

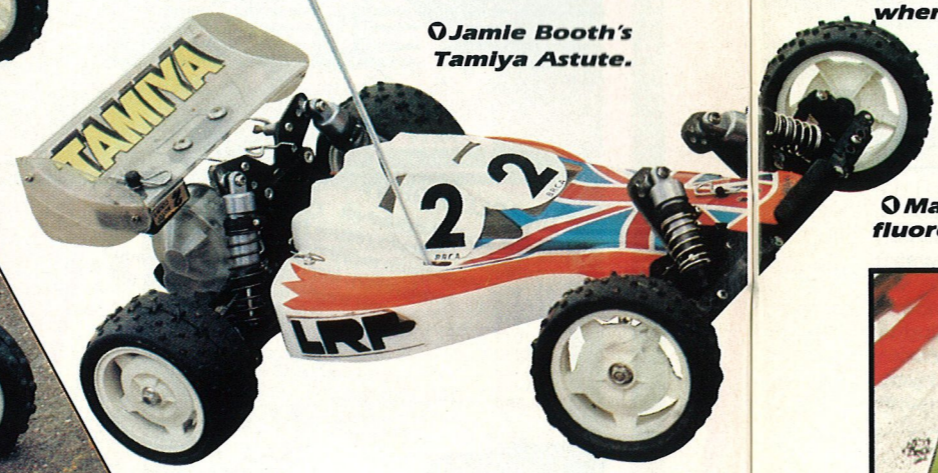
OFF-RO

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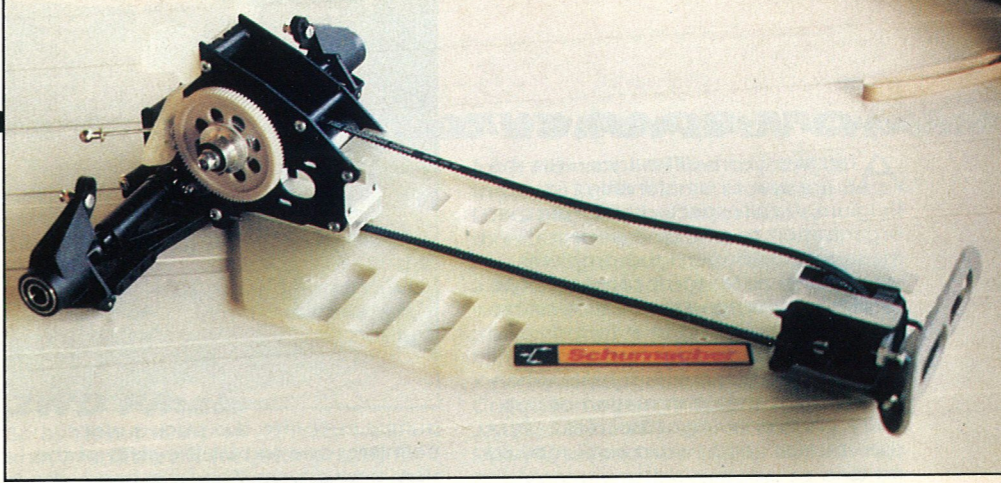
PEAN CHAMPIONSHI



◻ Jamie Booth's Tamlya Astute.



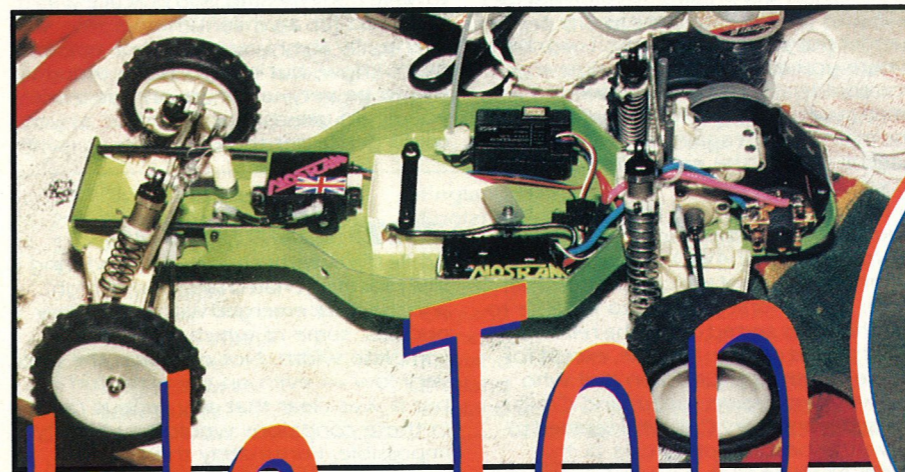
◻ A lot of modifications for the Pro Cat can be seen here on this development car — more details when we have them.



◻ Mark Nell's RC10 team car with fluorescent chassis.



◻ Rory Cull's RC10. Notice the transponder is mounted right at the front of the car.

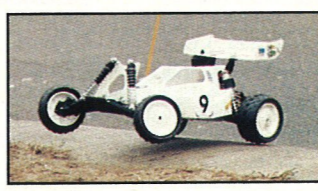


1991 1/10 Off-Road European Championships

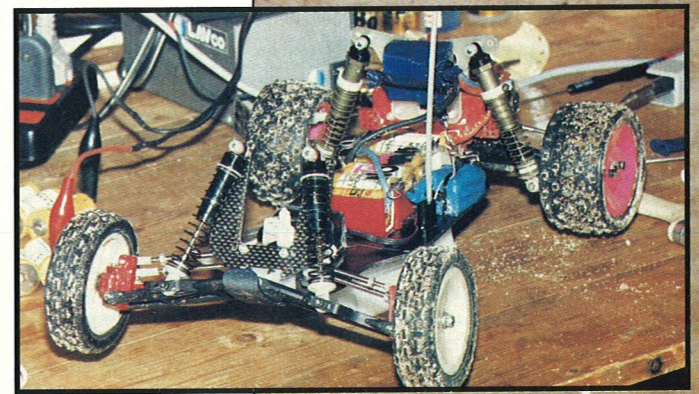
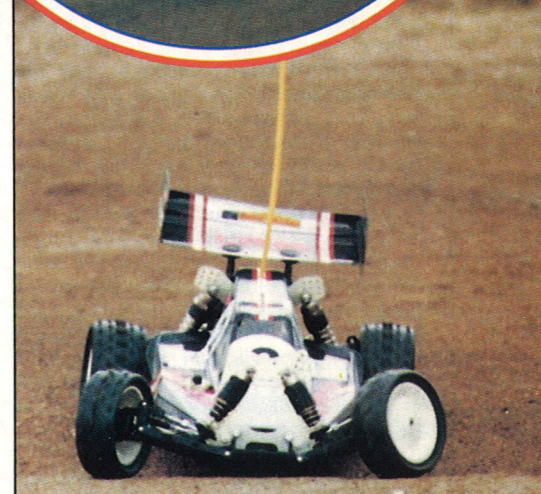
Drescher's Double Top

New RRC contributor Piet Goemans was at Southend on July 18-21 to report on the 1991 European Championships.

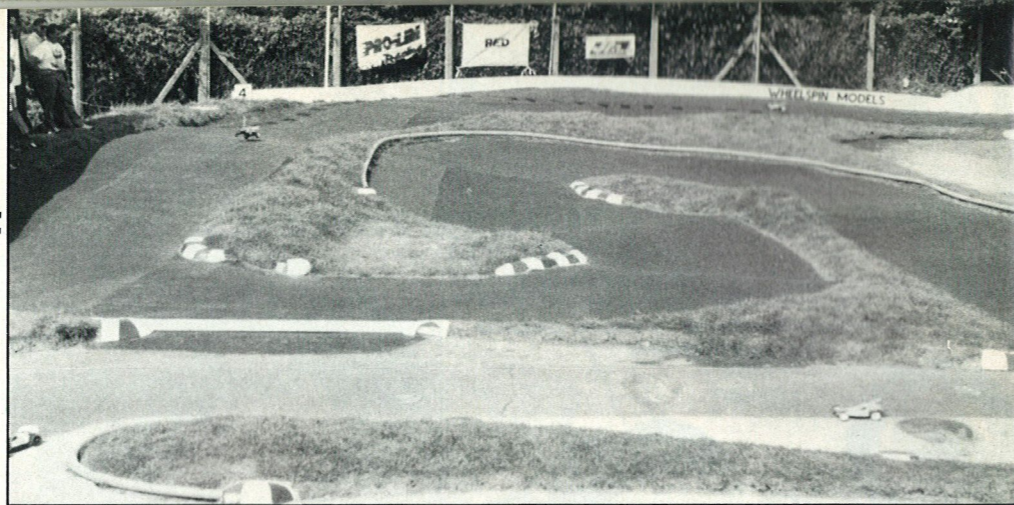
◻ Double European Champion for 1991 — Craig Drescher.



◻ Craig Drescher's winning RC10 team car.



1/10 OFF-ROAD EUROPEAN CHAMPIONSHIPS



After last years difficulties with the European Championships in Belgium, we all expected a lot from the organisation to put up a perfect meeting. At Antwerp the problems started when the track proved not to be able to withstand the beating of the 80 2WD cars during four rounds of qualifying. So this year had to be different. We got the first hints when we received the confirmation of our entry, and a drawing of the track, with the "tarmac" and "astro turf" marked on it.

When we arrived on Wednesday morning our 'interest' grew even more when we saw the track before us. It was definitely not going to break up, but it was going to be very difficult to set the car up to the various kinds of surfaces, jumps and turns.

For the 2WD event the track was run in a counter clockwise direction. You started off in the infield in a straight line on tarmac, which immediately changed to hard packed dirt. Here you had to negotiate a 180° righthand turn, again onto a bit of tarmac. Another hairpin to the left put you on the astro turf, which proved to be even grippier than any carpet I had ever raced on before. A short straight was followed by a very long sweeper to the left, which ended up into a slow left right combination in front of the rostrum. All this was made very difficult because of the jumps and

bumps built into the track surface, definitely one to test the skills of the very best drivers. The next bend was a 90° right hander on tarmac, followed by a U-turn to the left. Another right hander put you onto a small bit of grass where you could lose more time than you could gain. This was followed by a small sweeper on tarmac leading up to the main straight again. All in all a very difficult, but in the end enjoyable track to race on.

During the morning there were four hours of free practice for 2WD, followed by four hours of 4WD practice in the afternoon. Most of the competitors had a go, but no-one seemed to be able to get their cars sorted out in the relatively small period of time. No-one, except for Jamie Booth and Christian Keil who showed impressive speed, and Craig Drescher and Rory Cull who seemed to have the best handling cars at that stage. Practice was run very well and we got the first impressions of a very

strict but competent organisation.

The only problem occurred when Craig's box of spare crystals appeared to have gone missing, and practice was cancelled for a while. Whether eventually they were found or not, I don't know, but many people thought this to be very unfair, as on this track you could use as much practice as you could get to set the car up.

2WD Qualifying

While the weather had been fine during free practice, it had changed overnight, and the track emerged with quite a few puddles, some of which covered its complete width. Not only was the grip very low — even on the astro turf — but it was clear that any serious racing in these conditions would be virtually impossible. Fortunately the weather forecast was positive and this led the race director to delay the time schedule

EUROPEAN CHAMPIONSHIPS 1/10 OFF-ROAD EUROPEAN CHAMPIONSHIPS

by one hour. The sun broke through, the track started to dry up, and while the team managers were being introduced to the Mayor of Southend, drivers were anxious to get out for their first timed practice and qualifying rounds.

It was Jamie Booth who led the way with 12 laps in 322.77, closely followed by Craig Drescher on 325.35 and Kevin Moore, who missed the 12 laps by 41/100 of a second. It was obvious that a lot of cars still weren't 'dialed in' as their drivers would like. The result was that times improved dramatically during the next two rounds that day. It was important to get a good run, since the weather could change overnight. The provisional results showed eight British drivers, one French and one German driver in the A final.

overall. Marc Neale improved to take ninth which pushed Luke Burley to tenth on the grid. Tamiya Switzerland's Roland Jff took a sad eleventh place, making 12 laps for the first time at this meeting. The most disappointed driver must have been Jurgen Lautenberg who qualified 14th and would not be able to defend last year's title.

2WD Finals

So by now the top ten drivers were known and they were getting ready for the first leg of the A final. Last minute changes to the set-up could be made during the ten minutes of free practice they were given to sort out any frequency problems. A few minutes later spectators gathered around the track and cars were being put on the grid. Countdown had begun.

1	Craig Drescher	England	12/314.80
2	Steve West	England	12/317.82
3	Jamie Booth	England	12/318.14
4	Kevin Moore	England	12/321.60
5	Sasha Falter	Germany	12/325.67
6	Rory Cull	England	12/325.75
7	Stephane Vilorio	France	12/326.30
8	Marc Neale	England	12/326.79
9	Leigh Edwards	England	12/328.52
10	Luke Burley	England	11/300.90

Most of these drivers were using the Associated RC 10, which seemed to have a bit of an advantage, due to its tendency to oversteer. Schumacher two row studs and Losi X-pattern rears seemed to work brilliantly for them. Other cars were struggling to find enough steering response, especially under power on the tarmac. The only solution for them was to cut up some X-patterns, remove the X, and glue them back together again to suit the narrow front wheels.

The break overnight allowed the competitors to work a bit more extensively on their cars, and even though some were worried they wouldn't be able to improve because of the lower temperatures of the tarmac, the extra preparation payed off.

Both Steve West and Jamie Booth took a few tenths of a second off their times, but their relative positions stayed the same except that last years' 2WD Eurochamp, Jurgen Lautenberg, finally managed to get into the A, ninth on the grid. Heikki Naulapaa of Norway and David Delapierre of France also made 12 laps to put them 11th and 12th respectively. Round five saw a change of positions, with Jamie taking second spot on the grid, and Mark Tatman fourth, after a very clean run. Another brilliant effort by Team Tanaplan driver Luke Burley got him into the A again.

The tension between competitors grew as there was only one round left to improve. Craig confirmed his pole-position by improving by about three seconds. Kevin Moore got a good last run and was able to improve from his round three time to take fourth place.

William Mitchum took his last chance and jumped about 12 places to eighth

A Final — Leg One

Jamie Booth was fastest off the line, but had to take a wide line into the first hairpin to avoid Craig Drescher. This slowed him down, and Kevin Moore and Rory Cull crashed into him. The big pile-up allowed Craig to escape with only Sasha Falter to follow. Sasha made a mistake and Marc Neale got through to second place. Meanwhile Steve West, William Mitchum and Rory tried their best to keep up, but it was Jamie who was moving up all the time. He caught William and closed up to the fight for second place together with Steve and Rory. By this time Craig had a massive lead. A mistake by Marc and the coming together of Steve and Rory made Jamie's return all the more difficult. Craig lost a bit of time in the last few laps, but he was still the only one except for Sasha to cross the line before the five minute mark and take the extra lap which can be so important in the three leg finals. Craig won, 13 seconds ahead of Sasha, with Steve West in third.

H, G and F finals were run next. A mistake by the leading drivers on the last lap allowed Jos van den Heuvel from Holland to win the H final. Kyosho Germany driver Klaus Wilhelm, who struggled to sort out his new car on the very difficult track, got it right in the G, and Nick Cochrane took the chequered flag in the F final.

A Final — Leg Two

Mark Tatman made a mistake off the line, but Craig, Rory and Jamie got away. Marc Neale and Steve West made their way past Luke Burley, who rolled his car, and they moved up to fourth and fifth. Jamie lost his concentration

for a moment and had to let Marc through. Kevin Moore moved up past Luke, but was too far behind to threaten the leaders.

Halfway through the race Craig had a six second lead over Rory and Jamie with Marc and Kevin closing in. Jamie passed Rory for second, and with one minute to go the return of Marc and Kevin was stopped when they collided. Craig won again, this time followed by Jamie, Rory and Marc, all making 12 laps. His second warning for bad driving got Marc a one lap penalty, so only Craig, Jamie, Rory and Sasha Falter were still in with a chance to win the 2WD European Championship.

Stian Vala from Norway won the E final, Markus Vrana from Austria won the D, and Helge Johannesen made the most of his pole position to take the C final for Norway. In the B final Leigh Edwards got away to win, followed by Erik Andreassen and David Delapierre, who rolled his car but managed to keep third place.

A Final — Leg Three

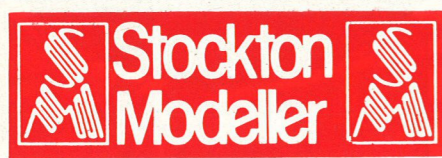
An irrelevant buzzer in between the countdown and the actual starting signal of the third leg was the cause of a lot of confusion. Craig and William jump started and were penalised with ten seconds whereas one lap would have been more in line with EFRA rules. Anyway, Craig got away and was followed by Rory and Steve. Rory made a mistake on lap four and had to let Steve, Mark Tatman and Marc Neale through. Mark Tatman dropped back when he rolled the car on the very next lap. By the three minute mark Craig again had a six second lead, this time over Steve West. Meanwhile Jamie had been moving up through the field and was holding third place, hotly pursued by Marc Neale, Mark Tatman and William Mitchum. With thirty seconds to go Craig was coming up to lap Sasha and Luke. He crossed the line first, followed by Steve West and Jamie who beat Rory by three tenths of a second.

So the 2WD champion was known. Craig Drescher TO-ed and won all finals, as if it had been easy. The organisation put up a reception at Southend's Civic Centre for the official prize-giving and, while everyone received a memento, most of them were probably already thinking of the 4WD event....

4WD Qualifying

Racing in the clockwise direction made the track completely different. The long astro turf sweeper was now extremely difficult because of undulations at the exit. If you went too fast over them, you would lose steering, and therefore had to correct a little bit later, which would make the car roll, if you tried to avoid the small bumps, you had to go very close to the outside barrier. It was obvious that this was not the place to try to gain a few seconds!

Free practice started on time, and it was pretty warm for the time of the day.



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LA09 Thrust bearing	£3.08				
LA12 Rear drive belt	£3.53				
LA13 Front drive belt	£4.35				
LA14 Damper stay	£5.39				
LA16 Chassis	£20.69				
LA21 King pin	£1.79				
LA22 Steering pin	£1.99				
LA26 Suspension arms	£3.85				
LA27 Front hub carrier	£1.55				
LA29 Upper rod end set	£1.53				
LA32 Front axle box	£1.35				
LA35 Gear cover	£1.35				
LA38 Screw set	£8.45				
LAW01 Damper stay	£22.95				
LAW05 Adjuster rods	£6.89				
LAW36 Body & Undertray	£15.29				
LAW42 Double wing	£3.55				
OT4 King pin	£2.50				
OT6 Drive shaft	£5.12				
OT16 Knuckle arm	£3.99				
RW RACING MANTA RAY BITS					
Carbon fibre prop shaft set	£15.35				
GRP chassis conversion	£25.45				
Ballraced steering set for GRP chassis	£20.45				
Nylon idler gears	£6.10				
1-way propshaft	£21.95				
RW223L Long chassis kit and propshaft	£44.95				
RW256S 15T Nylon final drive gear	£3.95				
RW256X 17T Nylon final drive gear	£3.95				
MMS MANTA RAY BITS					
TM1 Front alloy shock mount	£16.95				
TM2 Rear alloy shock mount	£16.00				
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T29 Fully machined gearbox for Pro Cat	£68.50				
T30 Ballraced steering set for Pro Cat	£29.50				
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Option b)	£62.45				
Stage III (Ballrace Set)					
(Two extra large, 10 large, two small)	£18.00				
R200/PRUGEOT 405					
FD1 Bumper	£1.53				
FD3 Belt	£2.81				
FD12 Front bulkhead	£2.00				
FD16 Brake parts	£2.00				
FD21 Flywheel set	£5.10				
FD22 Starter holder	£2.30				
FD24 One way assembly	£5.15				
FD25 Muffler	99p				
FD28 Fuel tank	99p				
FD29 Fuel tubing	99p				
FD30 Battery holder	99p				
FD31 Flywheel set	£4.35				
FD36 Link set	£2.35				
RM11 Air filter	£2.05				
AB16 Clutch bell	£2.55				
AB17 Clutch spring	£2.30				
GRASSHOPPER/HORNET					
A parts	£3.99				
B parts	£5.50				
C parts	£4.50				
D parts	£2.99				
S parts	£2.50				
Gearbag	£3.40				
Counter gear	70p				
Chassis	£6.70				
Grasshopper bodyset	£15.99				
Hornet bodyset	£15.99				
GRASSHOPPER II					
A parts	£3.40				
B parts	£5.50				
C parts	£3.99				
Chassis	£4.75				
Upright set	£2.99				
Steering rods	50p				
Super G Shocker/Diaphragm Set	£3.20				
Body set	£14.99				
MAD CAP					
A parts	£6.20				
B parts	£2.50				
C parts	£1.99				
D parts	£4.50				
E parts	£3.85				
F parts	£3.60				
G parts	£2.80				
Bodyset	£13.99				
MANTA RAY					
A parts	£7.30				
B parts	£8.50				
C parts	£4.50				
D parts	£4.20				
E parts	£5.80				
Gear set	£9.60				
Wheel set	£4.20				
Chassis	£8.99				
Upright	£2.25				
Drive shaft	£2.25				
Shaft bag	£3.40				
Body set	£13.99				
LUNCHBOX					
A parts	£3.99				
B parts	£5.50				
C parts	£4.50				
D parts	£2.50				
S parts	£1.99				
SA3 uprights	60p				
Damper shafts	£3.99				
Bumper	£19.99				
Body set	£8.20				
Wheel set	£1.99				
Tyres pr	£1.70				
Pinion	£1.70				
THUNDERSHOT/DAGON					
A parts	£6.99				
B parts	£2.50				
C parts	£3.40				
D parts	£1.70				
Gear set	£5.60				
F parts	£1.60				
Bumper	£2.10				
Driveshafts pr	£4.20				
Propshafts	£1.15				
T/shot body parts	£12.99				
T/Dragon body parts	£16.99				
Sickers T Shot	£1.50				
Sickers T Dragon	£1.99				
Chassis	£3.70				
BOOMERANG					
B parts and bumper	£4.60				
C parts	£3.50				
D parts	£1.65				
F parts	£1.95				
G parts	£2.99				
H parts	£3.10				
Bumper	£4.50				
Chassis	£3.70				
Bevel gears (small)	60p				
Bevel gears (large)	80p				
Drive Shafts pr	£1.75				
Body set	£14.99				
MONSTER BEETLE					
A parts chassis	£9.99				
B parts	£3.99				
C parts	£11.80				
E parts	£4.50				
G parts	£4.99				
H parts	£2.99				
J parts	£7.99				
K parts	£4.20				
Wheel set	£9.60				
Tyres pr	£13.60				
Pinion	£1.70				

● **1/10 OFF-ROAD EURO**

Continued from page 13

The main problem again proved to be finding enough front end grip. X-patterns all round, or cut Schumacher 3-row fronts with X-patterns on the rear seemed to give the best balance. A relatively low car was useful on the astro turf, but you needed a bit of suspension travel to absorb the bumps. The main thing was to prevent the car from rolling and to blast away on the short straights.

It was Rory Cull who got it right first time round, closely followed by Steve West and Marc Neal. Again Jurgen Lautenbach was having problems so early in the meeting, but it was new 2WD Eurochamp Craig Drescher, who surprised all by not making the twelve laps and qualifying a provisional 40th. He changed that in the second round by taking pole with a brilliant 12/300.54. Rory was less than two seconds slower and Jamie Booth improved to take third with 12/305.74. Jurgen and William Mitchum entered the top ten in sixth and ninth places respectively.

The 13 laps seemed to be possible on this track where you could go faster every round and it was Kevin Moore who went for it but fell about one second short. Jurgen improved again and took third. Three other drivers entered the top ten which after three rounds looked like this.



Again an overnight break provided the competitors with the necessary time to think of, and work on their cars. However, Guy De Weerd was the only one to enter the A final in the first round Sunday morning, with Christian Keil just missing out. A clean run in the next round resulted in 12/304.66, enough to put him fifth on the grid. William Mitchum improved to take seventh, only 3/100 ahead of Phil Davies.

Again everything was to be lost or gained in the last round. The number of people improving was really amazing and the order of the last few places in the A changed almost every heat. William Mitchum seemed to be on schedule for the first thirteen lapper of the meeting but finally ended up with

12/301.47, third so far. An impressive bit of driving from Alan Harman got him to sixth overall. The last people to get into the A final were Guy De Weerd and Ralf Helbing, thereby pushing out Piet Goemans and Leigh Edwards who were unfortunate not to knock off a few more seconds in their last round. Phil Davies saw most of the ProCat drivers use the set-up he had found, but he had never been able to improve on his round two result. For the second time this meeting the reigning champion had not succeeded in qualifying for the A final.

4WD Finals

Qualifying had been very close and the finals promised to be just as thrilling. The

1	Craig Drescher	England	12/300.54
2	Kevin Moore	England	12/301.01
3	Jurgen Lautenbach	Germany	12/301.75
4	Rory Cull	England	12/301.98
5	Jamie Booth	England	12/305.74
6	Phil Davies	England	12/307.75
7	Mark Tatman	England	12/308.22
8	Ralf Helbing	Germany	12/308.81
9	Steve West	England	12/309.99
10	Jean Marc Betticher	Switzerland	12/310.67

ROAD EUROPEAN CHAMPION

first five were separated by less than two seconds, the others following not far behind. Again a ten minute free practice was run and the drivers were preparing their cars for the first leg of the A final.

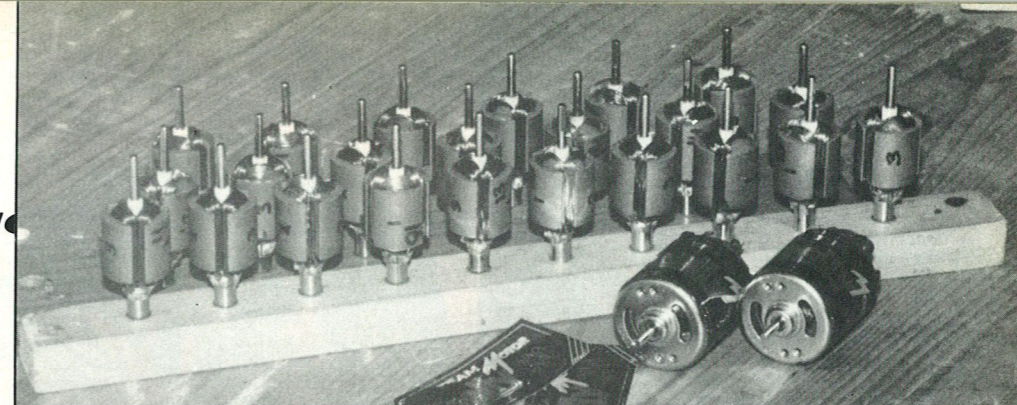
A Final — Leg One

Every 2WD A final had started off with some incident or other, and this time it would be no different. In the very first turn Jurgen Lautenbach crashed into William Mitchum, allowing Craig Drescher to get the advantage over Kevin Moore, Jamie Booth and Christian Keil. Further down Alan Harman was battling it out with Guy De Weerd. The others were struggling to follow. By lap four Craig had a huge lead over Kevin. Alan moved up to third when Jamie and Christian collided. At this stage, Craig was about one second a lap faster than anyone else. At the back of the field Jurgen passed Guy and Christian dropped back due to a mistake. The same happened to William and with one minute to go he was in danger of being lapped. Alan threatened Kevin for second place in the closing stages of the race but he finished third, trailing by 2/10 of a second. Craig was the only one to make the thirteen laps, so he immediately took a big step to becoming the 4WD champion as well!

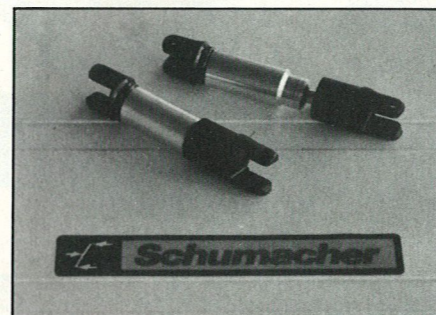
As usual the lower sub finals were run in between the first two legs of the A. Jeroen Pronk from Holland was the only one in the L to make 11 laps and Vegard Gasservd from Norway won the K final. The J put a bit of strain on the referees, with three warnings for bad driving and about as many ten second penalties. It took a lot of calculating to decide that Claus Holst from Denmark was the eventual winner. The I was very close, but it was Lars Weisskopf from Switzerland who made the most of it and another Swiss driver, Daniel Jff, took the H final.

A Final — Leg Two

Again it was time to introduce the top ten drivers to the spectators. Photographers tried to take the last few pictures of the cars on the grid, but the race director was asking them to clear the track. When the buzzer sounded Craig blasted away, with Kevin behind him. Four cars collided and only Jamie and Alan managed to avoid them. Alan made a mistake on lap two and dropped back about four places, while the unfortunate William Mitchum had to retire with a broken rear wishbone. Up front racing was very close, but it was further down the field where all the action was. Christian Keil tried everything possible to move up after his bad start, and by lap four he was back to sixth and moving in on Guy De Weerd. Jamie couldn't keep up with the front runners and had to allow Jurgen, Guy and Christian to come closer. In the final stages Guy made a mistake, but managed to limit the consequences and hold on to sixth. Meanwhile Craig had

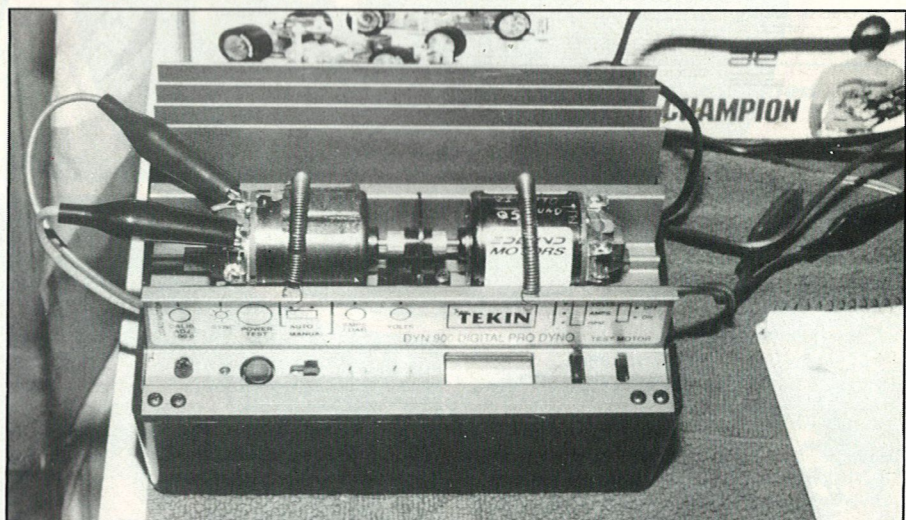


Q Just a couple of armatures to choose from!!

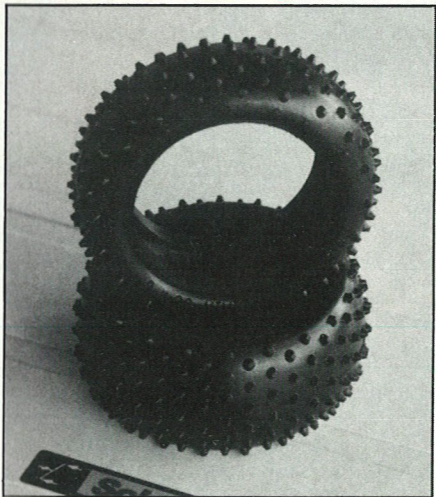


Q New telescopic driveshafts from Schumacher were being used by the team drivers at the event.

Q Tekin dyno, as seen at the Eurochamps, is currently under test in the UK by Helger Racing and may soon be available.



Q New Schumacher tyres.



crossed the timing loop for the twelfth time and the five minute sign sounded just when Kevin got to the line. Again twelve laps, but no more hopes for the championship, since Craig had made the thirteen for the second time, and therefore was already certain of his title. Jamie finished third, closely followed by Jurgen and Christian.

The rest of the sub-finals were up next. Germany's Udo Michael won the G and his fellow countryman Thomas Behnke beat Marco de Marchi in the F final. The E had a very close finish, with Jani Savolainen from Finland only one second ahead of Steve Brace. England's Steve Haynes got it right from fourth place on the grid in the D and Marc Neale, who drove so well in the 2WD event, used his pole position to win the C final by a relatively safe margin. The B featured last year's champion Phil Davies, but it was Piet Goemans who got away from pole and was assured of his victory when close rivals Phil Davies

and Leigh Edwards received a ten second penalty for corner cutting and bad driving.

A Final — Leg Three

The new European Champion might already be known, but the third leg of the A final was still to be decisive for the rest of the top ten places. For the sixth time this weekend Craig had the best start, followed by Rory, Jurgen and Jamie. After his pretty poor first two results, Rory seemed determined to finally get a good run. His hopes were shattered though when he rolled his car on the long astro-turf sweeper and the marshall ripped its body off trying to get it back on the track. So it was up to Jurgen to put the pressure on Craig. However, Craig kept his cool and he increased his lead lap after lap. Kevin put up a good effort and managed to push Jamie into a mistake, but the race was

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RESULTS (System SCE, SCR) June 1991

David Cook FTD & 1st Swords 4WD
Olly Carnelly A Final 1st RRC 4WD Mod RD5
Clive Stockham A Final 1st BRCA Pro Ten "again!"
Gareth Gordon A Final 4th RRC 4WD Mod RD5
Simon McRae A Final RRC 2WD Mod RD5
Gavin Stephenson A Final 3rd RRC 2WD Mod RD5
James Christie A Final RRC 2WD Mod RD5
Terry Stockham A Final BRCA Pro Ten
Steve Haskins A Final RRC 4WD Mod RD5

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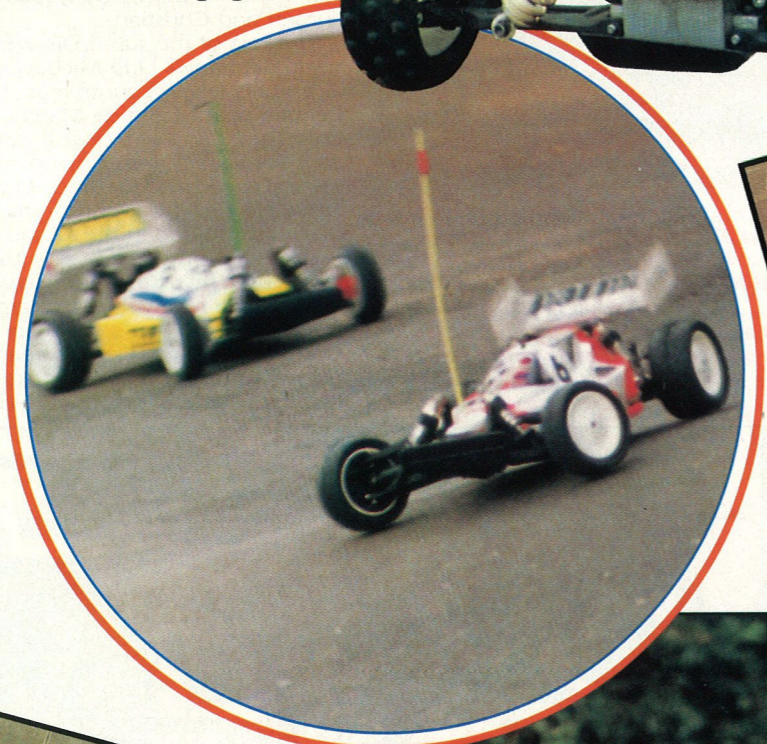
Marco De Marchi's much modified Yokomo Dogfighter.



ROAD EUROPEAN CHAMPIONSHIPS • OFF-ROAD EUROPEAN CHAMPIONSHIPS

Craig Drescher's Yokomo Works '91.

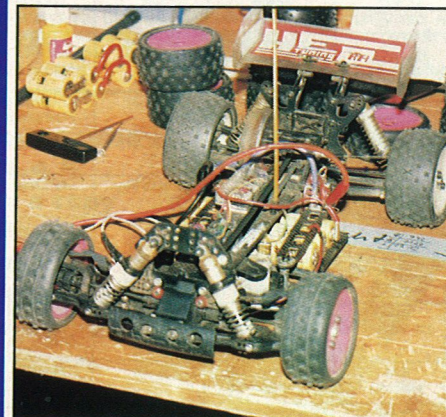
Motors being scrutineered after the 4WD 'A' Final.



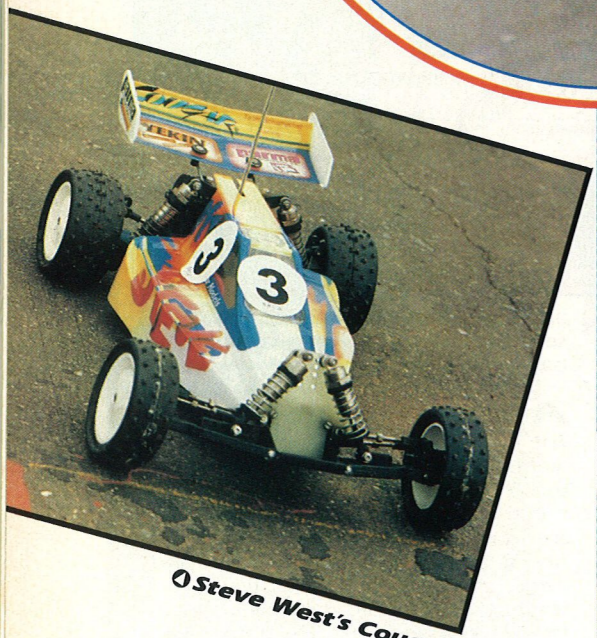
Drescher's Double Top



A 'Dallas' paint job. They just get better and better.



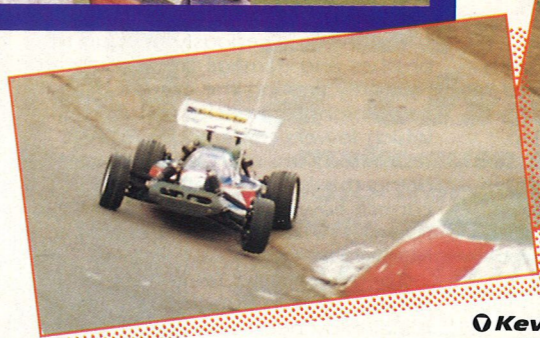
Ralf Helbing's modified Kyosho Lazer.



Steve West's Cougar.

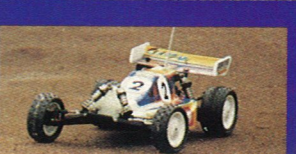


Top three in the 2WD championship: Jamie Booth, second; Craig Drescher, first; and Rory Cull, third.



Kevin Moore's Cougar with modified shock absorber towers.

Top three in the 4WD championship: Kevin Moore, second; Craig Drescher, first; and Jurgen Lautenbach, third.



Driver	Team	Car	Nicads	Motor	Speed Controller	Front Tyre	Rear Tyre	Radio	Servo	Ratio	Qualify	Final
Craig Drescher	Associated, Reedy, Novak, KO, Keil	RC10 Team Car	Keil SCE	Reedy MRT	Novak 410	2 Row Studs	X Pattern	KO Esprit II	131SH	17/84	1	1
Jamie Booth	Tamiya, LRP, KO, Nosram	Tamiya	LRP Oberle	LRP Blue SE	Nosram TL	X Pattern	X Pattern	KO Esprit II	KO Fet	7	2	2
Rory Cull	Associated, Reedy, Yokomo, Nosram, Keil, KO	RC10 Team Car	Keil SCE	Reedy MRT	Nosram Hi-Freq	2 Row Studs	X Pattern	KO Esprit II	131SH	16/84	6	3
Steve West	Schumacher, Parma	Cougar	Parma SCE	Parma 12 x 2	Tekin 420F	X Pattern	X Pattern	JR Apex	KO Fet	22/89	3	4
Sasha Falter	Associated, Keil	RC10	Keil SCE	Peak Perf. 14 x 2	Helbing RH-Turbo	X Pattern	Yokomo TR31	MPX EX-1	MPX BBS	25/14	7	5
Kevin Moore	Schumacher, LRP, MPH	Cougar	Schumacher Flashpoint	LRP Black E	LRP	X Pattern	X Pattern	KO Esprit II	KO Fet	22/89	4	6
Mark Tatman	Schumacher, LRP, Nosram	Cougar	Nosram SCR	LRP Blue SE	Nosram Hi-Freq	X Pattern	X Pattern	JR Apex	131SH	22/98	5	7
Marc Neale	Associated, Reedy, Phil Booth, Nosram	RC10 Team Car	Phil Booth SCE	Reedy MRT	Nosram Hi-Freq	2 Row Studs	X Pattern	JR Apex	KO Fet	17/85	8	9
William Mitchum	Schumacher, LRP, Galeforce	Cougar	Galeforce SCE	LRP Blue SE	Tekin 700	X Pattern	X Pattern	JR Apex	KO Fet	21/92	8	9
Luke Burley	Tanaplan, Nosram	RC10 Team Car	Tanaplan	Team Tanaplan 12 x 2	Nosram TL	2 Row Studs	Schumacher 15 x 12	Futaba 3EGX	KO Fet	18/86	10	10

Driver	Team	Car	Nicads	Motor	Speed Controller	Front Tyre	Rear Tyre	Radio	Servo	Ratio	Qualify	Final
Craig Drescher	Associated, Reedy, Yokomo, Novak, KO, Keil	Yokomo Works '91	Keil SCE	Reedy MRH	Novak 410	Cut 3 x 20	X Pattern	KO Esprit II	KO Fet	16/86	1	1
Kevin Moore	Schumacher, LRP, MPH	Pro Cat	Schumacher Flashpoint	LRP Blue SE	LRP	X Pattern	X Pattern	KO Esprit II	KO Fet	22/89	2	2
Jurgen Lautenbach	Schumacher, LRP	Pro Cat	LRP Oberle	LRP Blue SE	LRP	X Pattern	X Pattern	MPX EX-1	KO Fet	22/89	4	3
Jamie Booth	Tamiya, LRP, KO, Nosram	Manta Ray	LRP Oberle	LRP Blue SE	LRP	X Pattern	X Pattern	KO Esprit II	KO Fet	17/74	9	4
Alan Harman	RCMC, Parma, Schumacher	Pro Cat	Parma SCE	Parma	Tekin	X Pattern	X Pattern	Futaba FF3	131SH	19/92	6	5
Christian Keil	Associated, Reedy, Yokomo, Keil	Yokomo Works '91	Keil SCE	Reedy MRT	Helbing RH Turbo	Cut 3 x 20	X Pattern	KO	KO Fet	15/84	7	6
Guy De Weerd	Schumacher, LRP, PPB, Corally, Team Orion	Pro Cat	LRP Oberle Team Orion Panasonic	LRP Blue SE	Corally MMS II	X Pattern	X Pattern	Futaba FF3	Sanwa ERG-XS	29/118	8	7
Ralf Helbing	Kyosho, RH Tuning, MPX	Lazer	RH/MIH Pushed SCE	Evolution 12 x 3	Helbing RH Turbo	Cut 3 x 20	X Pattern	MPX EX-9	KO Fet	23/132	10	8
Rory Cull	Associated, Reedy, Yokomo, Nosram, Keil, KO	Yokomo Works '91	Keil SCE	Reedy MRH	Nosram Hi-Freq	Cut 3 x 20	X Pattern	KO Esprit II	KO Fet	16/86	5	9
William Mitchum	Schumacher, LRP, Nosram	Pro Cat	Galeforce SCE	LRP Blue SE	Nosram Hi-Freq	X Pattern	X Pattern	JR Apex	KO Fet	22/92	3	10

virtually run. Craig won, only just missing out on the thirteen laps, with Jurgen in second and Kevin in third place.

Even though in qualifying his lap times hadn't been all that much faster than anyone else's, Craig was always able to use his TO-spot to get away before the first turn collision. If there was any drawback to the track it must be that it favoured the man on pole. Especially in 2WD the first hairpin was too slow and too difficult to avoid people crashing into each other, even unwillingly. Anyway, everyone had the chance to qualify for first place on the grid, so there was no reason to complain afterwards! Craig put up a brilliant effort and did it twice, seemingly dominating the meeting, but in fact he was only slightly faster, but it was enough to make him double European Champion of 1991.

High Frequency Frenzy

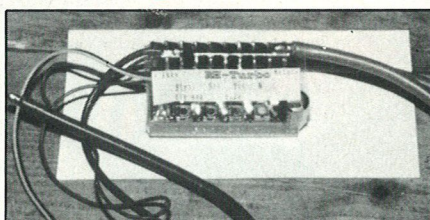
It was interesting to note that the top ten drivers used six different types of speed controllers, but they all had the same technology behind them; they were all high frequency, current limiting controllers.

The reason for this is very simple. The very 'hot' motors that are in use today, like the 11 and 12 turns at the meeting, draw a considerably high current. With an older generation controller, this

current would seriously heat up the brushes and damage the commutator. Not only limiting the current, but also using high frequencies to transfer it, which lowers the amount of heat dissipated. The most efficient way of doing this is by digitally controlling the current flow to the motor, like the Novak 410 Mic, Tekin 411 or the Corally MMS II do.

The Novak and Tekin are a fairly familiar sight in buggies, but although it's already been very successful in circuit racing this year, it's the first time that the new Corally controller has featured in the A final of an important

Q New speed controller from Ralf Helbing.



Q New LRP speed controllers, soon to be available.



off-road meeting like the Eurochamps.

The Nosram high frequency version has already been used at Birmingham during the British Grand Prix, and I expect it will be available as soon as possible.

LRP finally feel they are ready to put their speed controller on the market too. They have been working on it for more than a year and it has already won the 1990 1/12 Eurochamps in its prototype form. It features the traditional pot-meters for neutral and full throttle, as well as an adjustable brake and an adjustable current limiter. If you want to, you can choose to override this and get a little bit of extra punch by sacrificing some of its efficiency.

Ralf Helbing's RH Turbo has got the same idea, but it is realised in a different manner. Here you can adjust the time after which the current limiter will be by-passed. When you give full throttle, the controller will at first limit the current but after the allotted time period allow the maximum power to the motor. This will give you a kind of turbo effect, and hence the controller's name. If you choose a very short time it will in fact act as a non-limiting controller.

Although most of these ESC's are pretty expensive, they are more than worth their price, because of the longer motor and battery life. In the long run it might even work out cheaper. A high frequency, current limiting controller is definitely an investment to think of in the near future.