

**IFMAR**  
held at  
**CIRCUIT DE CARNOUX**

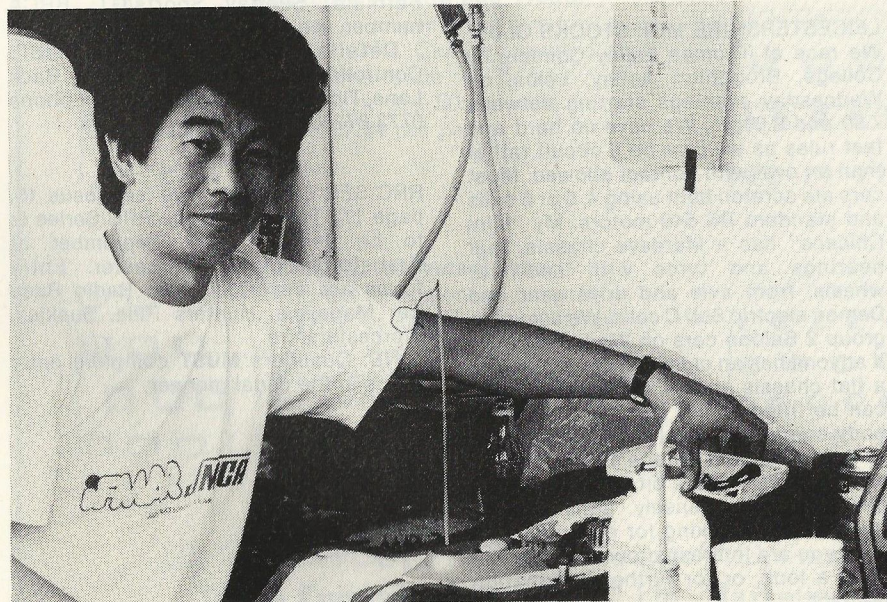
# world champs

The fourth World Championship meeting for 1/8 i.c. powered R/C cars took place at Carnoux-en-Provence in France this July. A battle of the giants that had been eagerly awaited by enthusiasts all over the world, and the manufacturers had been working to develop their cars to keep ahead of the tough opposition.

The host club, Carnoux Mini-Racing, had put in an awesome (to use the latest American adjective) amount of work to not only the track but also to promote the event.

The track owner M Rene Rossi and Race Director Micheline Lesieur had worked closely for the past 18 months with IFMAR to improve the circuit and facilities for this premier event. The result must be the finest 1/8th circuit I have seen with both driver and spectator facilities of the highest order. The pits had both compressed air and 12 volt power laid on. The race control and lap counting area had a 20 foot plus anti-glare window to give a superb view of the 300 metre track. For those with a thirst the pit area had its own bar, plus one in the adjoining night club, and one in the spectator stands. And believe me these did good business with the temperature in the 90's.

Around the circuit the spectators stands were designed to give the audience and excellent view. All in all a terrific achievement.



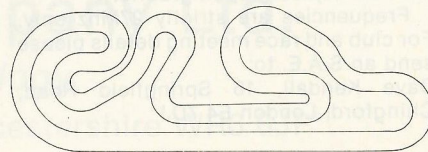
Ishihara Naoki, the well liked Japanese driver, with his Delta Eagle — OPS powered with KO Digiace radio.

By Monday morning, many of the 120 competitors from 23 countries had arrived and were settling down to the serious business of 'dialling' in their cars to the circuit. The weather was hot and fine with high traction. A strong favourite soon to emerge was Ralph Burch Jnr, often referred to as 'Robot Ralph', due to his apparent lack of nerves. Ralph went on to become top qualifier, driving his K & B powered Associated with a scorching performance putting him just ahead of Britain's Gary Culver and his Picco powered PB.

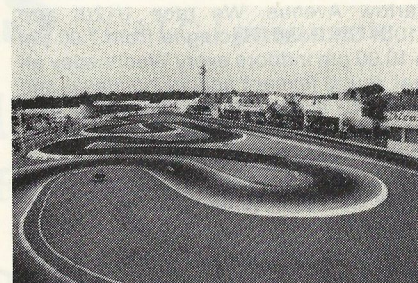
It seemed no time at all before the controlled practice had gone and the qualifying heats were underway. The target of course was to be in the top 4 qualifiers and going straight through to the final. For those other 6 drivers to reach the final it would require some tough battling in the semi's to qualify. After the qualifying heats it was:—

1. Ralph Burch Jnr USA
2. Gary Culver GB
3. Giulio Gherzi Italy
4. Rody Rohm Holland

Gary Culver just missed TQ position after a rocket like performance only to run out of fuel just before the end! So into the semi's; it was possible (though unlikely) that a driver could work his way up from the bottom semis and into the 'biggie' set into two groups of seven. The semi's were fought out with the three top drivers going through to



Above and below: diagrammatic and pictorial views of the track.



the next round.

Many of the top names fell by the wayside in the face of fierce competition; Debbie Preston in the 1/16 semi after her motor blew on the line. Debbie had really bad luck with every sort of problem presenting itself.

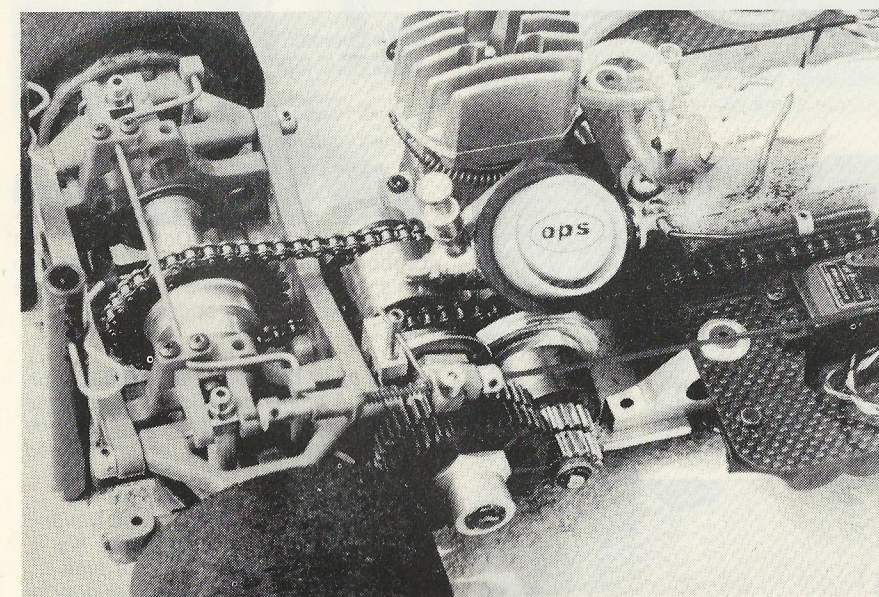
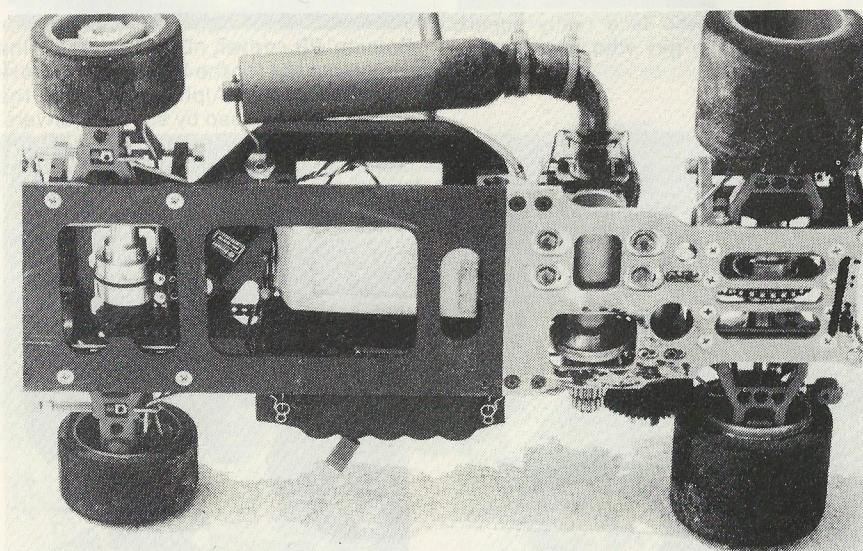
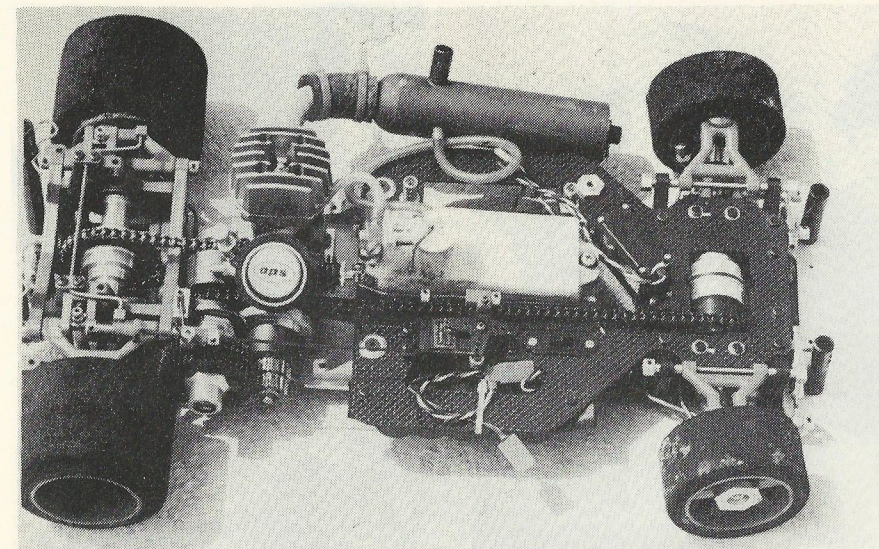
The semi-final saw reigning champion Art Carbonell being knocked out along with Franco Sabattini and Ishihara both strong favourites.

Meanwhile a tremendous battle was taking place. This commenced in the 1/8 semi when Pieter Bervoets (Serpent) and Dana Smeltzer (Associated) fought their way through no less than four semi's (five if you include the 1/4 semi which was re-run), to gain a well deserved place in the finals, a really tremendous feat.

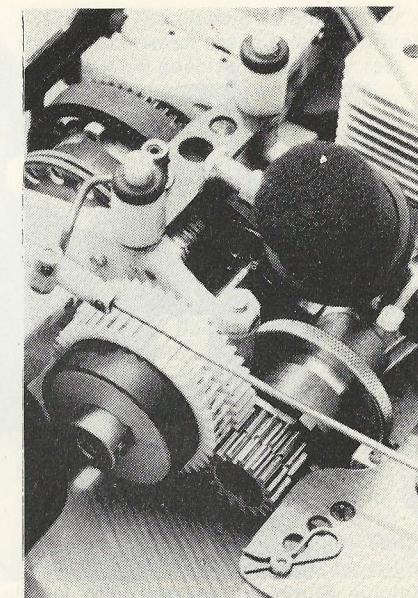
So the finals line up was:—

1. Ralph Burch Jnr USA
2. Gary Culver GB
3. Giulio Gherzi Italy
4. Rody Rohm Holland
5. Pieter Bervoets Holland
6. Ermes Tadiello Italy
7. Dana Smeltzer USA
8. David Lecat France
9. Vito Orazi Italy
10. Phil Greeno GB

After some delay the final took off at a sizzling pace with Ralph Burch Jnr quickly taking the lead, but not for long; he made on of his rare errors of judgement and hit a rope barrier on the in-field section — which hurt his car. A further error on the chicane finished his challenge. The lead was then taken by Rody Rohm who should really have won. He was driving superbly and his car doing almost everything that was



Really interesting car, from Japan, using PB components in the main. It has no less than three differentials (all PB units) chain drive to front and rear wheels via primary diff. Built by Takeda Kunsei who, of course, had to make many special parts to complete this car.



Business end of Joe Sullivan's Associated RC500 — K & B motor with OPS carb, McCoy tuned pipe, 2 speed drive unit, belt drive as had most of the RC500 cars. The belts do differ from the cars seen in Europe with closer mesh and a high reliability record. Burch claims to have used this same belt for 6 months without problems.

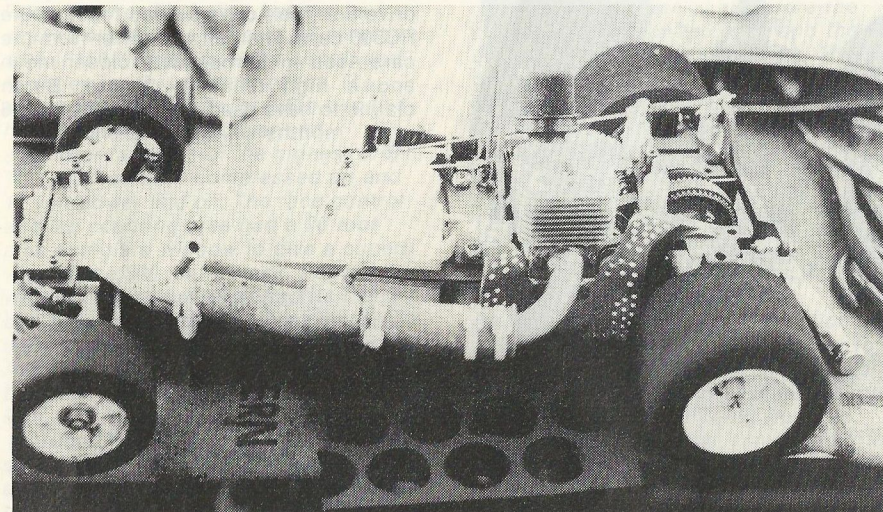


Rody Rohm who drove his Serpent car magnificently, was very fast and he initially led the field but due to problems he finished a very credible third.

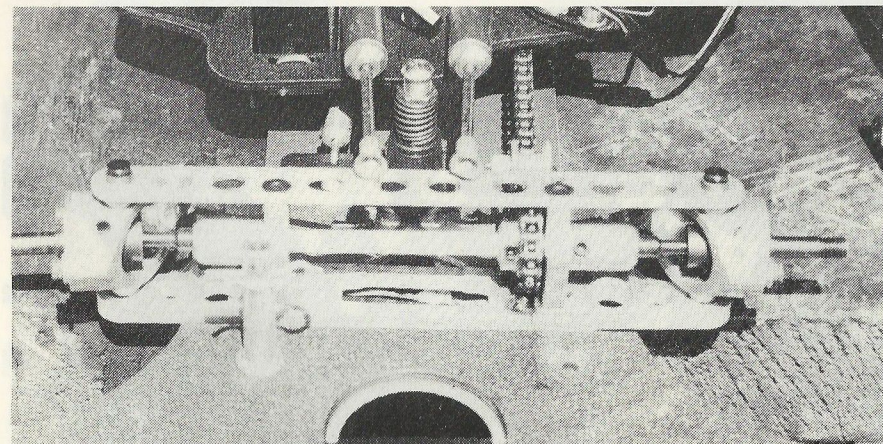




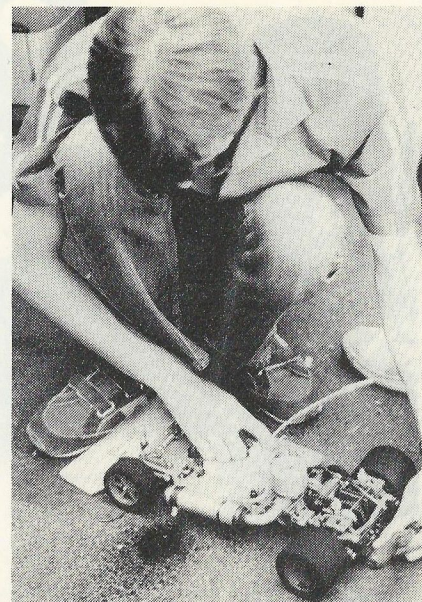
Ralphie Burch Jr (centre) with his dad Ralph Sr (left) who is a really superb mechanic and 'Mr Engine-Man', Rich Lee (right), who is the guy who breathed on Ralphie's K B motor.



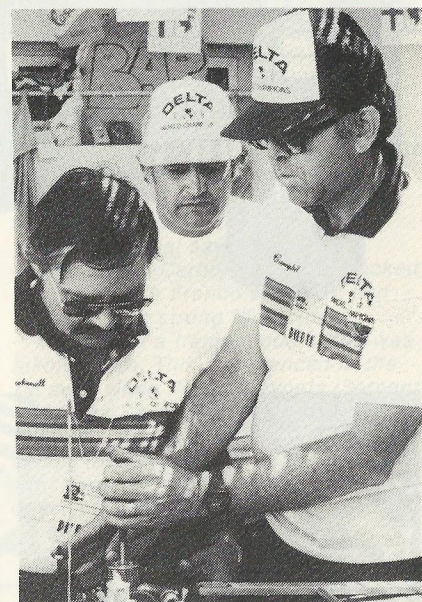
Ralph's Associated RC 500 car. Note square trined K & B motor McCoy tuned pipe and belt drive (would you believe?) replacing the original chain. The strange object bolted to the rear of the motor is a crankcase heat sink made in an effort to overcome the over heating problem that seemed to plague some of the American team.



Front end of the Kyosho 4x4 car driven by Kishi Kiyokazu from Japan. The uses a 'flat pan' arrangement and in addition to having no suspension. It has no differential fitted. Drive to front wheels is by chain and has a one way drive gear on the front axle. Said to drive well on smooth circuits.

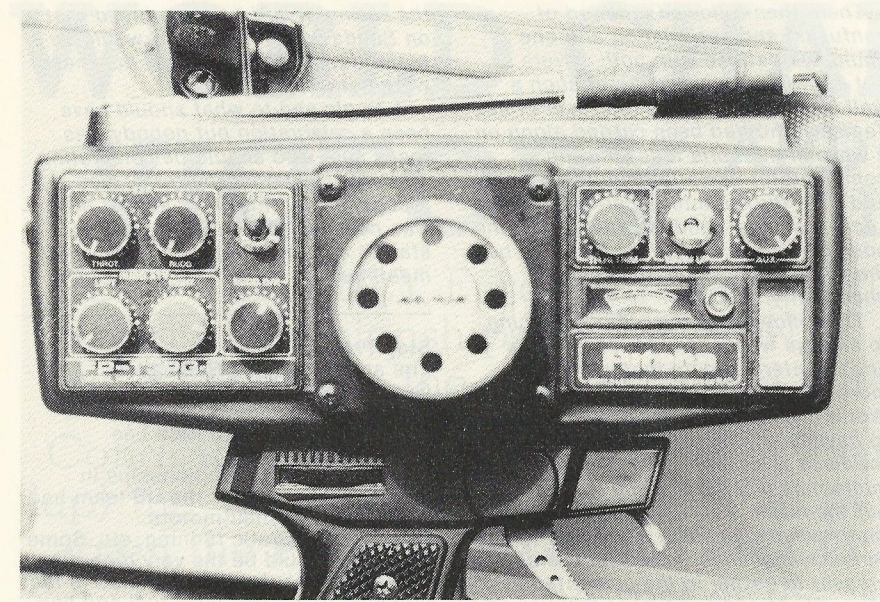


French PB driver, David Lecat, fine tuning his car for the finals. David drove a fairly standard Alpha 83 and not the special version used by some PB drivers. David finished second, subject to confirmation, as 1st and 2nd positions are in dispute!



Bill Campbell, Mr Delta, and Art Carbonell put the finishing touches to Art's car watched over by Mr Rio, the Spanish Delta consessioner.

asked of it. But soon the gremlins got at him. A nasty collision with another car causing damage took time to sort out and three times his motor stopped (fuel?), and apart from throwing his hat down at the pits in frustration, there was little he could do as Italian Orazi took the lead only to have his hopes dashed when his motor blew after 111 laps, leaving the final duel between Ermes Tadiello and David Lecat and when the chequered flag fell it was Tadiello who was announced the winner by a mere 9 inches after a 1



Latest offering from Futaba. This pistol grip transmitter looks as if it is on loan from 'Darth Vader'. It has a host of facilities from exponential switches to a warm up switch plus much more.



The formidable array of trophies.

CARNOUX MINI-RACING 09/07/83 21:37:31  
CHAMPIONNAT DU MONDE 4-10 JUILLET 1983

FINALE									
P I L O T E			P E R F O R M A N C E			S C R A T C H			
voiture	N°	N O M	Nat	penal	T E M P S	place	T E M P S	place	Km/h
01	0058	BURCH	USA		55 T 60'00"0	10	00'00"0	4	0.000
02	0115	CULVER	ENG		150 T 60'27"9	5	00'00"0	1	0.000
03	0114	GHERSI	ITA		92 T 60'00"0	9	00'00"0	7	0.000
04	0084	ROEM	HOL		160 T 60'13"2	3	00'00"0	3	0.000
05	0025	BERVOETS	HOL		137 T 60'11"0	7	00'00"0	8	0.000
06	0085	TADIELLO	ITA		165 T 60'14"9	1	00'00"0	8	0.000
07	0123	SHELTZER	USA		156 T 60'27"5	4	00'00"0	19	0.000
08	0054	LECAT	FRA		165 T 60'15"5	2	00'00"0	66	0.000
09	0026	ORAZI	ITA		111 T 60'00"0	8	00'00"0	66	0.000
10	0135	GREENO	ENG		147 T 60'01"9	6	00'00"0	25	0.000

Lap times and positions, following final, as announced by Race Control.

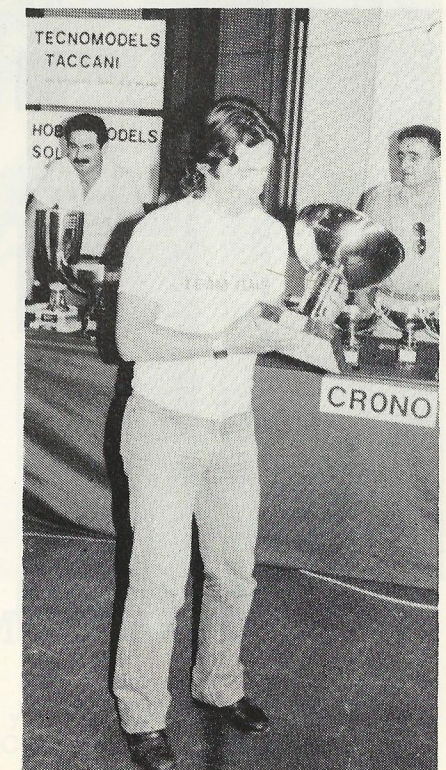
hour final. The closing 15 minutes of the race between these talented drivers had the 4000 spectators on their feet shouting and cheering providing a terrific atmosphere that will be remembered for a long time. It was, unfortunately, after the chequered flag had fallen that the problems started.

Following the finish and Tadiello being hailed as the winner it took some time to obtain the lap counting record sheets and times.

It was at this point an official protest was lodged by Bernard Poupaert of the French FFMARC. This said there may be some inconsistencies in lap times and requested verification — though this was not to be made common knowledge until later at the banquet in the evening. It was here that rumour and counter-rumours started to add to the general confusion.

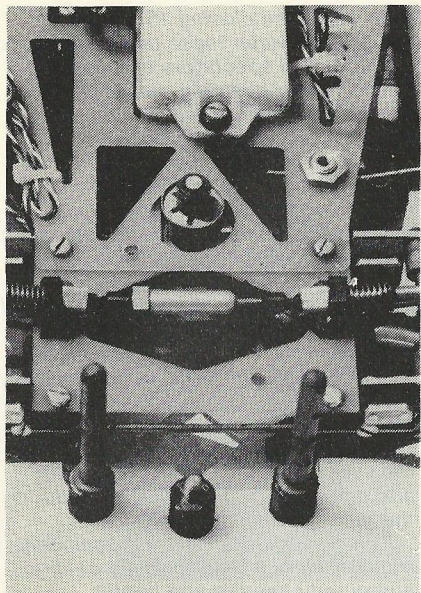
The presentation of the magnificent trophies went ahead to the usual good humoured cheering and banter.

However, when the time came to present the World Championship and second place trophies the mood changed. M Rossi explained in French that he had been asked by the world body IFMAR, via its president Ted Longshaw, to delay the presentation until the lap charts and times had been checked and verified. The French protest had been made to IFMAR and its officers felt that such verification should take place. M Rossi said he had reluctantly agreed to postpone these presentations. When Ted Longshaw attempted to explain, in English, the reason for this decision he was jeered and hissed at by many of the crowd — a most unfortunate and unpleasant spectacle.



The top Italian, Masnata.





Front end of PB's latest Alpha using monoshock, coil springs and looking very neat.



This is what it was all about the magnificent trophy for the 1983 World Champion after having just been flown in by helicopter. With the trophy Micheline Lesieur, the Race Director, who worked to hard for 18 months to host the Championships.

There then followed a period of confusion and speculation and one could sympathise with both drivers at not knowing the out come of such a well fought and closely run race. Ermes Tadiello who had been carried along on a wave of euphoria following the commentator declaring him the winner and then thrown into uncertainty. David Lecat was now suddenly faced with the possibility, and hope, that he could be the winner but, again, the same uncertainty.

The following morning the only thing to emerge was a new set of rumours and counter-rumours that were even more confusing, but as to who was World Champion no decision appeared to have been made, either by IFMAR or the Race Directors. It was following the customary IFMAR meeting to thrash out the format for the next two years, that track owner Rene Rossi and Race Director Micheline Lesieur asked all present to gather in the presentation Marquee. Here he made a blistering speech about the French protest and said it was the decision of the race directors to declare Ermes Tadiello World Champion and David Lecat runner-up.

The ceremony ended as abruptly as it had started and brought to a close

the racing. It had been arranged that on Sunday afternoon there would be a team race and other events but these were not to be.

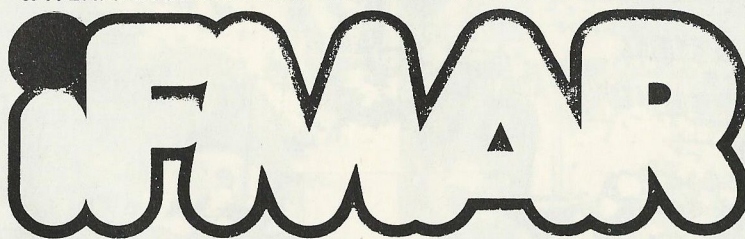
A tragic end to what should have been a celebration but nobody was really sure who should be celebrating and what! Whether the result was recognised by IFMAR or even if that was necessary. A sad end to what started as a meeting to end all meetings.

#### Stop Press

The annual race at Weisbaden Germany was won by Rody Rohm (Serpent), 2nd Ralphie Burch Jnr (Associated) and 3rd Rich Lee (Associated).

At the World Championships in Carnoux a number of the US team had problems with their motors. Overheating erratic running, etc. Some thought it could be the very high nitro content (50%). John Thorpe had in fact changed to a lower nitro fuel and had apparently overcome his original problems. Now it seems, after Weisbaden, it could just be that the 4% castor oil content had been omitted from the fuel in the States. They added 4% castor oil in Germany and, hey presto, their motors were back on form without problem.

### INTERNATIONAL FEDERATION OF MODEL AUTO RACING



#### 1983 1:8 WORLD CHAMPIONSHIP CARNOUX.

This Statement is issued by IFMAR to clarify the result of first and second places at the above race.

After extensive independent checks of the original lap charts, timed pit stops, and other information produced during the final, it is clear that David Lecat of France completed one more lap than Ermes Tadiello of Italy, and so Lecat is the current 1:8 scale IFMAR World Champion.

That it has been necessary to issue this statement is regretted, and no good will be done in trying to apportion blame. IFMAR certainly is not blameless, but combination of circumstances such as this should not occur again following steps already taken by IFMAR.

Foolproof automatic lap counting is already a reality, and this is coupled to a firm resolution from IFMAR that all future World Championships will be subject to IFMAR control regarding ALL aspects of the racing. Interested parties (i.e., Press, National Associations etc.) who would like photo copies of the original charts showing how the wholly unintentional mistakes occurred are invited to write directly to:- Vice President IFMAR, Mike Reedy, 16661 E. McFadden 63, Tustin, California 92680, U.S.A.

*Ted Longo*



INTERNATIONAL FEDERATION OF MODEL AUTO RACING



## 1983 Championnat Du Monde De Voitures RC 4th R/C Car World Championship

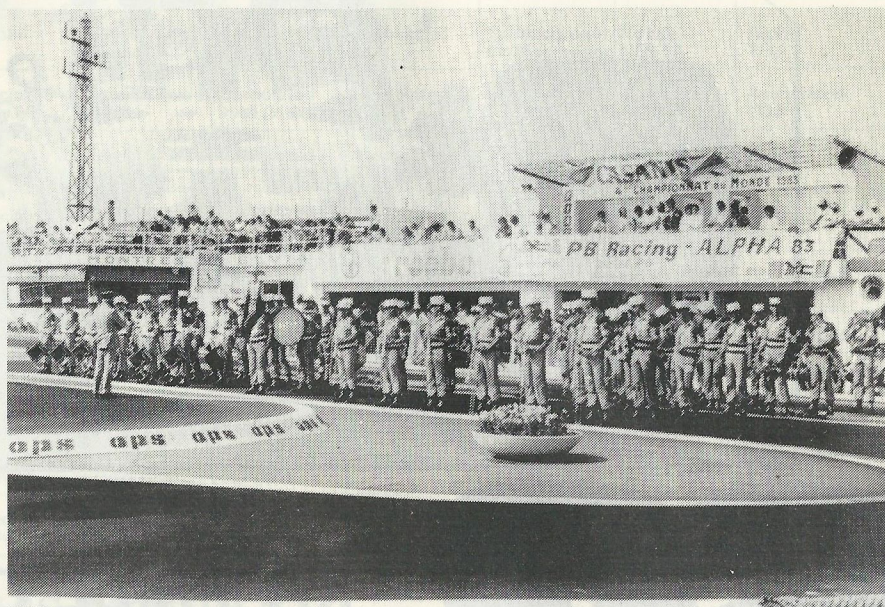
Report by Mick Langridge  
Photos by Tony Stephenson

As you swing off the autoroute into the delightful southern town of Carnoux En Provence a large banner across the road welcomes you to the Championnat Du Monde. A few more kilometres along a winding hillside road to the west of the town, with plenty of road signs to direct you to the mini-racing circuit, and there before you stands the impressive permanent track of the Carnoux Mini Racing Club, organiser of the event.

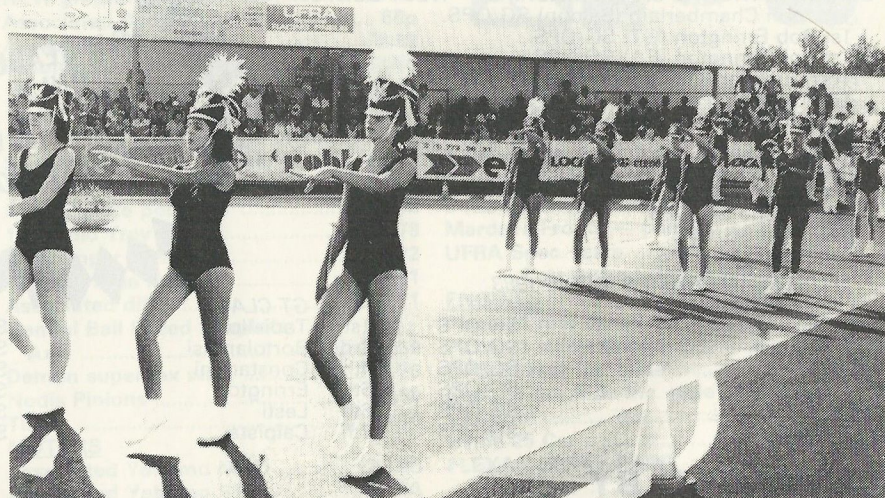
It is rumoured M. Rossi, owner of the track, had spent some £80,000 (eat your heart out Indianapolis) to stage this event since being awarded the race in 1981. A first look round quickly left this writer in no doubt that seemingly no expense had been spared in putting on this event. The organisational standards extended to Polaroid I.D. badges for all with track access, closed circuit colour television with about 15 monitors to relay messages, results and live pictures of the racing, no less than 2 IBM computers for lap scoring back up with the main lap counting being done with a Seiko split time counting digital stop watch for each car. You cannot buy these watches in the U.K. although they change hands for £60-£70 at meetings. All of this equipment was housed under one of the stands at race control which buzzed with activity during the whole weeks racing. Race director was the charming Mademoiselle Micheline Lesieur, whose placid manner and air of authority was instrumental in ensuring an incident free week, whilst at the same time providing the world's model press with every facility.

The actual track and pit area was no less impressive. Two sides of the track were protected by fencing whilst the other two sides had low walls alongside the pit and spectating areas. There were permanent stands surrounding much of the circuit, some of which were covered and very popular during the oppressive heat. Much of the pit area was covered, the large solid workbenches each being provided with power, air line, heavy duty 12v battery, large paper roll and bin. Each cluster of benches was served by the loud, clear tannoy system and a colour T.V. monitor. Add to this three bars and a large comfortable lounge with a good view of the track and you will understand why my six days at the track were quite bearable. Oh! and for an added bonus some of the female "mechanics" rivalled any seen at a full size Grand Prix.

The 45 page book of regulations showed amongst other things, that track time was ample for even the most assiduous drivers. There were to be five days of



French Foreign Legion Band provided the opening ceremonial music.



We've seen nothing like this at Bradford!!!

free practise from 7 am until 10 pm each day, with the pits open until midnight (I know I was there), followed by a day's controlled practise giving each driver four 15 minute untimed heats. As well as having fewer cars on the track (most of the time in free practise there were 20-25 cars on the track) the mechanics were given a chance to practise starts and pit stops. The start sequence was normal i.e. at 3 secs cars to be released and mechanics to step behind a line. A photo-electric cell operated a Polaroid camera if a car crossed the start line before the green light, this was in addition to start-line judges who applied a one lap penalty for any offenders.

A similar one lap penalty was imposed on cars should a mechanic step over the low wall alongside the pit-lane. Cars had to stop in front of their mechanics who had to lift the cars clear of the wall for refuelling or any other work. Should a car break down or cut out on the track the mechanics were not allowed to fetch it—marshals returned the car to the pit lane. During drivers briefing there was a great deal of discussion about the organisers proposed use of a flag marshal to control cars leaving the pits. It was felt by most of the drivers that this could delay a car unfairly during the 10 minute qualifying heats and so it was decided to dispense with this flag man and put the onus on the drivers. The referees announced that any car causing an avoidable accident by the pits exit would suffer a one-lap penalty. This would apply to cars going by on the straight as well as to those exiting the pits.

So after controlled practise the following two days were to be qualifying heats until 7.40 pm, followed by more practise until track closure at 10 pm. Only finals day Saturday 9 July limited the cars to set times, and even then it was possible for six of the 120 drivers to be on the track for a total of 3½ hours of finals, working their way to the finish. The finals go down (or up) in eight steps from 1/128 to the main with the first three in each going on to the next round. 108 of the 120 entrants in fact have a chance of winning however remote.

During practice no real idea could be gained of likely front runners. There was quite a lot of "bar talk" about various drivers lap times but this was mainly a wind up intended to stimulate conversation and agitate mechanics and team managers. SG were alleged to have spent about a month at the track in preparation—their subsequent speed could mean there was an element of truth in this. PB had been there two weeks previously but had been thwarted by the weather.

First days qualifying started promptly at 8.30 on Thursday morning. The drivers were split into two groups for qualifying—group A had three heats on Thursday morning with a further three Friday afternoon whilst Group B had the afternoon sun to contend with on Thursday. Group B's Friday morning session gave them quite an advantage over the first group. The cooler morning sessions turned out to be faster which meant those drivers on Friday afternoon were ham-

pered by a track which turned out to be a lap slower. Still there were always the finals!

Chris White of Huddersfield was the first British driver to qualify—in heat 2 and he held FTD after his first run. This was beaten in heat 3 and hammered in heat 5. Heat 5 was sprinkled with well known names—Bill Jianas (2nd World Champs 1979), David Lecat (remember this name), Ralphie Burch (2nd fastest 1981 World Champs), Kondo Katsurori (3rd World Champs 1981), Paul Pagdin (2nd first U.K. Electric Nationals), Christopher Cheung (triple Asian Champion). At the green light Ralphie Burch was off and gone. Driving a superbly controlled race with his neat precise driving style complementing his well balanced car, the current American man to beat laid down a 29 lap and 10.2 second qualifying time which was to stand as FTD for the rest of

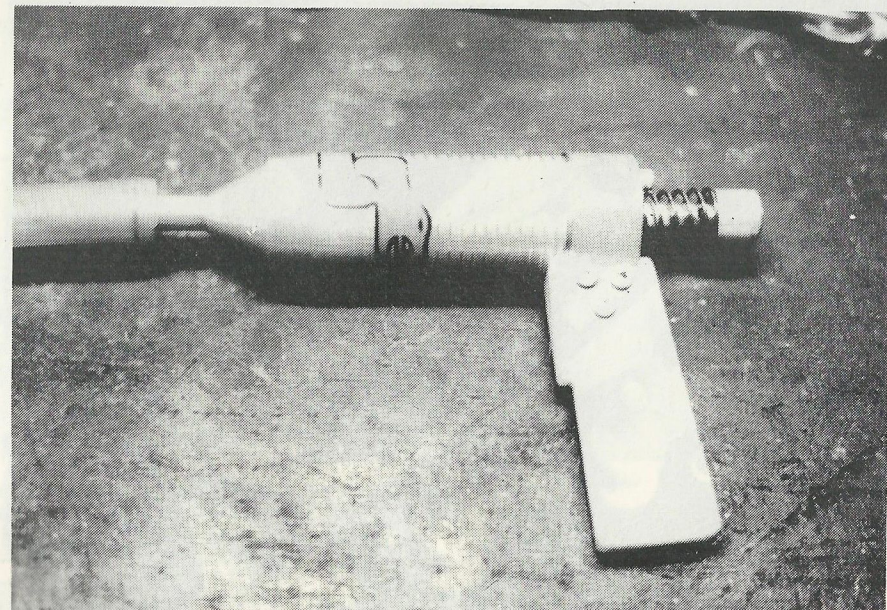
the meeting. After the first round this heat had four drivers in the top six, Burch 1st, Bortolomasi 2nd, Cheung 5th and Jianas 6th.

As this group of heats progressed it soon became clear that a fast 28 lapper was necessary to be in the running. Burch put in another 29 to hold 1st and 2nd fastest times, whilst fellow teenage compatriot Repete (I can't swim) Fusco were followed by Franco Sabattini (Mr SG), Massimiliano, Orazi and Bortolomasi all using the latest version of the SG Columbia. 7th at the end of the first morning session was Venezuelan Maurizio Busnardo. An unknown quantity by the other teams, Venezuela would appear to be a force to be reckoned with.

Group B qualifying heats followed straight on from the morning session. In the very first heat Ernes Tadiello threw down his gauntlet with a very fast 28 to

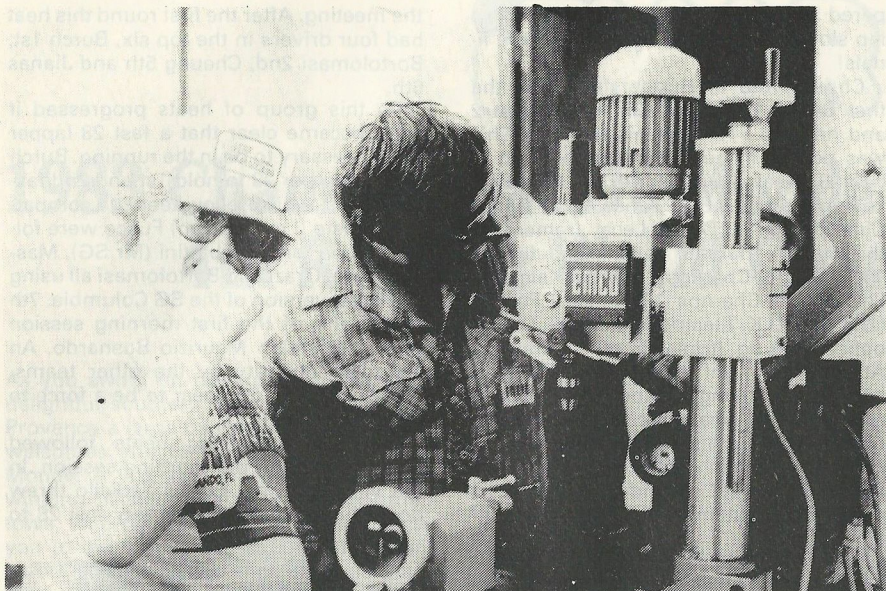


Even a track cleaner/sweeper was on hand—great machine but it couldn't quite manage a 28 lapper!

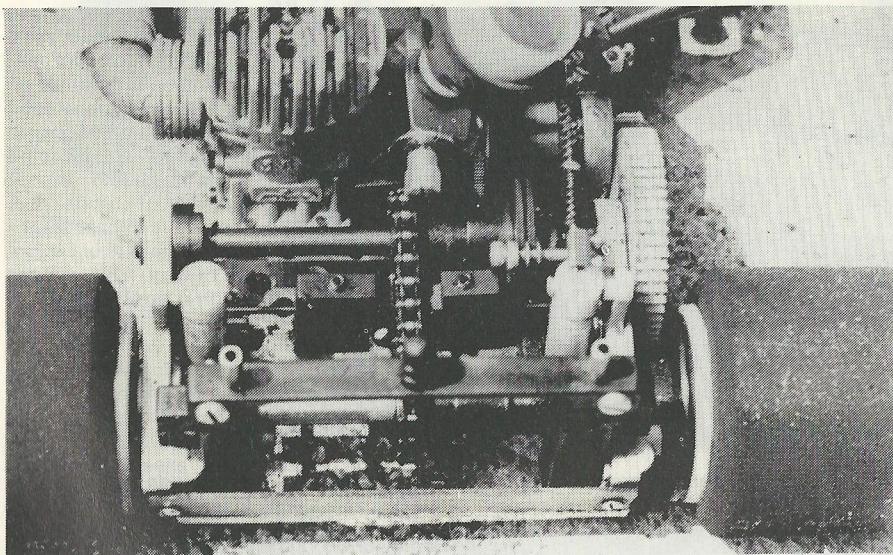


The Serpent secret refueller. It really did cut pit stop time dramatically—it released a measured amount of fuel into the tank using gravity rather than pressure. It also incorporates a Laminar flow pattern—both these factors stop the dreaded "foaming" (this is what we were told anyway!). Serpent may market this later.

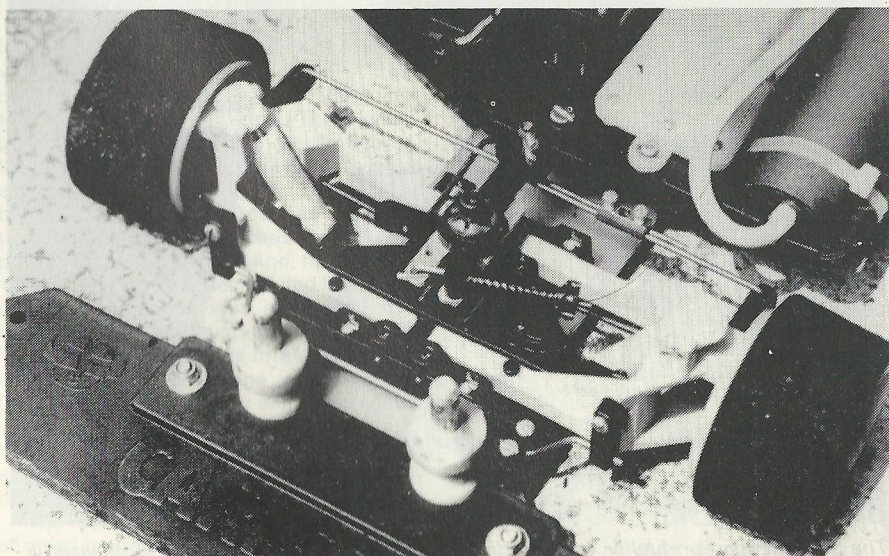




"Gee! you mean this has all been laid on for us!" Kim Davis and Rick Davis Team USA (no they're not related) examining some of the excellent equipment provided in the pits.



Front forward set up with coil springs and mono shock used on the PB team's Beta cars.



Rear of the Carlson car using the latest Picco direct mount motor.

join the other SGs near the top of the list, Steve White was ten seconds down on Tadiello in this heat, but was well placed in the top 20. Heat 11 was another star studded heat featuring reigning double World Champion Arturo Carbonell, European Champion Giulio Gherzi, Asian Champion Kunsei Takeda, 1981 World Champs finalist Gary Culver, Dutch Champion Ron Ton (Mr. Serpent) and Britains fastest lady Debbie Preston driving an Associated. Gherzi proved to be the front runner in this heat with a 29 to slot into 2nd after two rounds. Carbonell was struggling to finish a heat as was Debbie Preston, although Culver was patiently improving his times to stay in the top 20.

At the end of this first days qualifying the rock steady Burch remained fastest followed by Gherzi, Tadiello, Fusco III and Sabattini. Highest placed British driver was SG distributor Phil Greeno in 8th, although many believed him to have lost a lap which cost him FTD. Race control would not amend the score sheets so after a very brave run in a not particularly competitive heat Phil was resigned to having to do it all again tomorrow.

Friday was just as hot as usual so now the previous afternoons drivers had the cooler and faster morning session to make their mark. And that's just what they did. In the first heat Roddy Roem blasted round a lap faster to slot into 2nd position while the infamous heat 11 provided the best race of the week so far. Culver and Gherzi were tied together for practically the whole race and towed each other round to fast 29s, Gary crossing the line first just .8 of a second in front, the Italian who knocked almost 10 seconds off his previous best time to push Roem back down to fourth. Carbonell finally completed a heat, albeit more than a lap down on Culver and Gherzi.

In the very next heat Curtis Husting hammered his way round to yet another fast 29 improving by a lap to slot into 4th just two seconds behind Gherzi. The adrenalin was beginning to flow now and it was only 10 o'clock in the morning as Phil Greeno took to the track for his 29 lapper to claim 5th place just  $\frac{1}{10}$ th of a second ahead of Roem. All was quiet for a few heats; Roem had a bad run and was left with one more heat to climb back into that all important 'straight through' top four, so we waited for heat 11 again.

I was timing this heat on the PB computer, which does not give a running display but will print out every drivers individual lap times, as well as a full race result. Carbonell was really flying in this one, but even so was always behind Gary Culver who was on one of his infamous solid undramatic qualifying runs in which his car is absolutely perfect, and his tidy driving style stands him apart from most of his contemporaries. Only Ralphie Burch looked in the same class at this meeting. As his car crossed the finish line for the 28th time I glanced at the time 9 mins and 10 seconds—this was fantastic for to score 29 laps it was necessary to average 20 seconds a lap so it looked like 30 laps and a clear FTD for Culver. Then the engine cut-out of fuel so we shall never know just how fast the new PB car can go



round Carnoux. Apart from his pit-stop every lap was under 20 seconds which makes the print out for car number 5 a very special piece of paper. Through all this Carbonnell finally got his act together and slotted in 4th fastest.

In his very last run at 1.30 Rody Roem pipped Carbonnell by a half second to take 4th spot and last straight through position. As the 'morning' session played out there were no further major upsets. Debbie Preston finally finished a heat after truly appalling luck although her position left her with quite a lot to do on Saturday.

As the heat built up for the afternoon session I retired to the pool for a few hours. After the excitement of the morning these last heats were a bit of an anticlimax, with times at least a lap down on the morning scores although a number of drivers lower down the list were trading qualifying times none of the top 20 positions were destined to alter.

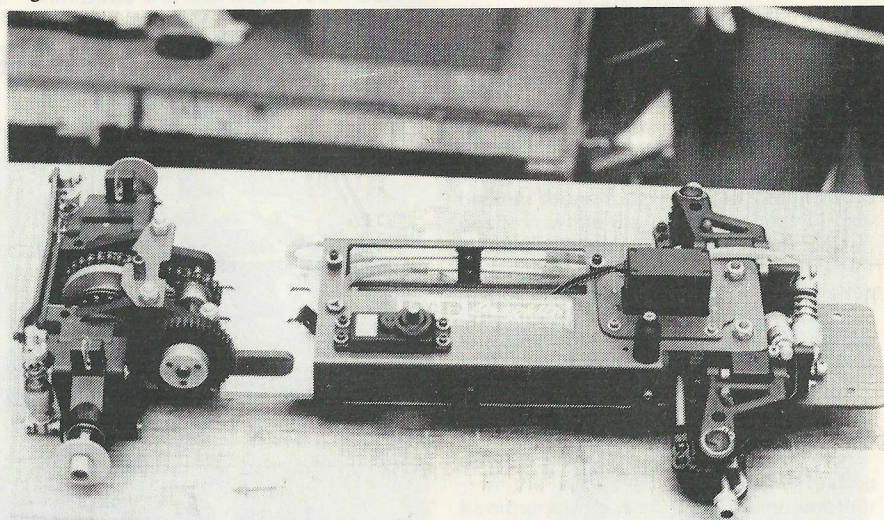
On the car front there was plenty to interest the model car enthusiast. Mind boggling is the only way to describe some of the cars especially when their parentage became apparent. There was a PB Alpha converted to 4WD with three differentials and all independant suspension which was really an engineers delight (see issue 16) although I didn't see it run. This belonged to one of the Japanese and their team featured quite a few 4WD cars although the faster drivers in the team were using kit based cars; SG, PB, Alpha and Delta. In fact I believe the 20th place qualifier Kunsei Takeda as well as being fastest of the Asians was also the fastest Alpha (Culvers car is not an Alpha) to qualify (excluding Lecat of course) although having said that the number of alterations was considerable. The chassis was duplicated in alloy, ditto the radio plate but in carbon fibre, a large mono shock was fitted at the front but under the radio plate like SG, but the most noticeable thing (to me) was the very low profile tyres which were parallel at the rear and were very hard at the front. Carbon fibre was big news in the American pit. I saw a Delta and an Associated both of which were using a complete box section of carbon fibre for the chassis. This made for a very stiff structure obviating the need for radio plates as the radio equipment and fuel tanks were let into recesses. The Delta of course uses carbon fibre as standard whilst Associated list a carbon fibre spare for virtually all epoxy or alloy parts of the standard RC 500.

It was the factory or factory supported teams which provided most of the potential finalists, so here is a brief summary of what I saw (or was told!) during the final practice when some semblance of order was taking place.

**Associated**—Chassis and radio plate carbon fibre options as was the rear shocker bulkhead. KB square head engine prepared by Rich Lee (Burches) and using as in-elegant lump of allong on crankcase as heat sink. Pre-production 2 speed gearbox and fine pitch toothed belt were obvious additions. Brand new rear rubber not even on price list yet was proving ideal for conditions and when used with win-



They say an army marches on its stomach! so too the Associated/USA team. Repete Fusco discusses the menu with Liza Curtis (L) and Midge Husting who are busy providing the essential services.



The superb carbon fibre 'box' chassis from the Florida company D & D incorporated here onto an Associated RC500.



Serpent pit crew using their refueling "pistol".

tergreen (additives were permitted!) not so ideal—there must be a moral in there somewhere. Rear hubs had quick change mechanism very similar to SGs (it may be that SGs is similar to Associates—I didn't ask).

**Delta**—Carbonnell—Some last minute thought saw some subtle changes to Art's Eagle. The front suspension geometry had the facility for extra adjustments and control of camber change whilst at the back end the kit car's fibre glass brake discs were changed for steel. Apparently the stock items are prone to binding when hot (as at Carnoux) otherwise the car was pretty standard, although most of the metal was substituted for titanium or other such exotica.

Naturally as befits the reigning World Champion Mr. Picco had provided motors as good as any and again for the hot conditions the larger buggy head was fitted. Probably one of the lighter cars (I was unable to check weights specifically) the acceleration out of the bends would probably have impressed even Rene Arnoux.

**PB**—As mentioned in my report of the Southampton Open in RRC issue 15 Keith Plested had been testing a car which showed a radical rethink in concept. Designed specifically with Carnoux in mind but with serious top-level competitor usage for the future, the car which will see production ultimately in one form or another as the PB Beta met with mixed fortunes. Gary Culver's methodical and precise approach to setting up a car showed dividends in his 2nd fastest qualifying time, but with hindsight the lack of track time before the meeting was a gamble which didn't pay off for the other factory drivers. Featuring a chassis and radio plate of C.A.D. (computer aided design—as in all Fords) the basic concept is of a low centre of gravity and light weight—not always compatible considering the amount of "top heavy" equipment carried by an IC car. Knowing that traction at Carnoux would be very high with the allowance of tyre additives the front suspension was designed to give sufficient bite and feel without making it too sensitive. The relative lack of success was guided by some outside factors but overall the Beta seems to work and I for one look forward to getting my hands on one in the not too distant future.

Gary Culvers electrifying "pearly" run impressed more than a few drivers for despite Mr. Picco's best efforts with buggy headed engines the Beta's were not noticeably quicker on the straight but their stability and ability to put down the power was quite a talking point.

The newly announced gear boxes were not used—weight and doubts as to their advantage at this high speed circuit were the reasons given. Beautifully made and very nice looking these four cars were destined to be upstaged by the standard kit of Lecat.

**Serpent**—Both Rody Roem's and Pieter Bervoets' cars featured non standard chassis materials, although the Serpent's basic layout and suspension remained as standard. In the interest of saving weight Roem used carbon fibre for chassis and radio plate whilst Bervoets' chassis was 4mm aluminium used to act as a heat

sink. Virtually all the Serpents factory or private entries, were running with a gearbox making these cars exceptionally quick round the very fast sweeper leading onto the straight, good stability already a strongpoint of the Serpent. There were no signs of Cipolla motors in the works cars (this was accurately predicted by Andy Stafford) so a variety of motors were tried with Bervoets' settling on a Pico with buggy head and Roem on a new type OPS.

Secret weapon of the Serpent team was a high speed fuel syringe looking like a cross between a grease gun and a fire extinguisher, a full tank of fuel was loaded in 1½ seconds without spilling and without frothing simply by releasing a plunger. It obviously wasn't that simple but although I was given a demonstration, an explanation wasn't forthcoming. **SG**—Always a good SG track the factory came up with a few mods and new type of tyre which proved to be a potent combination.

The car mods were a thicker now 4mm instead of 3mm chassis (alloy of course) stiffer rear torsion bars and relocated rear shock absorbers. The mono shock was discarded and separate shockers were mounted vertically at the rear of the chassis. The real advantage SG had was with rear tyres, these were of an open cell, soft compound and seemed to be working no matter how hot the track was. Other teams could not get a full 10 minute heat out of comparable tyres. Called Gandini's (I believe) they could well be a dominating factor in the rest of this summers racing.

Mr. Rossette from OPS was in attendance to service the teams new engines, which were proving to be very reliable; perhaps the all metal chassis was allowing the motors to run cooler. Somehow the SG's didn't look exceptionally fast round the track but with eight cars in the top 20 and four in the final they were none the less effective.

At 8.00 am promptly on Saturday morning the first of the 15 finals started, this was called the 1/25th and contained the odd-numbered qualifiers from 89th down to 107th. The first three in this final went through to the odd numbered 1/64th final, and so it was possible to now leap frog up to the main final—unlikely but possible. During the course of these early finals one or two drivers were able to climb a little higher and take in a couple more finals. 37th qualifier Pieter Bervoets won his 1/6th final chased hard all the way by 39th qualifier Dana Smeltzer of the U.S.A. I mention their qualifying positions because we were to hear more of these two.

The first quarter final contained 25th qualifier, local hero and track record holder David Lecat. Urged on by the capacity crowd who were being wound up by the commentator David drove an absolute stormer to win comfortably and take a well earned place in the semis. While this race was on there was apparently an announcement—in French—over the PA cutting the warm up times in an attempt to bring the meeting back to the published timetable. Bervoets promptly won the second quarter final from John Cham-

berlain only to be told to re-run immediately. It was stated quite clearly at briefing that English was the official language of the meeting and all instructions, protests etc. were to be made in English. The previous announcement had not unnaturally, been missed by Smeltzer who did not start his quarter final, and quite rightly demanded a re-run. As the first three in the quarter finals went straight through to the next semi the re-run had to be held straight away. Just to prove his point Smeltzer won the re-run with an irate Bervoets right behind him. So these two had now leap-frogged 20 places.

Ernes Tadiello won the first semi-final from the irrepressible Lecat; only the first two went into the final from each semi with the next two fastest semi times taking the last two slots, so from the first semi Phil Greeno and Vittorio Orazi had to sit and sweat it out. Would you believe for the third time in two hours Bervoets and Smeltzer chased each other round to wrap this one up, just a gnats finger nail apart after 30 minutes. I wonder why these two chose the hard way to get to the final—70 minutes of knock-out finals after 60 minutes of qualifying heats is just a bit heavy. After regaining a missed lap third place man Curtis Husting was bitterly disappointed to miss the final by 3 seconds—letting in a relieved Phil Greeno. Before the main final a brief summary of the British drivers.

Debbie Preston suffered appalling luck—everything from a servo quitting a few laps into her final qualifying heat, to the motor blowing up during warm up for her final—qualified 47th 1/64th final.

Bob Errington had a multitude of nagging problems culminating in steering servo packing up a quarter of a lap into his final—qualified 24th 1/4 final.



Strong British hope Steve White with his PB car sporting the new Ever Ready livery.



Chris White was very happy with his PB Beta, getting progressively faster but lost the exhaust in his final—qualified 27th 1/4 final 8th.

Paul Pagdin was unsettled on the first day when his Citroen was broken into and his stereo and CB equipment was ripped out. The subsequent loss of practice while sorting this out was to prove decisive at this level. Leading his final until a spinning car knocked him into the wall severely damaging left front suspension. He struggled round to no avail—qualified 40th 1/6th Final 7th.

John Chamberlain was not outclassed at his first World Championship and was unlucky not to qualify for semis during Smeltzer/Bervoets re-run—qualified 31st 1/4 final 4th.

Steve White was troubled with engines not running cleanly, partly resolved by changing to the same fuel as the rest of the team. All of this wasted valuable chassis sorting time. Unfortunately Steve was unable to put on one of his charges in the semi, where he usually drives round car troubles to qualify for the final. An interference problem wrecked his car—qualified 18th Semi Final.

Gary Culver it would seem ended up the victim of some quite blatant "gamesmanship". The four straight through finalists had been given a 30 minute practice session—six hours before the final at the height of the afternoon heat, which was not a lot of help in choosing tyres for the changeable track conditions. Before each final, including the main, was a 10 minute warm-up for last minute sorting and it was in this period that Culver struck radio interference problems. It would appear that an Italian driver decided to change to a frequency adjacent to Culvers without informing race control, but when

this was discovered Culver had to change despite being 2nd fastest qualifier. This naturally took time—valuable testing time—which meant that Gary went to the start unsure of his tyre choice. In the event he was to experience worsening grip and traction problems that a tyre change was unable to cure. As always his methodical and meticulous preparation ensured total mechanical reliability during the meeting—qualified 2nd Main Final 5th.

Phil Greeno benefited greatly from his close liaison with the SG factory, putting to good use the latest tweaks and tyres. His was a particularly good effort considering the lack of pace makers in this heat—he was usually at least two laps up on the other drivers. Neat precise driving and good preparation has its rewards and it was only a broken exhaust—ably fixed by Steve Fagg which cost him a higher place at the finish. Qualified 6th Main Final 6th.

I would like to have given you a detailed report of the main final but bad lap counting coupled with a French only commentary left me and the rest of the non-French spectators slightly bemused. There were bursts of English commentary of the helpful type like "there goes a red car down the straight"—"number 5 is going in for fuel", "number 8 is Lecat" etc.

The starting grid was "Le Mans" style giving Burch in pole position a 25-yard start over the tail-enders. Burch took an immediate lead from Roem but then made one of his rare mistakes letting the Serpent through. Roem managed to consolidate his lead and helped by the fast fuel filler did not relinquish his lead during his first stop at six minutes. The factory SGs stayed out for seven minutes,



Husband and wife team Joe and Gay Sullivan who run the Ja-Lea Model Company in Texas.

Top British Associated driver Debbie Preston who really did have terrible luck.

their OPS's proving to be very frugal. Burch's driving seemed to get more ragged as the race wore on, although his car may have been damaged after he suffered one particularly nasty shunt. Gary Culver's PB was under-steering more and more as the track cooled (the final started at 8.30 in the evening) and was unable to challenge the leaders, who included Orazi and Tadiello. Lecat was being cheered enthusiastically everytime he overtook another car regardless of whether he was improving his position or not.

Roem still held the lead going into the second half of the race, followed by Orazi, Tadiello and Lecat. A collision with a backmarker lost Roem the lead when his motor cut out, losing even more time whilst the marshals returned his car to the pits. Orazi's lead was short-lived—his engine stopped with a loud click as he accelerated across the finish line. For the last quarter of an hour we were led to believe that Tadiello was in the lead, a lap up on local hero Lecat—that is according to the TV monitor. The official results were the hand recorded and written times, but the commentator was looking at a different screen to us, and told the very partisan crowd that Lecat was just behind Tadiello and fighting for the lead. The SG pitted for the last time with six minutes to go and Lecat swept by to lead for the first time, but he had one more stop to make. By the time the Alpha accelerated up to full speed Tadiello held a six second lead and Lecat was unable to close the gap—on the last lap it was down to four seconds as Tadiello gingerly picked his way past the remaining cars he baulked slightly through the double hairpin and seconds before the finish line. The crowd were really urging on Lecat as he made a desperate lunge through the slower cars to try and snatch the title on the line—failing by less than a yard—we thought. A glance at the monitor showed the Italian to have a lap in hand—was the commentator merely winding up the crowd or were they together? An absolutely drained David Lecat was obviously disappointed to have come so close to winning on home ground.

While the Italian team were celebrating as only they can it later transpired that Tadiello had been double counted according to the official sheets. A check of Lecat's official sheet by Bernard Poupaert, FFMARC President, indicated a missed lap which would make Lecat Champion.

Most of you will have read our World Championship report in the last issue (RRC brings you the top news fast and first) recording the problems and debate as to who is now the IFMAR World Champion. As most of you will know David Lecat has been recognised as the World Champion by IFMAR (the World organising body) following extensive examination of the lap timing though again this decision is still in some dispute.

The racing was really superb at a truly magnificent circuit, marred to some extent by the later problems. But I am sure enjoyed tremendously by the vast majority of drivers and the thousands of enthusiastic spectators who attended the 4th World Championship meeting.

Semi Finals (30 minutes)

Place	Name	Country	Laps
11	Curtis Hustings	USA	81
12	Constantini Massimiliano	Italy	80
13	Roberto Bortolomasi	Italy	80
14	Klaus Horchen	Germany	80
15	Rich Lee	USA	79
16	Naoki Ishiara	Japan	79
17	Jacob Buhler	Switzerland	79
18	Roberto Pezzini	Italy	79
19	Busnardo Maurizio	Venezuela	78
20	Arturo Carbonell	USA	77
21	Repete Fusco	USA	76
22	Franco Sabattini	Italy	42
23	Michael Mielke	Germany	19
24	Steve White	GB	18

1/4 FINAL — 20 minutes

Place	Name	Country	Laps
25	John Chamberlain	GB	53
26	Shinichi Katsura	Japan	53
27	Eric Nougier	France	52
28	Groschl Franz	Germany	52
29	Chris White	GB	51
30	Phillippe Collet	France	51
31	Christopher Cheung	Hong Kong	49
32	Peter De Carro	Sweden	49
33	Jean-Claude Berrow	France	43
34	Kunsei Takeda	Japan	43
35	Ron Ton	Holland	7
36	Heinz Wilphi	Switzerland	0
37	Bob Errington	GB	0
38	Bill Jianas	USA	0

1/8 FINAL — 20 minutes

Place	Name	Country	Laps
39	Stewart Grant	Australia	52
40	Denis Salle	France	52
41	Gerhard Fruchwirth	USA	52
42	Rick Davis	USA	51
43	Michel Bernard	France	51
44	Hans Johansson	Sweden	51
45	Paul Pagdin	GB	51
46	J.R. Losi	USA	51
47	Roger Curtis	USA	51
48	Tohru Inoue	Japan	43
49	Milko Tendhof	Holland	25
50	Jean Matrone	France	22
51	Finn Ghersee	Denmark	20
52	Gene Hustung	USA	0

1/16 FINAL — 20 minutes

Place	Name	Country	Laps
53	Kondo Katsunori	Japan	52
54	Leo Hongisto	Finland	52
55	Jürgen Bahr	Germany	51
56	Naomi Tomita	Japan	49
57	Mark Meister	Switzerland	49
58	Alain Van Leeuw	Belgium	49

Country	Laps
France	44
Spain	42
Belgium	42
Japan	39
Holland	39
	35
Norway	14
GB	0

1/32 FINAL — 20 minutes

Place	Name	Country	Laps
67	Bob Lekron	USA	52
68	Knut Egilenger	Norway	52
69	Aston Ke Lee	Hong Kong	51
70	Hirokazu Itoh	Japan	50
71	Hie Kie Ong	Singapore	49
72	Herman Raith	Germany	47
73	Romano Garbani	Switzerland	46
74	Jean-Louis Bevacqua	Monaco	43
75	Javier Lorag	Spain	41
76	Haikan Kristofferson	Sweden	37
77	Peter Lind	Denmark	32
78	Piero Sevesa	Italy	29
79	Robin Reade	Australia	20
80	Chuck Moon	USA	16

1/64 FINAL — 20 minutes

Place	Name	Country	Laps
81	Yuji Kaki	Japan	51
82	John Thorpe	USA	50
83	Wolfgang Scherter	Aus	50
84	Ruedi Hassig	Switzerland	48
85	Ralph Phillips	USA	46
86	Chuck Hallam	USA	40
87	Luis Albaraccin	Venezuela	37
88	Luc Van Der Linden	Belgium	37
89	Maurizio Cavicchioli	Venezuela	32
90	Alan Cy Chang	Hong Kong	15
91	Kim Davis	USA	2
92	Butch Kloeber	USA	0
93	Gregoir Reintjes	Germany	0
94	Ross Kloeber	USA	0

1/128 FINAL — 20 minutes

Place	Name	Country	Laps
95	Thierry Zanado	Switzerland	49
96	Patrick Chan	Singapore	47
97	Joe Sullivan	USA	47
98	Francisco Arnaldo	Portugal	47
99	Chuck Wiggung	USA	40
100	Jean-Marc Follette	Monaco	36
101	Joe Tassilio	USA	34
102	Keizo Michiora	Japan	30
103	Alfred Pittner	Austria	28
104	Roland Lammarr	Luxembourg	19
105	Tadashi Morita	Japan	13
106	Bill Campbell	USA	8
107	Gay Sullivan	USA	8
108	Joergen Justesen	Denmark	0

CARNOUX MINI-RACING

CHAMPIONNAT DU MONDE 4-10 JUILLET 1983

09/07/83 21:37:31

FINALE

P I L O T E				P E R F O R M A N C E			S C R A T C H		
voiture	N°	N O M	Nat	penal	TEMPS	place	TEMPS	place	Km/h
01	0058	BURCH	USA		55 T 60'00"0	10	00'00"0	4	0.000
02	0115	CULVER	ENG		150 T 60'27"9	5	00'00"0	1	0.000
03	0114	GHERSI	ITA		92 T 60'00"0	9	00'00"0	7	0.000
04	0084	ROEM	HOL		160 T 60'13"2	3	00'00"0	3	0.000
05	0025	BERVUETS	HOL		137 T 60'11"0	7	00'00"0	8	0.000
06	0085	TADIELLO	ITA		165 T 60'14"9	1	00'00"0	8	0.000
07	0123	SHELIZER	USA		156 T 60'27"5	4	00'00"0	19	0.000
08	0054	LECAT	FRA		165 T 60'15"5	2	00'00"0	66	0.000
09	0026	DRAZI	ITA		111 T 60'00"0	8	00'00"0	66	0.000
10	0135	GREENO	ENG		147 T 60'01"9	6	00'00"0	25	0.000

Lap times and positions, following final, as announced by Race Control.

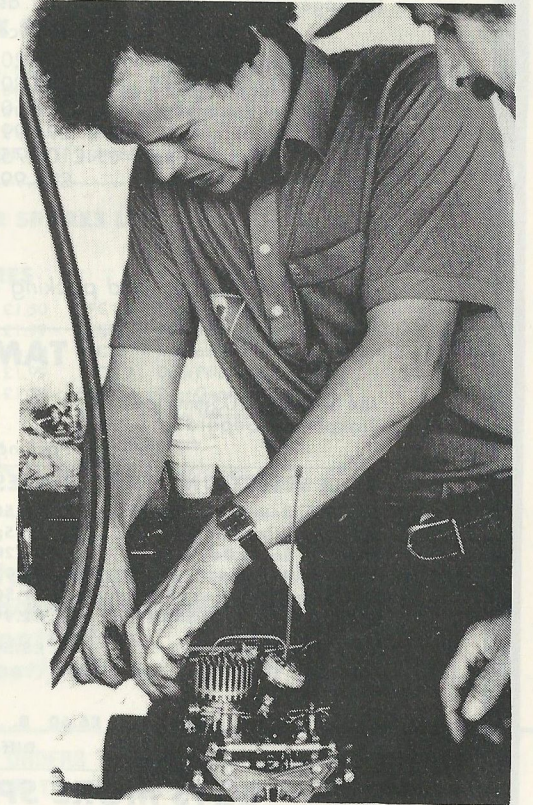
IFMAR confirmed results

FINALS — 1 hour

Place	Name	Country	Laps	Picco	OPS	SG	Associated
1	David Lecat	France	165				
2	Ernes Tadiello	Italy	164				
3	Rody Roem	Holland	160				
4	Dana Smeltzer	USA	156				
5	Gary Culver	GB	150				
6	Phil Greeno	GB	147				
7	Pieter Bervoets	Holland	137				
8	Vito Orazi	Italy	111				
9	Giulio Ghersi	Italy	92				
10	Ralphie Burch	USA	55				

POSITION DES QUALIFIES

.F.		A		B	
1	BURCH R.J.	5	CARBONELL A.	6	GREENO P.
2	CULVER G.	7	HUNTING C.	8	TADIELLO E.
3	GHERSI G.	9	FUSCO P.H.	10	PEZZINI R.
4	ROEM R.	11	SABATTINI F.	12	COSTANTINI M.
		13	LEE R.	14	LECAT D.
		15	BORTOLOMASE R.	16	BUNNARD M.
		17	BUEHLER J.	18	WHITE S.
		19	WIPPLI R.	20	KUNSEI T.
		21	KATSURA S.	22	HONCHEN K.
		23	NOUGIER E.	24	ERRINGTON R.
		25	DEARRO P.	26	LECAT D.
		27	WHITE C.	28	JANIS R.
		29	WILDE M.	30	TON R.
		31	CHAMBERLAIN J.	32	BERRON J.C.
		33	TOHRU I.	34	COLLET PH.
		35	CHERNOE P.	36	LOSI J.G.
		37	BENVUETS P.	38	CHRISTOPHER KN
		39	SHELTER D.	40	PAGDIN R.
		41	HUNTING G.	42	SALLE D.
		43	DAVIS R.	44	ISHIARA
		45	GRONCH R.	46	JOHANSON H.
		47	PRESTON D.	48	BERNARD M.
		49	SIMARD D.	50	KATSNORI K.
		51	MATRONE J.	52	BARR J.
		53	DUAY C.	54	TENDROF
		55	QUITTE E.	56	REBERT B.
		57	CROMBERG E.	58	HONGISTO L.
		59	GRANT S.	60	KISHI
		61	FRUCHWIRTH G.	62	SEVESO P.
		63	TOMITA	64	YAN LEEUW
		65	BEVACQUA J.L.	66	GARBANI R.
		67	MOON C.	68	CURTIS R.
		69	KNUT E.E.	70	TOH R.
		71	LOHAE J.	72	PETTERSEN F.L.
		73	MEISTER M.	74	READE R.
		75	HANNIG R.	76	RIE KIE ONG
		77	ALBARACCIN L.	78	DAVIS R.
		79	ANTON K.T.	80	LIND P.
		81	KLOEBER R.	82	TROIP J.
		83	HALLUM C.	84	REINTJES G.
		85	KRISTOFFERSON	86	LEKRON H.
		87	KLOEBER R.	88	VAN DER LINDEN
		89	CAMPBELL H.	90	KAKI
		91	PITNER A.	92	CAVICHIOLO
		93	PHILLIPS	94	ZANADA T.
		95	MAKINELY	96	CHAN P.
		97	RAITH H.	98	SULLIVAN J.
		99	ARNALDO F.	100	WIGGINS
		101	TADASHI M.	102	FOLETTE J.M.
		103	SCHUTTER W.	104	ALAN C.C.
		105	REIZO M.	106	JUSTSEN



Gary Culver gets to grips with the between heats stripping, cleaning and rebuilding. It's this sort of attention to detail that can win or lose a race.