

Corally SP12

**Dave Gale builds and drives
Corally's latest winner**

Two things in the field of model car racing can be taken for granted. Firstly Associated make Race winning cars, and secondly that Corally make the highest quality cars available. With the release of the new Corally SP12, the time has come for Corally to make high quality race winning cars.

The car started life as a series of grey matter impulses within Bert Van de Vecht's head about 16 months ago. The design features a beam type front suspension, and a fully floating rear axle/motor pod. Several prototypes were made for evaluation by the team drivers, and at its inaugural meeting, Oscar Jansen walked off with the first place trophy, and Constant Paul TQ. Up until that point, the car had only

been considered as a 'Concept' car, but with the encouraging results obtained the decision to manufacture was taken. With Mr. Paul's Knowledge, each part of the car's design was looked at, and improved where possible. To the uninitiated, the new car looks very similar to previous ones, but closer scrutiny reveals that almost every part has changed in one way or another.

Some of these design changes were simply a matter of changing the material from which the components were made, and other alterations to the injection moulding tools.

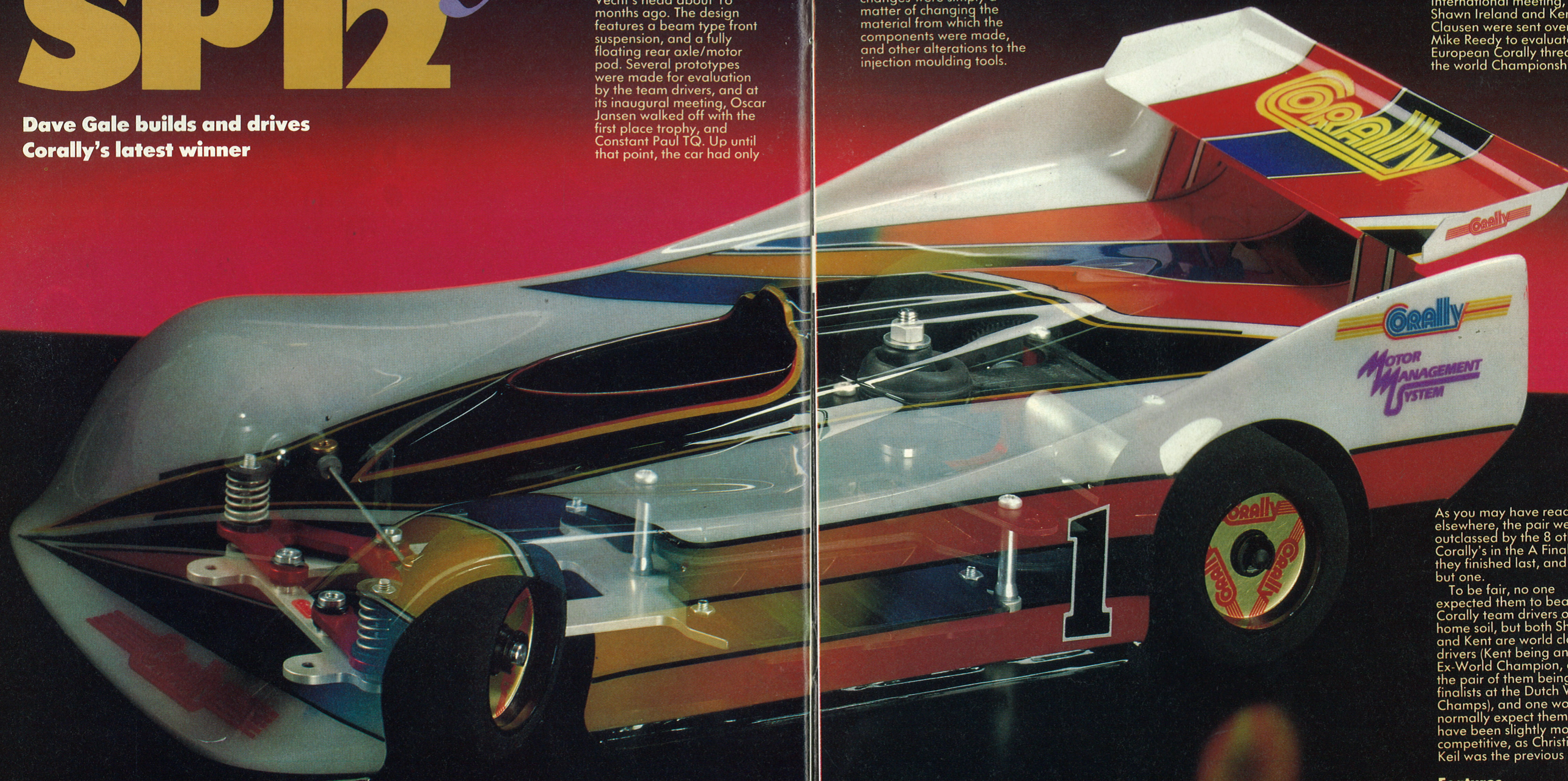
The first signs of the potential were shown at the French Grand Prix last November. To say the meeting was an Oscar Jansen benefit would be an understatement. However, in the finals he was given a close run by Constant and Bert, giving the Team drivers a convincing 1, 2, 3 victory. As a marketing ploy the decision was made to enter the USA Cleveland 4 cell national. Ten cars had

been sent over to Dumor, the USA Corally importer for use by several top American drivers. The result? 4 of the new cars made the A Main, with Chris Doseck on pole by a Lap. In the A Main, Joel Johnson threw away a convincing lead denying Corally the win, which allowed Andy Dobson to take the chequered flag, but only after a superb dice with the eventual second placed

driver. It's nice to hear that Andy is back on his winning ways after several disappointing years in the States, perhaps this win will give him the incentive to prove beyond doubt his world class ability.

To give you some idea of the new car's impact, Mike Reedy was heard to say that Associated needed to do some 'serious' work on the 12L before the World Championships in Singapore.

At the recent Dutch International meeting, Shawn Ireland and Kent Clausen were sent over by Mike Reedy to evaluate the European Corally threat for the world Championships.



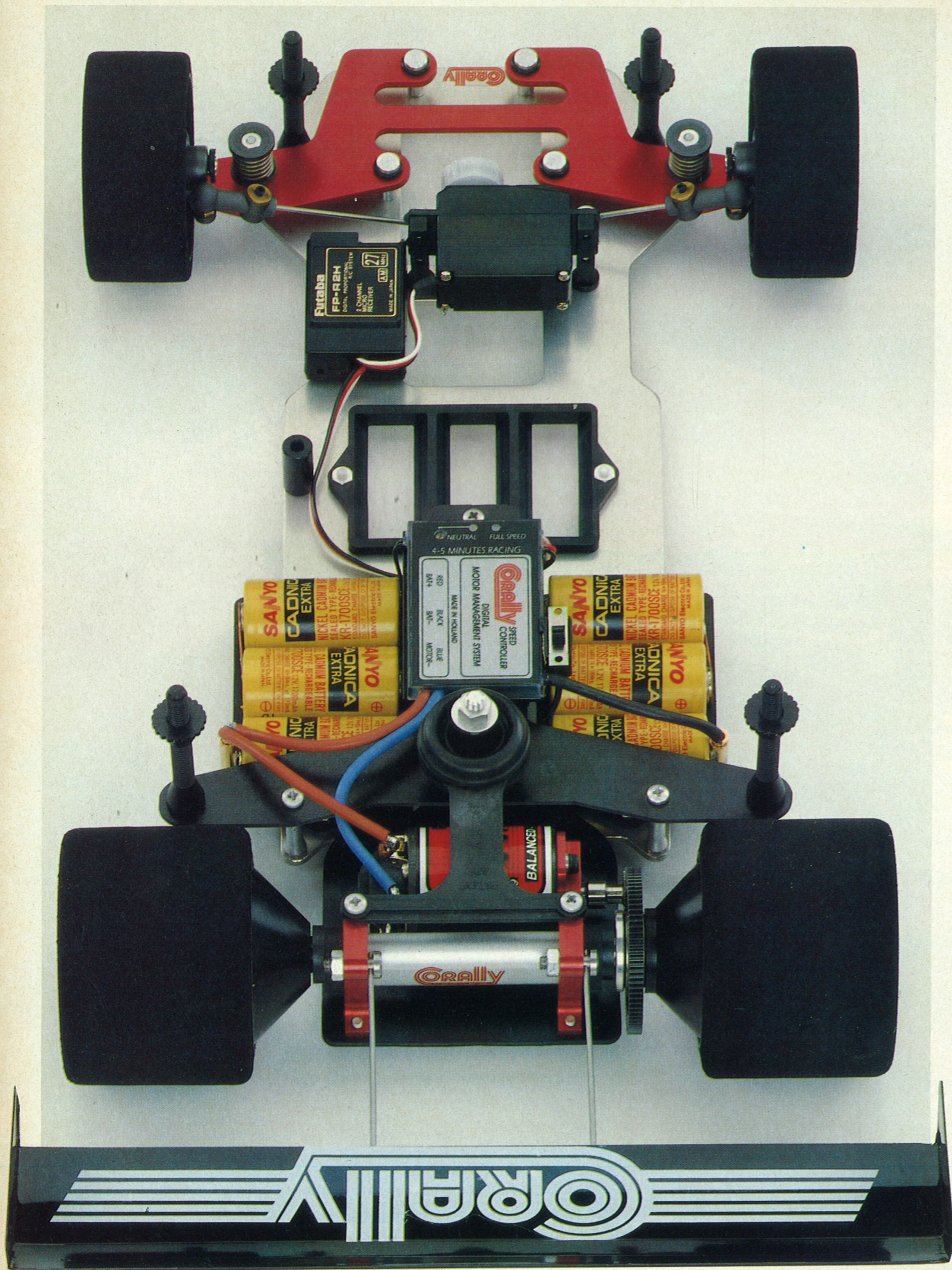
As you may have read elsewhere, the pair were outclassed by the 8 other Corally's in the A Final, and they finished last, and last but one.

To be fair, no one expected them to beat the Corally team drivers on home soil, but both Shawn and Kent are world class drivers (Kent being an Ex-World Champion, and the pair of them being A finalists at the Dutch World Champs), and one would normally expect them to have been slightly more competitive, as Christian Keil was the previous year.

Features

Most of the chassis parts are made from the exceptionally light and





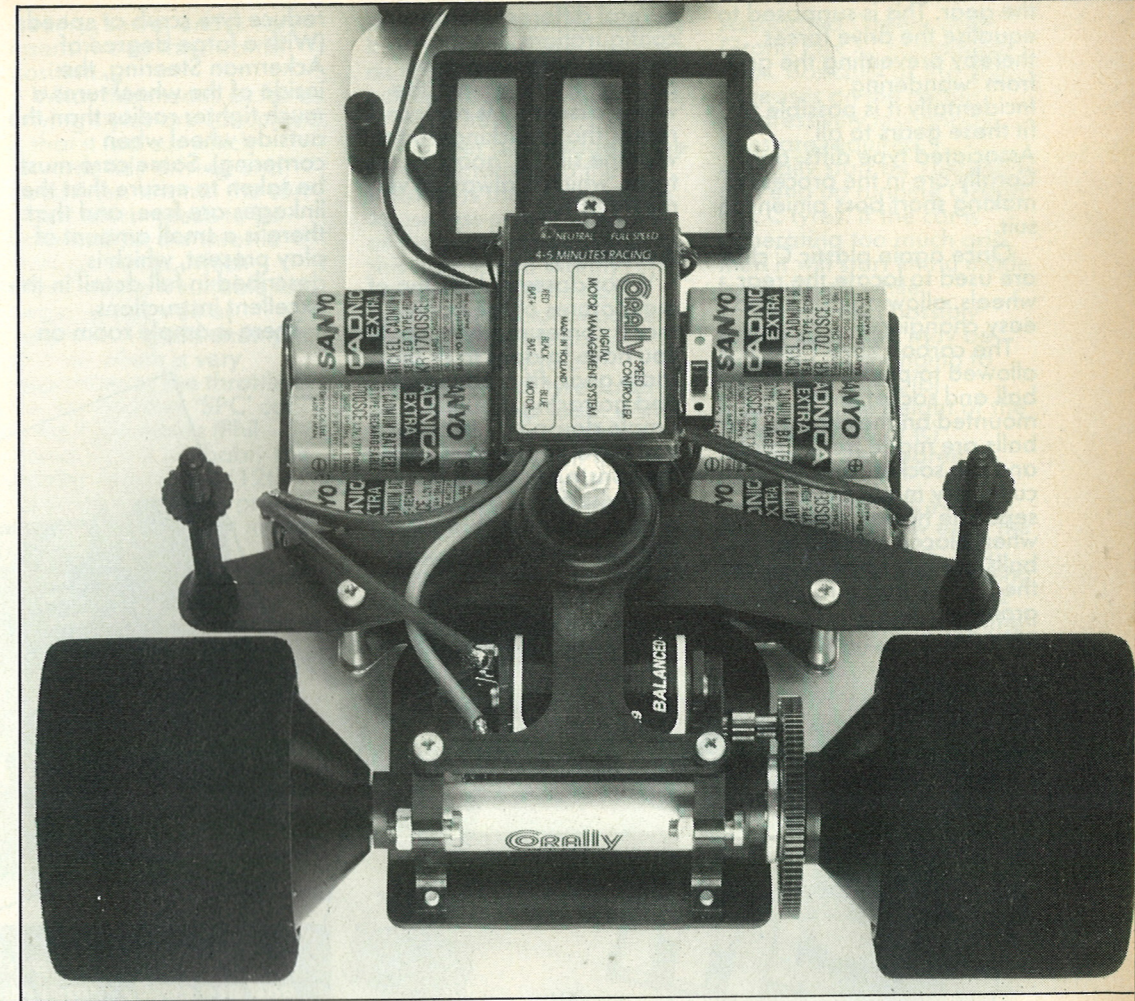
strong aluminium alloy 'Coral'. (This is where the name 'Corally' comes from.) This includes the chassis, front beam, and rear axle/motor pod. The shaker plate, T piece, and differential axle are made from carbon fibre, and the rest of the components are injection moulded plastic.

At the front of the car, the front beam is allowed to pivot on rubber bushings, designed so that it can flex under cornering loads like the more conventional sprung wishbone arrangement. Some springs are fitted, but are in reality cosmetic additions, which prevent the steering sticking at full lock.

The front wheels are fitted to live stub axles, with the ball bearings inside the steering blocks, and are held onto the axles with some very neat injection moulded plastic 'C' clips. This allows the wheels to be changed very quickly, and without the problems of the rubber 'O' rings used on earlier cars.

The front ride height can be adjusted by placing packing washers above or below the steering blocks on the king pins. Again plastic 'C' clips are used to allow quick and easy adjustment.

At the rear of the car, the motor pod is fabricated from 'Coral' and is bolted to the T piece using light alloy screws. Three different bearing holders are used to adjust the ride height, and give a total of six different ride settings, allowing the car to cope with either very large or small tyres. The diff axle runs through the



torque tube, and is supported at each end by large bearings in the adjustable holders. On the opposite side to the gear, the fixed wheel holder has been redesigned, as on earlier versions of the car it was prone to breaking.

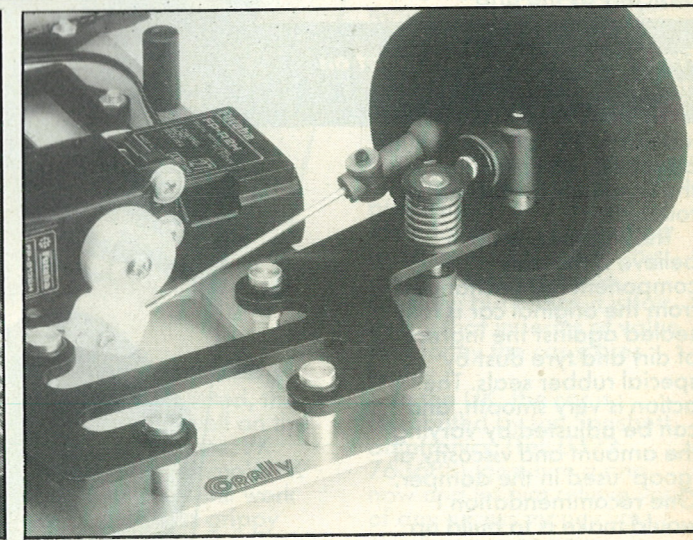
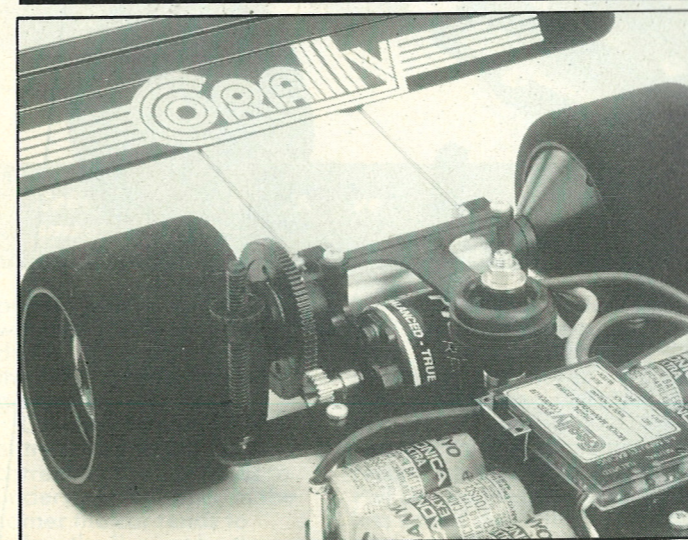
The differential has to be the smoothest I have ever felt, and is designed so that

the wheels can be changed without having to dismantle the diff. Another advantage of the design is that most of the 'gubbins' is enclosed, keeping out dirt and tyre dust.

As standard 0.5 Module gears are fitted, which are now made from nylon, which gives a quieter and better wearing mesh than

the original nylon/carbon fibre material. The tooth form is machined rather than moulded which helps to guarantee a perfect gear mesh and whisper quiet operation if adjusted correctly. To ensure that the gears run true, 12 balls are fitted, and these are arranged so that they are fitted from alternate sides of

The well designed Corally SP12 features some of the nicest parts available on Model Cars today. Note coned rear wheels.



the gear. This is supposed to equalise the drive forces thereby preventing the gear from 'wandering'. Incidentally it is possible to fit these gears to all Associated type diffs, and Corally are in the process of making short boss pinions to suit.

Once again plastic C clips are used to locate the rear wheels, allowing quick and easy changing.

The carbon fibre T piece is allowed to pivot via special ball and socket joints mounted on the chassis. The balls are made from Coral, and the sockets are cunningly made from two separate halves, which when placed around the balls are locked in place by the T piece and a rubber grommet. This provides a

several different damper configurations, (i.e. hard, medium, soft), so that to change the damping, the whole assembly is replaced, rather than mucking about with the silicon 'goop' at the track, which is always a very messy affair.

Assembly

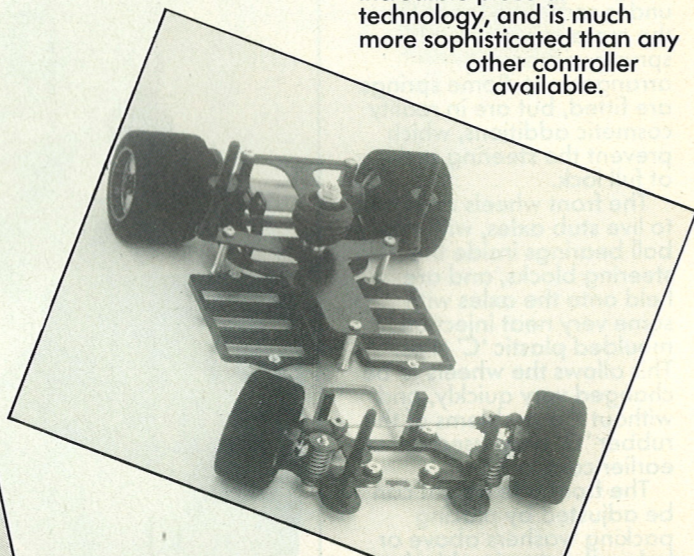
What assembly? One of the features of the car is that it comes ready built. All you have to do is to fit the radio gear, fit a bodyshell and go racing. Sounds simple doesn't it? In case you have any worries about the construction, this is supervised by Oscar Jansen, who guarantees that all cars are assembled to the

reduce tyre scrub at speed. (With a large degree of Ackerman Steering, the inside of the wheel turns a much tighter radius than the outside wheel when cornering). Some care must be taken to ensure that the linkages are free, and that there is a small amount of play present, which is described in full detail in the excellent instructions.

There is ample room on

nicely, perched on top of the shaker plate between the batteries, and helps keep the motor and battery connecting wires as short as possible.

The Receiver has worked flawlessly with a JR APEX transmitter, and has shown no signs of being susceptible to the high frequency operation of the MMS. Whilst on the subject of the MMS, it is an incredible piece of technology, and is much more sophisticated than any other controller available.



Neat Corally saddle pack clamps feature and are easily removable.

the chassis and radio tray to fit most popular speed controllers and receivers. I chose to fit one of the new Futaba 40MHz receivers and a Corally MMS (Motor Management System) Speed Controller. This fits in

On the negative side, fitting the motor is a bit tricky until you get used to it, as it is important to fit the lower motor mounting screw first. Also the screws used to

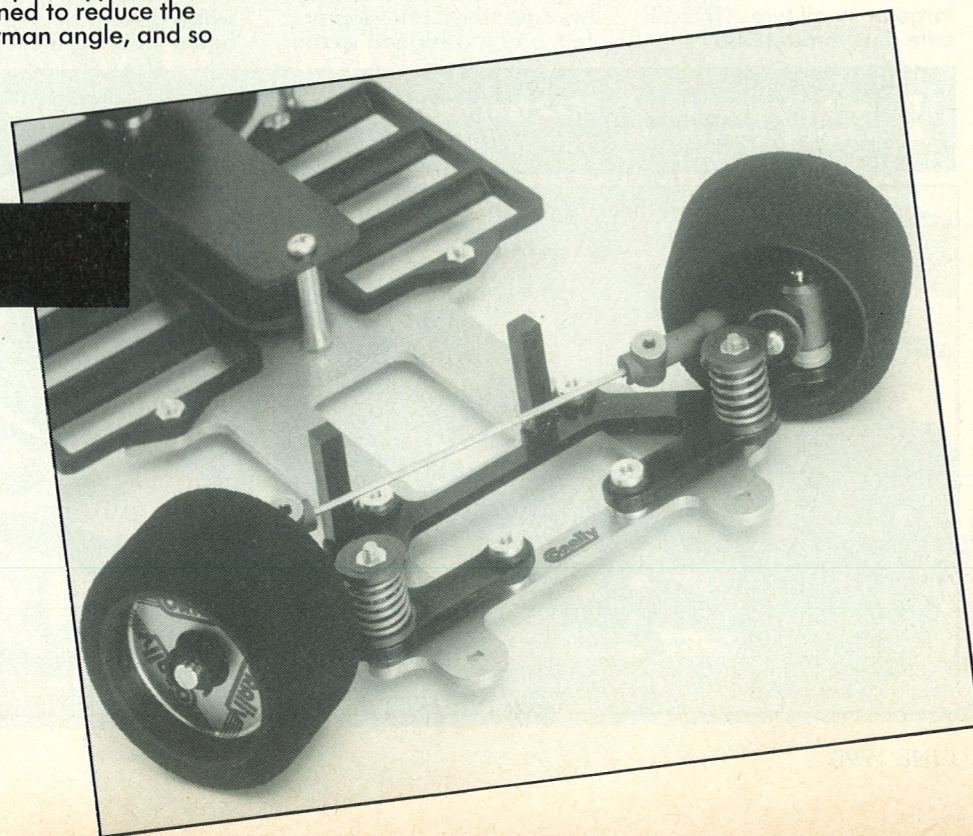
highest quality. Most small servos will fit; I chose a Futaba FPS 132H, which bolted straight onto the servo posts. The steering linkages supplied are of the centre point type, which are designed to reduce the Ackerman angle, and so

very free arrangement, and also allows the T piece to be removed in a matter of seconds. This is just as well, as one of the few adjustments possible is to alter the relative height of the pivot balls. This allows the roll axis to be raised or lowered, relative to the roll centre (centre of gravity). Basically as the grip

Front suspension arms pivot on rubber sleeves.

increases the roll axis should be raised, which will reduce the tendency for the car to roll over.

The damper, which I believe is the only component left unchanged from the original car is fully sealed against the ingress of dirt and tyre dust by special rubber seals. The action is very smooth, and can be adjusted by varying the amount and viscosity of 'goop' used in the damper. One recommendation I would make is to build up



hold the car together are made from a very soft steel. Not only are they heavy, but are prone to stripping unless exactly the right size of screwdriver is used. However, by the time you read this all cars will be fitted with a new type of screw (Tork), which will be much stronger.

Driving impressions

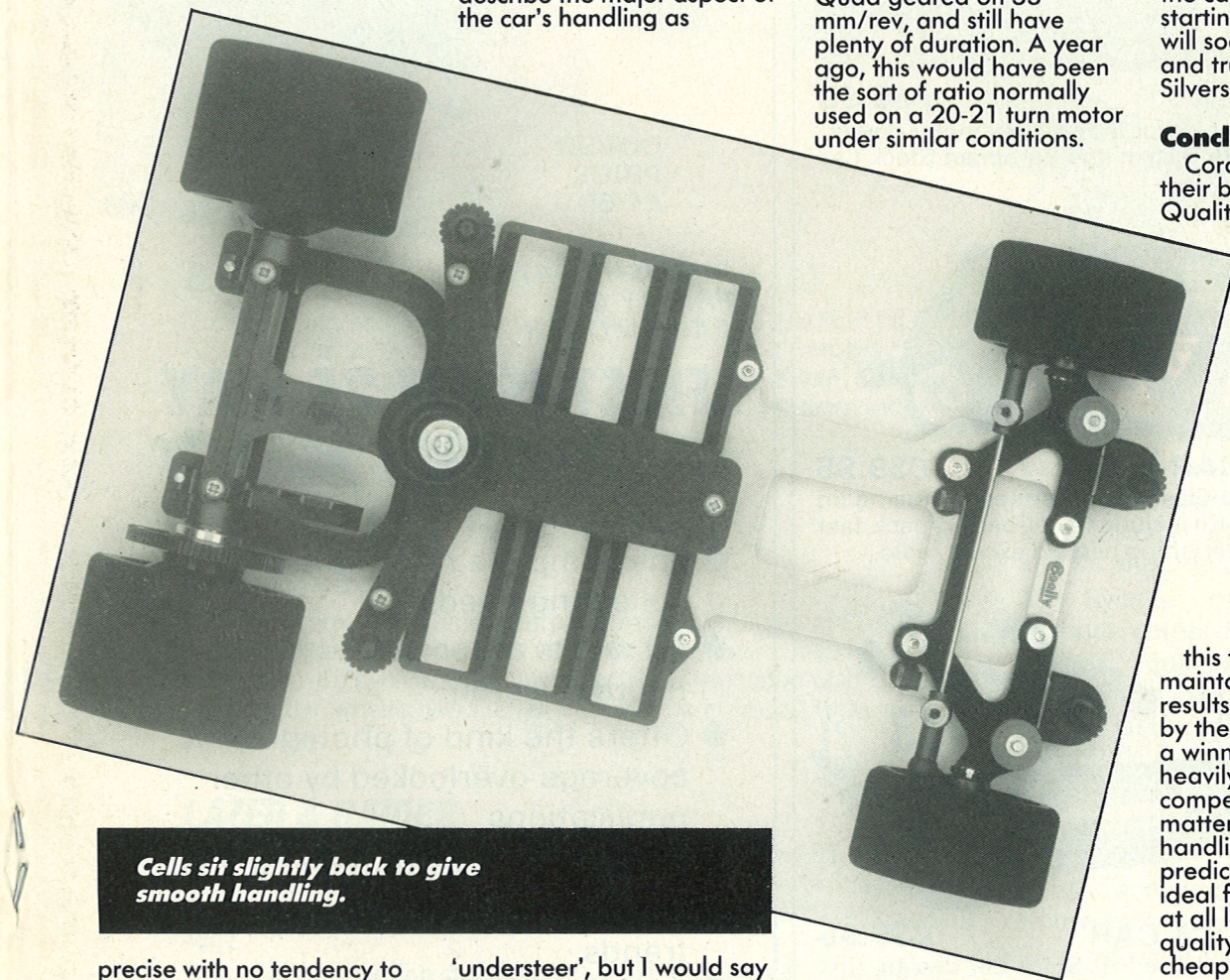
Having been lent Oscar's original prototype at the French Grand Prix, I have been able to run the car at several meetings. The first thing I noticed was just how stable the car is under power. In Paris I was having handling difficulties on my 12L with a 21 double, the Corally was fitted with a 17 Double, and despite the extra torque I found that the power could be used much sooner exciting corners. At high speed the car is very stable and

steering servo, and is very insensitive to the throttle position.

What this means as far as driving styles are concerned, is that it is a car which rewards tidy driving and good lines. It is not the sort of car which needs to be balanced on the throttle through bends, which should make it suitable for beginners as well as 'experts'. A good example of a car which is very responsive to the throttle is the Schumacher 'SPC' car. In the right hands (Phil Davies's), it is probably the fastest cornering 1/12th car available, but is prone to being inconsistent in the wrong hands.

For the SP12 this means that the power can be removed mid bend, without the front end suddenly 'biting', causing the car to spin unless caught in time.

Some people would describe the major aspect of the car's handling as



Cells sit slightly back to give smooth handling.

precise with no tendency to wander. This is obviously due to the extra grip that the fully floating rear end generates.

On entry to corners, the entry speed has to be correct, or the car tends to understeer, but once in the corner the car tends to follow the line set by the

'understeer', but I would say that this is not the case, as once in the corner the car shows no tendency to 'wash' out wide, and holds its line. At several meetings this year I have been able to record lap times similar to Phil Davies, despite having less speed down the straight. What this means is

that the car must be making it up in the corners, I suspect exiting bends, where that added stability can be used to good effect.

Another advantage of the cars insensitivity to the throttle, is that it is possible to use less power to corner at the same speed. Whilst this may sound slightly weird, it should be noted that there is a lot of power wasted while the car is cornering, due to a combination of tyre scrub and high motor load. With the Corally it is possible to take corners at half throttle or less, whereas other cars may require full power to keep the car on line through the bend. As an example of this, at a recent meeting at Eastbourne, I was experimenting with a much more throttle conscious driving style, and found that it was possible to circulate competitively with a 17 Quad geared on 33 mm/rev, and still have plenty of duration. A year ago, this would have been the sort of ratio normally used on a 20-21 turn motor under similar conditions.

Associated Greens and Grand Prix 'C' compound tyres. Basically as the grip increases on the carpet, progressively less grippy tyres are required. I normally start on Yokomo's, and end up running Grand Prix C tyres. If the car is generating too much grip, then it will start lifting inside front wheels while cornering, and possibly rolling over. This may be cured by (a) changing to less grippy tyres, (b) increasing the height of the T piece pivots, or (c) increasing the degree of damping.

One other thing you will soon notice, is how even the tyre wear pattern is. This means that the grip is being generated evenly on all 4 tyres, which means that the car should be more predictable.

Trued and glued TRC Greens are supplied with the car, which are a good starting point, but Corally will soon be supplying glued and trued PK Golds and Silvers as an option.

Conclusions

Corally have always done their best to ensure that the Quality of their products is the highest available. In the SP12

this tradition has been maintained, and if initial results are anything to go by the car is destined to be a winner. The car scores heavily on ease of use, as a complete strip down takes a matter of minutes. The handling is safe and predictable, and should be ideal for drivers competing at all levels. Of course this quality does not come cheaply, but I think it is fair to say that in terms of value for money the car scores highly.

Tyres and Handling

As to be expected, the car works very well on the new breed of tyres, PK Gold's and Yokomo's (PK silver's), but will still work very well on less grippy tyres such as Parma Greens,

In the UK, the car is distributed by Ian Spashett at Intronic, (Tel. 0323 763688), give him a ring now and let him relieve you of any excess money you may happen to have.