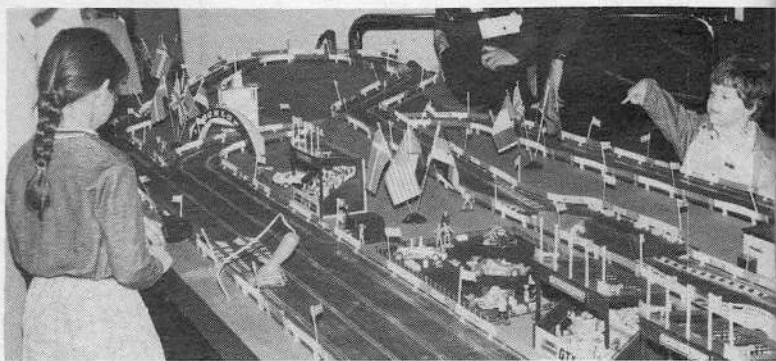


Above: impressive Scalextric circuit laid out with 'atmospheric' scenery including Dunlop bridge and spectator stands.

Scalextric at the Royal Tournament

Earls Court, July 11-28.

Scalextric Grand Prix circuit delights youngsters at the military show



Above and below: close ups of the action and circuit with youngsters at the wheel.



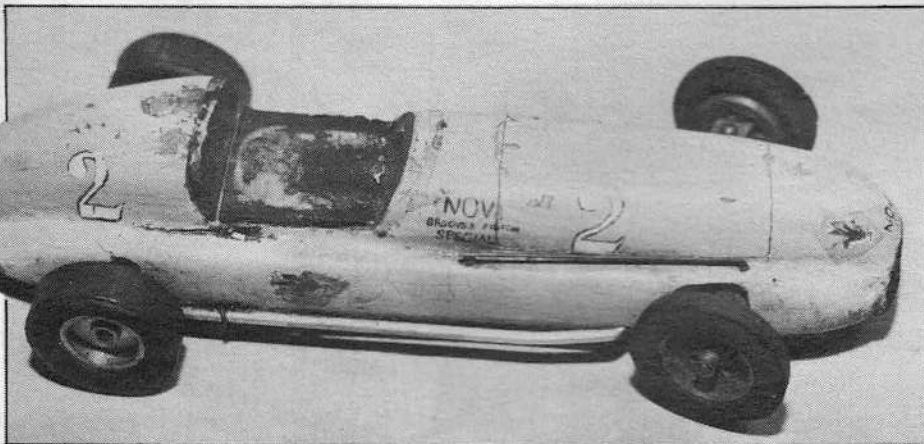
The 1964 National Grand Prix Champion Ken Stokes, Mercedes W 154 1938

by Trevor Tennant

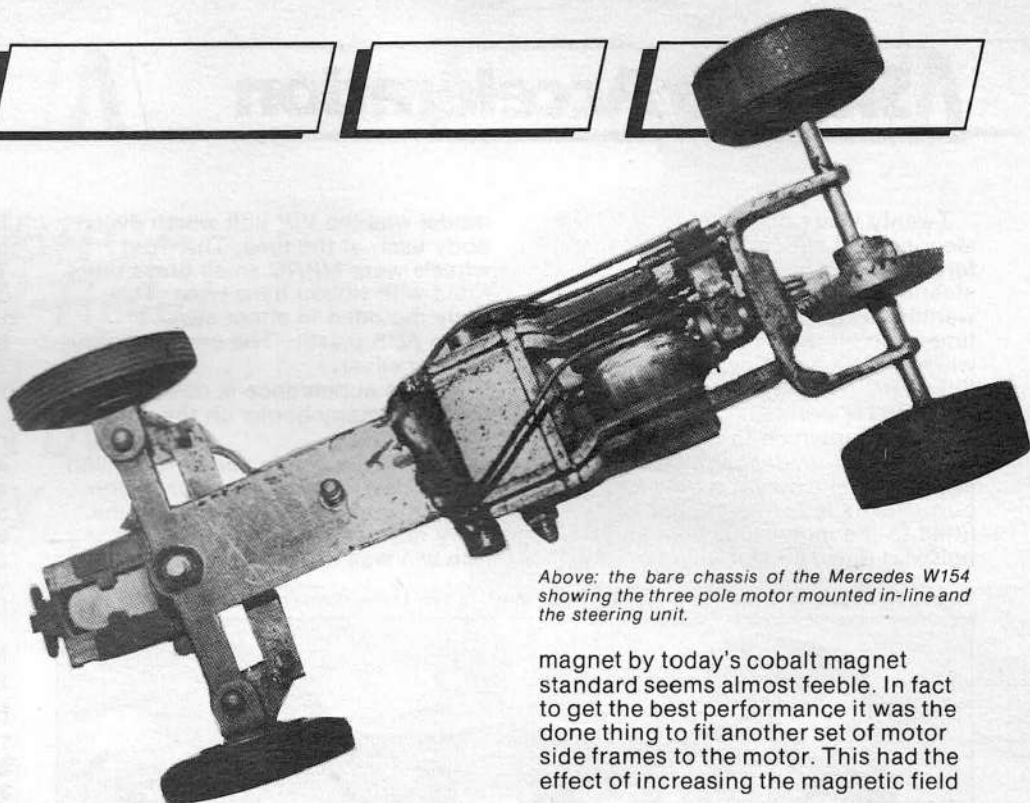
THIS NOVEMBER will be the 20th anniversary of the first running of the Nationals. Held at Watford on the circuit purpose built by the staff of the 'Model Cars' magazine at that time, the circuit was designed by the famous all round modeller Vic Smeed. The racing surface was the very rough by today's standards, 'Imstone' track paint.

The attitude of the competitors in those days was different in the respect that then you raced far more accurate scale models than is the case today. The body of the car had to be scale in size within $\pm\frac{1}{8}$ in. The wheelbase and track dimensions had to be scale $\pm\frac{1}{16}$ in. The tyres had to be the nearest commercially obtainable items. Compared with a 1984 race car the cars almost look skinny and very small in overall size.

Below: Ted Longshaw's balsa wood bodyshell of the 1947 Indy Novi.



One of the most popular prototypes modelled was the *Pre-war/Mercedes Grand Prix* car. When MRRRC produced the plastic body kit it immediately became a best seller. The amazing fact about this car is that all the parts are still obtainable to make virtually an exact replica of the Ken Stokes car. The reason why an exact replica is not possible is because I am informed that a works modified motor was fitted. The engineer who did the work, Ralph



Above: the bare chassis of the Mercedes W154 showing the three pole motor mounted in-line and the steering unit.

magnet by today's cobalt magnet standard seems almost feeble. In fact to get the best performance it was the done thing to fit another set of motor side frames to the motor. This had the effect of increasing the magnetic field

Slot Classics

Burgas, left the company many years ago and failing contact with Ralph, I have had to surmise on some details.

The motor was based on the Standard 3-pole type sold at the time. The armature would have been carefully rewound and balanced. The winding would be 36swg, 100 turns per pole. Compared with today's 28swg, 26 turns, the power output

strength. Even so, the motor had to be remagnetised very often to get the best results. If you find an old motor it will certainly require the magnet recharging, especially if the armature has been removed. *Auto Electrical Workshops* should be able to recharge the motor or send them to MRRRC. One feature of the motor which was and still is a good idea is the oil retaining felts fitted to the oilite motor bearings. In my view a feature which if copied on more recent motors would greatly increase the motor bearing life. The motor brushes were always highly rated on these motors and until the *Mabuchi '36d'* were the best motor brushes, and were fitted as replacements in many other motors, even *Pitmans!*

The axle location was by a bent up 'U' bracket riveted to the side frames of the motor. The axle holes in standard form were simply drilled but if serious gear life was to be obtained then bearings had to be fitted. The best bearings were the MRRRC solder fitted ball thrust bearings. These looked at first glance to be very crude but in actual fact were ideal for this use. The brass bevel gears of ratio 3.5:1 were very efficient and for the tyre size about optimum for best results. The rear axle is $\frac{3}{32}$ in. silver steel threaded $\frac{3}{32}$ in. Whitworth to take the very special 700x15 air cored tyres. These tyres were a sensation when they were first announced but in my case I could not get them to work at the time. They were not a success which was a pity because the tyres looked really well but alas they did not catch on.

seems almost non-existent but I can assure you that this car seemed very fast at the time. The most powerful motors of the day were the American *Pitman '196a'* 3-pole motors, but they were very expensive selling for £2.50. When you realise that my apprentice pay then was only £4.00 a week, a *Pitman* was a luxury which not many could afford. The MRRRC 3-pole sold at approximately 80p and was a bargain. Developed from the *Tri-ang* train motor, the solid alloy steel

Slot Car Acceleration

Twenty years on the idea of fitting steering to a slotcar is a long since forgotten idea. But in the 60's, steering was the done thing if you wanted to win. The magazines of the time even showed twin motor 4-wheel drive chassis with steering fitted. *MRRC* themselves have produced a 4-wheel drive version of this very car which in my opinion was the best model car kit ever produced. The steering unit was purpose made for the model and fitted to the motor lugs with an 8BA bolt and nut. The slot guide on my

model was the *VIP* unit which everybody used at the time. The front wheels were *MRRC* small brass units fitted with ribbed hard tyres. The body moulded in either silver or white ABS plastic. The correct colour all over silver.

If scale appearance is desired then there are many books on the cars on sale.

Ken Stokes beat a very strong field on the day including my hero John Snewin whom I always rated in the early days as the very best driver. The win was the first of two won by

British motors. The next was the following year when a Gordon Tapsell won with the 'Beckenham Bombshell'! More of this some other time. If Ken Stokes reads this I would be pleased if he could correct any mistakes I may have made regarding the details of the car.

Ted Longshaw the well known R/C racer was a very successful slot racer and he has been kind enough to loan me one of his most successful slotcars. This car uses similar parts to the Stokes car but differs in the respect that a hand carved balsa wood body is used. The prototype in this case is a 1947 Indy Novi.

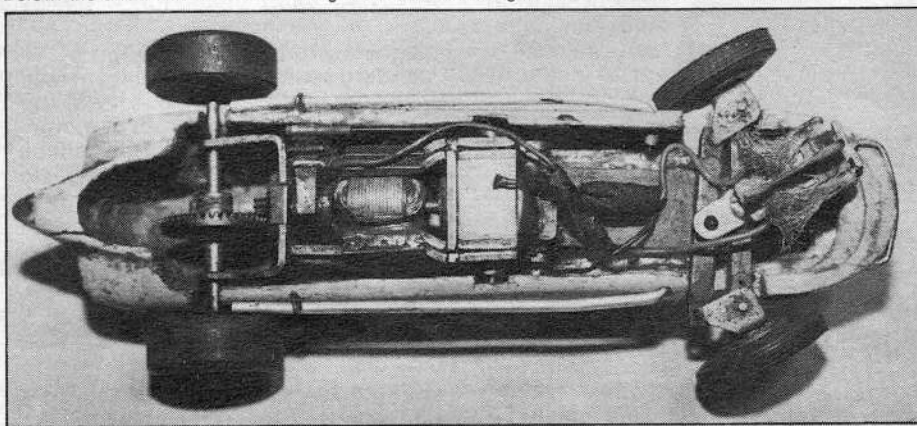
The parts can be obtained from - Barry's, 27 Ashley Road, Boscombe, Bournemouth, Hants.

Parts list

1. Mercedes W154 ABS bodyshell kit.
2. 3-pole motor with 3.5:1 bevel gears.
3. 1 pair of $\frac{3}{32}$ ballraces.
4. 1 pair of 700x15 air tyres and threaded axle.
5. 1 steering unit and slot guide to match body.
6. Motor lead wire and pickup braid.
7. 1 pair of front wheels and tyres to match body.

Note: *MRRC* intend to sell a complete set of parts to order.

Below: the underside of the Ted Longshaw Novi revealing similar mechanics to the Ken Stokes car.



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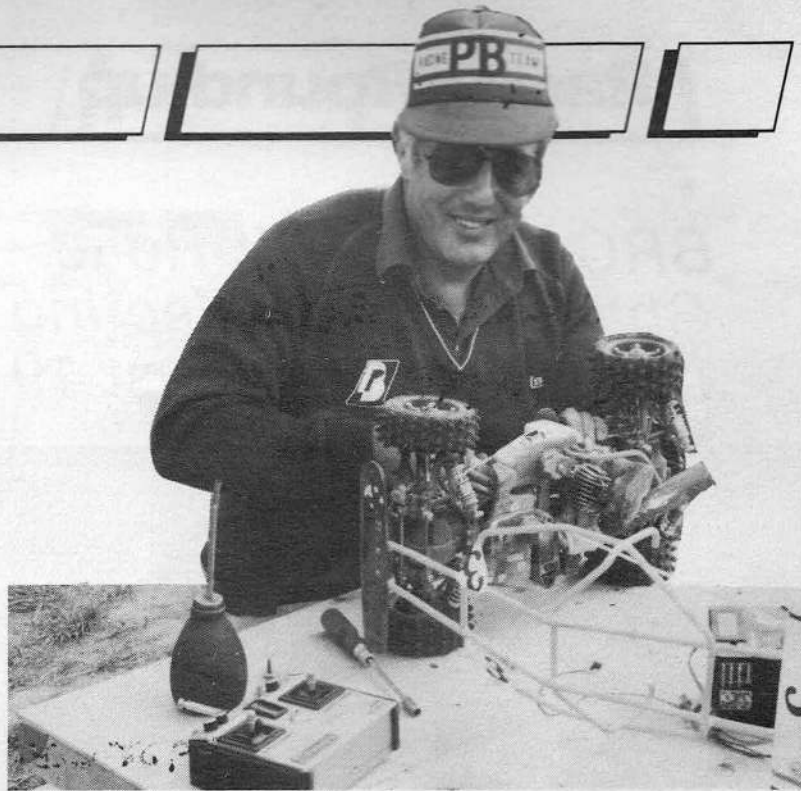
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Southampton BRCA 1/8th Scale Off-Road Championship meeting report by Tony Knightley

THE 15th OF JULY saw the Southampton Off-Road club run their first B.R.C.A. meeting at their Lordshill Outdoor Recreation Centre site. The weather was bright and breezy, hence the track was very, very dusty. Forty-one competitors turned up for the prompt 10.30 start, so the racing was bound to be fast and furious!

The first heats saw the emergence of the new Garbo "Gepard" which was showing its potential in the difficult conditions, taking both FTD and overall winner but more of that later. Everyone was given four chances to put in a good eight minute heat time to qualify for the twenty minute finals. By lunch-

Right: the 'Guv'nor,' Keith Plested of PB Racing Products makes ready his Garbo 'Gepard' for the unrestricted final.



saw the "Yankees" of Chris Clark (Southampton) closely chased by Peter Davis (Bournemouth) with his "Alpha", both being on the same lap at the finish. The finals also saw two other Southampton members (Rex Fryatt and Mike Hills) racing so it was a good day for the South Coast.

The unrestricted final saw some of our European Off-Road championship contenders having their last race meeting before leaving for Sweden.

All eight cars set off at a screaming rate, but the pace soon slowed with mechanical problems mainly to the "Gepards", (factory assembly?) Keith Plested (new Southampton Off-Road Club member) soon settled to a comfortable lead with a constantly changing chasing group. The race continued in this vein, with at one point Southampton members in the top two places, but the problems still dogged the competitors. Just when it seemed that Keith had had a trouble-free race, his "Picco" blew a con-rod. Luckily time was on his side and John Skidmore was unable to make up the deficit.

Unrestricted Final

Pos.	Name	Laps	Car
1	Keith Plested	46	Gepard
2	John Skidmore	42	Gepard
3	James Weedon	40	Yankee
4	Mike Harney	37	Cobra
5	Dave Bott	31	Yankee
6	Gary Marsden	13	Gepard
7	Ted Longshaw	12	Gepard
8	Tony Marsden	1	Gepard

Many thanks from the racers for all the hard "behind the scenes" work.

A good days racing was had by all (well almost!), and it was encouraging to see so many circuit racers involved. (Nice one Ted).

Race Director: Tim Reynolds
Referee: Dave Farndale

Restricted Final

Pos.	Name	Laps	Car
1	Chris Clark	37	Yankee
2	Pete Davis	37	Alpha
3	Terry Lawless	34	—
4	Tony Miller	34	Alpha
5	Rex Fryatt	28	Alpha
6	Justin Mackey	18	Yankee
7	Simon Heap	14	—
8	Mike Hills	8	Alpha

Below: the Restricted class finalists with their cars and trophies.



Above: Unrestricted finals left to right: John Skidmore; Gary Marsden; Ted Longshaw; Tony Marsden; Dave Bott; James Weedon; Keith Plested and Mick Harvey.

time things were really cooking (no pun intended) with three competitors putting in nineteen laps plus. These scores going to Gary Marsden (FTD), James Weedon, and Mr. P.B., Keith Plested.

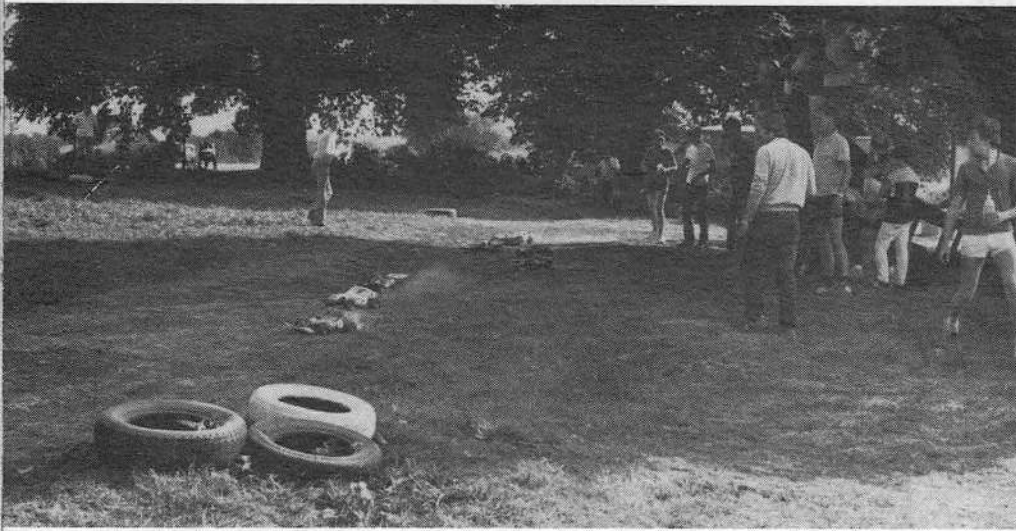
Lunchtime saw a great deal of work being carried out to the cars in the form of stripping and cleaning to remove the vast amounts of dust which, as ever, got in everywhere!

Racing resumed with the majority of the cars still running, and by now air-filters were working overtime. The afternoon saw a continuation of the close racing seen in the morning, with the new "Gepard" alongside the established "Yankees" and "Cobras".

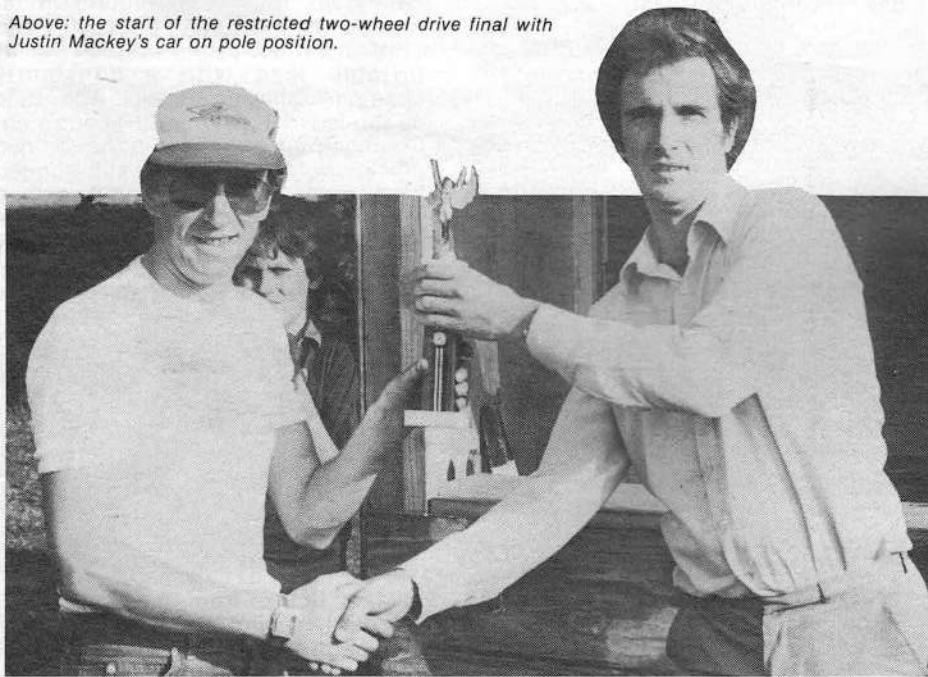
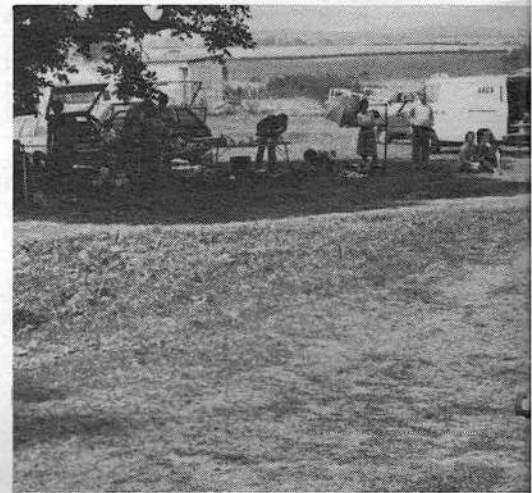
The finals saw a "Le Mans" start as opposed to the standard heat grid start. The restricted final was run first and

Racing Round-up

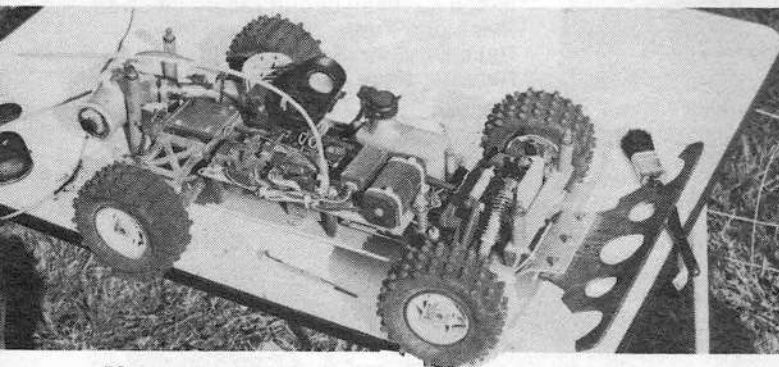
BRCA 1/8th Off-Road Championship Meeting Lilford Park, August 19



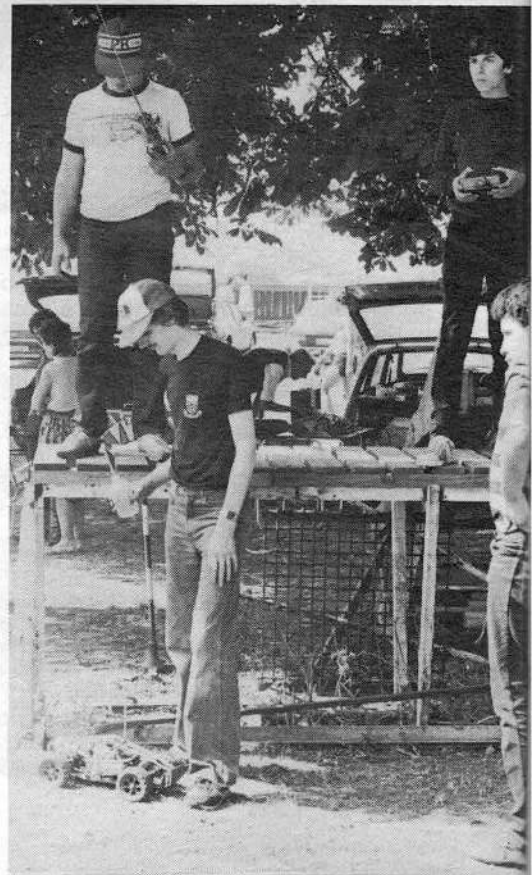
Above: the start of the restricted two-wheel drive final with Justin Mackey's car on pole position.

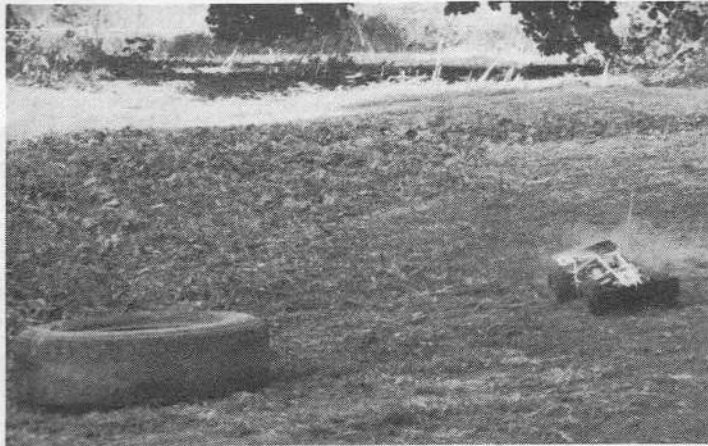


Above: Lilford car club secretary, Steve Taylor, presents Derek Brader, with the winner's trophy for the Unrestricted class. Derek also attained FTD with his Serpent 'Cobra.'



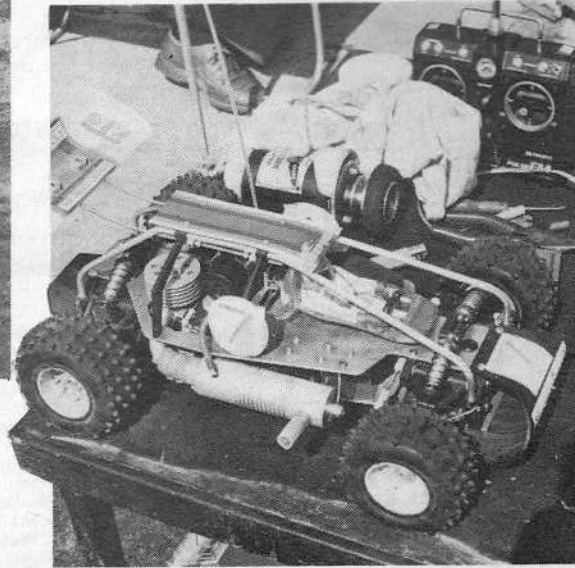
Left: James Weedon's Yankee four-wheel drive car performed well against the 'new' opposition of the 'Cobras,' 'Leopards' and 'Gepard.'



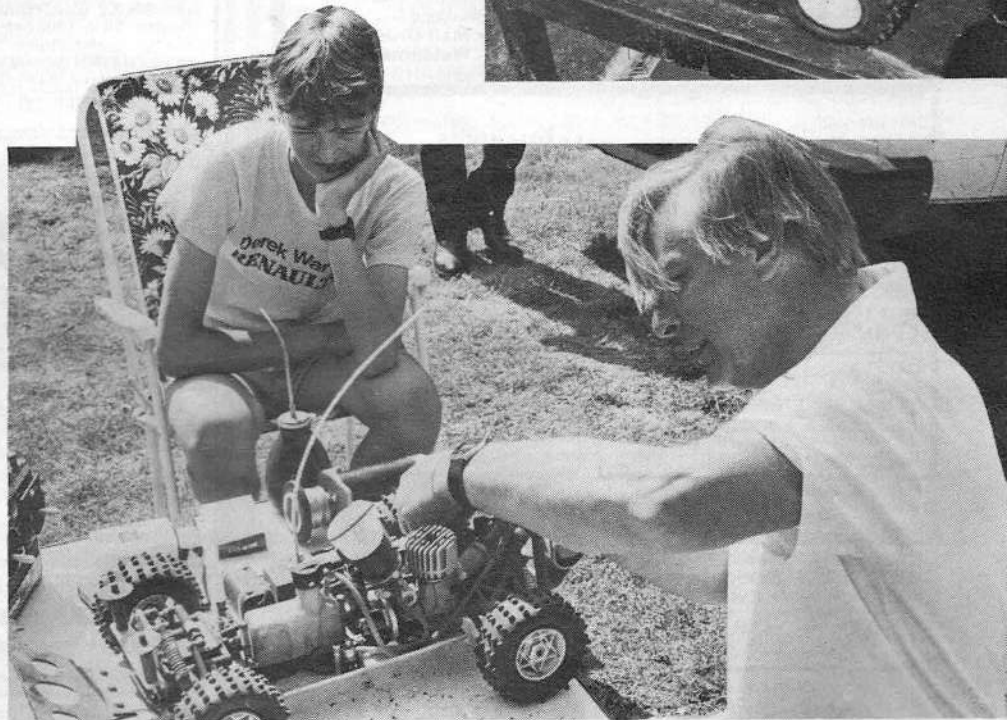


Left: Justin Mackey receives his first place, restricted class, trophy from Steve Taylor. Justin won his final by over ten laps. Above: the Lilford chicane demands concentration, quick reactions and an excellent handling car.

Below: fastest car throughout the day. Derek Brader's Serpent 'Cobra' winner of the Unrestricted final by seven laps.



Above: four-wheel drive cars race along the Lilford straight waiting for the start of the Unrestricted final. Left: will it work? Colin Strauss (rostrum) ponders the question along with mechanic Damon Gunn. Right: the Weedons (James Weedon Junior is the driver) attends to the Yankees' needs before the final.



Results

Restricted 2WD

1. J. Mackey	51	Kyosho
2. P. Scatcliffe	40	Sigma
3. T. Lawless	39	Sigma
4. S. Heap	35	Yankee
5. J. Thompson	19	?
6. T. Miller	17	?
7. P. Grant	6	?
8. T. Bloomfield	1	PB

FTD

Unrestricted 4WD

1. D. Brader	59	Cobra	FTD
2. D. Chung	52	Gepard	
3. S. Dean	51	Serpent	
4. T. Kersey	49	Leopard	
5. M. Harney	49	Cobra	
6. D. Ashton	41	Leopard	
7. J. Weedon	38	Yankee	
8. W. Burkinshaw	35	Cobra	

20 minute finals



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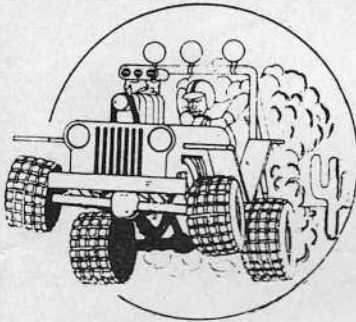
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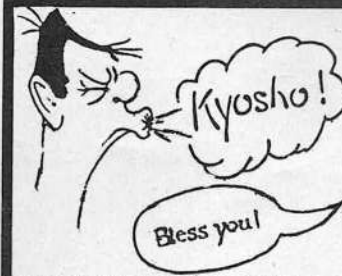
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