

Last year saw the first full season of the 1/10th circuit class held in Britain, and what a year it was. At the start of the year Glyn Peglar and Jimmy Davis ruled supreme with knowledge gained from the previous year. By mid-season the party was really in swing, as the Associated 10L started a steam roller movement, flattening everything in its path. By the end of the season, the cars were forgotten, and all talk was back on tyres (Pinks, Purples, Platins, and Ballerinas to name a few).

What has all this got to do with the review of the Corally SP10 I hear you ask? The answer is simple - Fun, which is what 1/10th circuit racing is all about.

This is Corally's first attempt at a 1/10th circuit car, previously Corally have been dedicated to 1/12th scale cars, motors, batteries, and some chassis parts for 1/10th buggies. This is not to say that the car is untried, as Corally spent almost six

months before releasing the car testing and developing at their permanent indoor track. Indeed rumour has it that the team drivers had to learn special driving skills,

driving the cars to the point of destruction to test the strength of various parts. This is a shame really, as I am certain that it would have been much easier to

lend the cars to stock car racers and let them dish out the carnage!

The New Corally SP10 shares a lot in common with its recently released brother, the SP12, and to all intents and purposes, is a scaled up version. Coral is the aluminium alloy used to make most of the chassis parts, and is exceptionally light and strong. Quite how the chassis will cope with some of the larger bumps and kerbs remains to be seen, as I have visions of cars leaving tracers of sparks, similar to the Formula 1 cars of several years ago. High quality is the hallmark of all Corally products, and in this respect the SP10 is no different from earlier products.

#### Construction

At the front of the car, there is a single piece beam type wishbone, made of Coral, which pivots on rubber bushings. This allows a fair degree of travel, which should be enough to cope with all but the most

bumpy tracks. The wheels are mounted on live axles (again made from coral to reduce weight), with the ball bearings inside the steering blocks. Special injection moulded C clips are used to hold the whole lot together, which makes it very easy to dismantle when required. A small amount of ride height adjustment may be obtained by placing packing washers under/above the steering blocks on the king pins. The amount of castor is factory set, but can be increased or decreased if required by placing washers under the beam mounts.

At the rear of the car, the motor pod is machined from coral and is bolted to the carbon fibre 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.

A rear wing can be fitted directly onto the motor pod, using the special mounts supplied, which allows the wing angle to be simply adjusted and then locked in place.

The differential is unbelievably smooth, and is designed so that the wheels can be changed without having to dismantle the diff, a feature common with most other 1/10 circuit cars. However, the Corally goes one stage further by enclosing most of the working parts of the diff, keeping out dirt and tyre dust. Speedy tyre changes

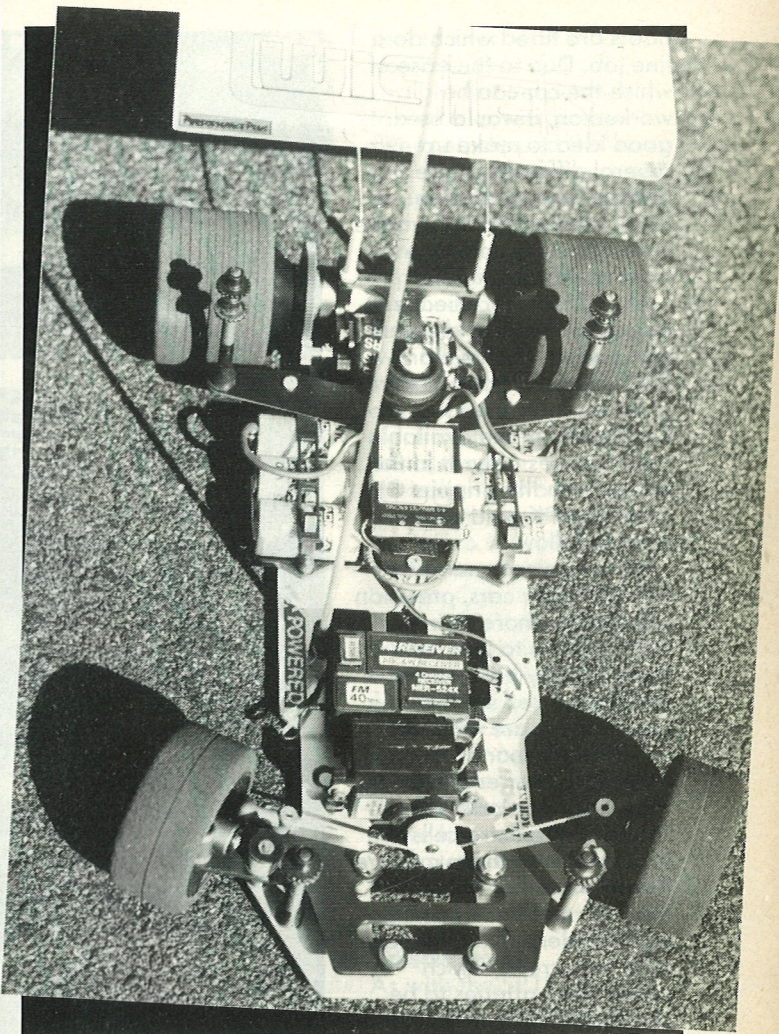
are possible, as all that hold on the wheels is one of the aforementioned plastic C clips.

Whisper quiet 0.5 Module gears are made from a new nylon material, which gives a quieter and better wearing mesh than Tufnol and other materials. A 16 tooth pinion and 90 tooth spur gear are supplied, which should suit something like a 15 turn motor if used out doors. 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 gear.

Incidentally, it is possible to fit these gers to Associated type diffs, and Corally are in the process of making pinions to suit.

The fully floating rear end is a unique feature of the car, and gains its name by allowing the T piece 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 plastic halves, which when placed around the balls are locked in place by the T piece and a rubber grommet. This provides a very free arrangement, and also allows the T piece to be removed in a matter of seconds.

By raising or lowering the height of the T piece pivots, it should be possible to alter the roll axis of the car to cope with various track conditions. On carpet tracks the pivots may want to be



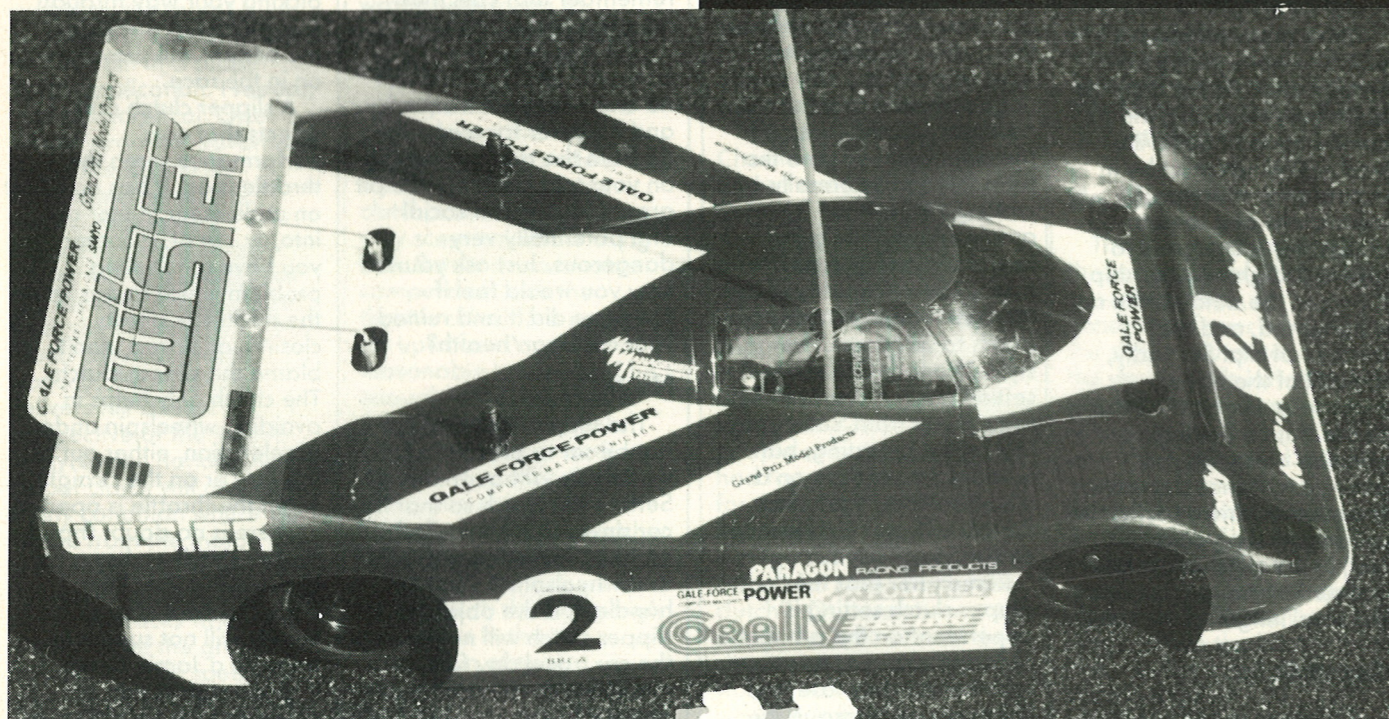
raised higher on the chassis, but for outdoor use, maximum grip is required, and hence the pivots should be mounted as close to the chassis as possible, which is how the car is supplied.

Instead of a sprung damper, the SP10 is fitted with a special friction damper, which has the

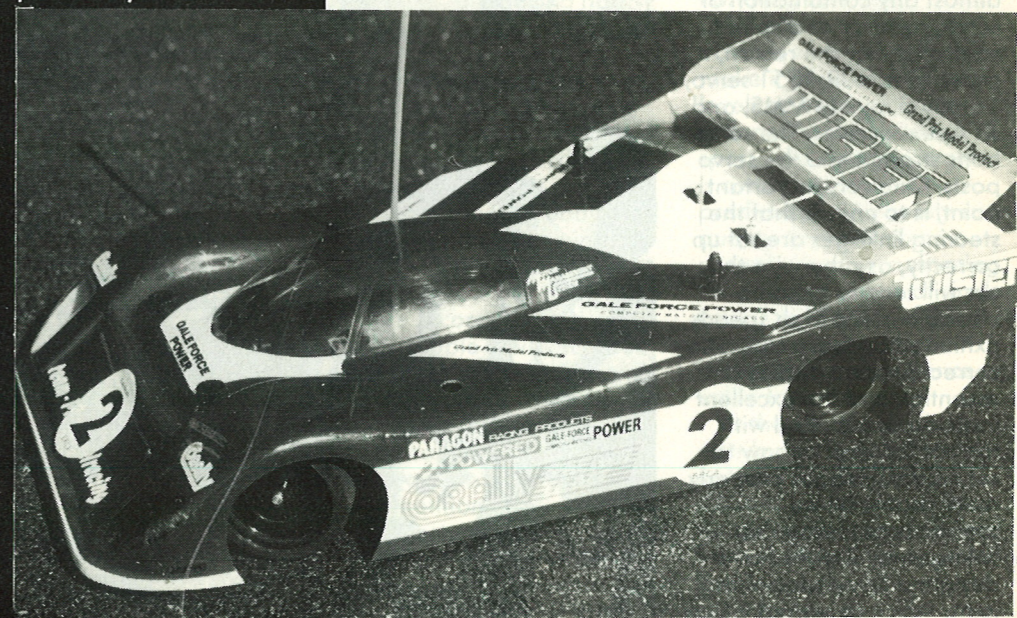
advantage of damping boht lateral and longitudinal forces equally. This may be adjusted by altering the grade and amount of silicone grease inside the damper assembly. To prevent dust, grit and tyre dust entering the damper and affecting its operation, special rubber



**Dave Gale builds the Pro 10 racer from Corally**



**Corally's neat chassis offers alternative cell locations and rear wing mount.**



**Corally SP10**



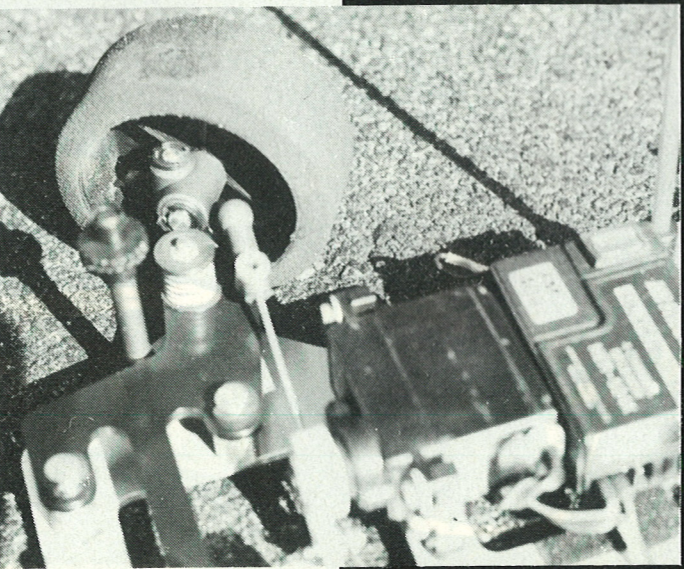
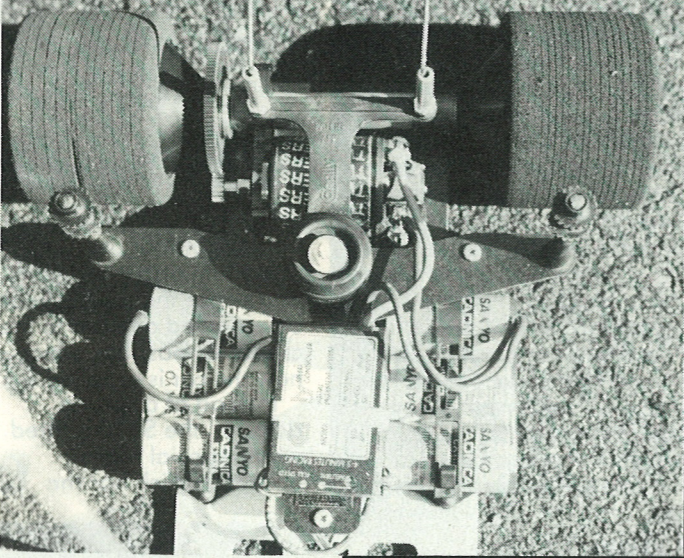
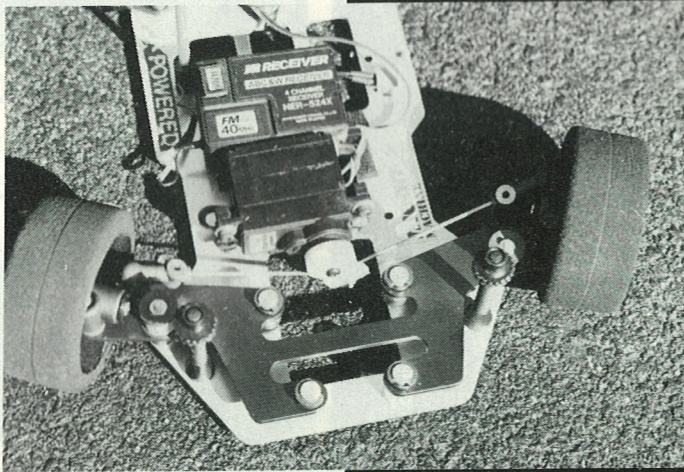
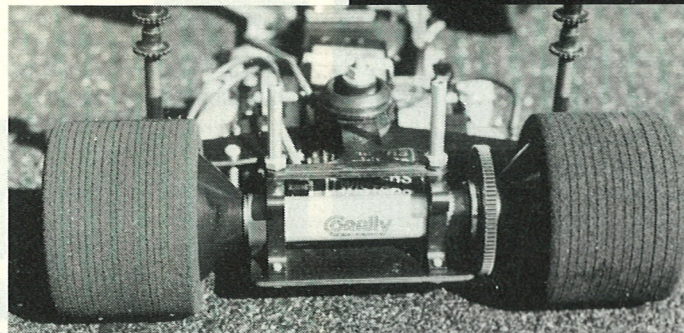
boots are fitted which do a fine job. Due to the ease of which the car can be worked on, it would be a good idea to make up several different grade damper assemblies (i.e., hard, medium, soft) to make setting the car up to the track quick and simple.

The SP10 is supplied with one set of trued and glued tyres, which I believe are TRC greens, a good starting point for most tracks. Corally will make available other grades of tyres in the future, with the grippier PK silver and PK gold grade tyres to follow.

As is conventional with 1/10th circuit cars, provision is made for more than 6 cells, with up to nine cells in three battery holders. For standard 6 cell saddle packs, these are mounted towards the rear of the car, improving rear end traction, a must for non-additive racing. If the extra cells are required, then these may be fitted in another holder in the centre of the chassis. Each holder is fixed in place with two screws, which allows the batteries to be changed simply and without recourse to using tape.

#### Assembly

Like the SP12, Corally have decided to supply the car ready assembled, so preparing the car for its first race will only take a matter of minutes. Fitting the radio gear is simple as there is plenty of room on the chassis and radio tray for almost any combination of servo, receiver and speed controller. For the record, I chose to fit a JR 4051 servo, Corally 5 minute MMS, and JR Apex receiver. The servo bolts straight into the servo posts. One very important point, is to ensure that the steering linkages are set up correctly, as otherwise the car will tend to become unstable at the high speeds exhibited by these cars. The correct amount of play is essential, and the excellent instructions supplied with the car tell exactly how to set up the linkages properly. There should be no problems adjusting the linkages, as Corally have designed some special ball joints which as well as being



very strong, allow very fine adjustment.

Before fitting the motor, it is helpful to remove the wheel on the diff side, as this will allow better access to the motor screws. Also it is easier to fit the motor if the lower screw is fitted first. The body posts are adjustable to any length, although they may be too short for saloon type shells, for the TOJ and Group C Jaguar they are fine.

#### Running the Car

This is where the fun really starts, as first impressions are always the most lasting. Having been used to the RC10L, the Corally was always going to have a hard act to follow, but although I have only tried the car at three tracks I am absolutely certain the SP10 will be a front runner next season. The three tracks in question, Lilford Park, Southampton and Mendip are as different as chalk and cheese, and each challenging in different respects.

Lilford is a very high grip circuit, with large bumps, and perhaps one of the most difficult corners of any circuit at the entry to the straight. Average lap speeds are very high because of the grip, with TQ at the last National meeting averaging a shade over the 30mph barrier for the whole 5 minutes.

After a few runs to get used to the car, (on kit tyres), I found I was soon lapping consistently, although 6 months' rest still hasn't made the corner onto the straight any easier. Overall the car felt very precise and stable, having excellent turn in and grip exiting the bends. The car did not seem too troubled by the bumps, although some of the concrete chippings left from recent track repairs caused spectacular sparks on impact with the motor,

**The Corally SP10 features coned rear wheels 0.5 module gears and is supplied with tough adjustable body mounts. Left: Large springs feature on the front suspension.**

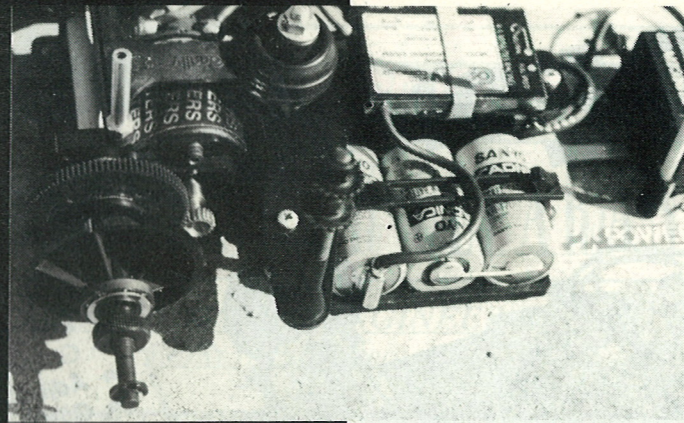
which was soon showing tell-tale signs of being the lowest point in the car. After another couple of runs, Rob and I swapped cars, so that I could try his 10L.

Relative to the 10L, we found that the Corally had better turn in, and was able to put down more power exiting the bends before spinning out became a problem. The increased turn in was almost certainly due to the slightly different grades of 'green' front tyres, the ones on the Corally being much softer. However, both cars were fitted with similar grade rear tyres, so the Corally's ability to handle more power under acceleration must mean that the fully floating rear end generates more grip.

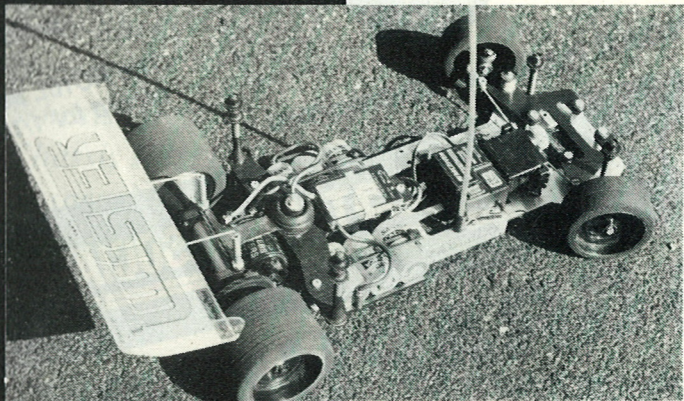
With 'brass monkey' weather beginning to set in for the afternoon, I opted out of the last Run, and handed the car over to Rob, so that I could do some lap timing. Knowing that 18 second laps were the target to beat, we were both surprised that Rob managed some fast 19 second laps, and a couple of 18s. With higher temperatures, better batteries and motors, I think that the SP10 will easily be on the pace next year.

At Mendip I was without the benefit of Rob's expert help and guidance, but at least the track was in much better condition than Lilford. The grip at Mendip is very unpredictable, and varies from extremely high, immediately after an 1/8th, scale meeting, to extremely low as the castor oil from the exhausts is removed by rain, dew, etc. Another factor at Mendip is the temperature, as the higher the temperature, the better the grip.

Various tyre combinations were tried, and I eventually found that Belsport Platinums were giving the best all round grip, although the standard kit tyres performed acceptably. With this tyre combination the car was very stable, and was circulating well. With other tyre combinations which we found suited to the 10L the Corally tended to exhibit more understeer.



**Wheel fitting doesn't require dismantling of the differential. Below: Rear wing fitted and ready for the test drive.**



This was particularly noticeable through the sweeping corners after the straight and before the start/finish line. On the 10L, it handles better if the front tyres are slightly firmer than the rears, as it generates a lot of front grip. On the Corally I think that it is best suited when the front and rear tyres are the same grade, which is why the Belsport Platinums front and rear worked so well. (On the 10L, this would give too much oversteer). Obviously as the season progresses the tyre combinations best suited to the car will eventually be determined, but being able to run tyres of the same grade front and rear must be an advantage.

I found that I was averaging about 23 seconds a lap, which is about 1 second off the pace set at a national meeting, but felt that with more track time this could easily be reduced. In certain parts of the track the car was much better, especially through the chicane onto the straight, and in the car's ride over bumps at high speed. This allowed the car to be driven with more

precision into the corner at the end of the straight.

Southampton is a huge circuit, with a variation of subtly banked corners, adverse cambers, hairpins, and straights, and as usual bumps in all the wrong places. After some playing about with tyres, I found that PK silvers gave an excellent balance. At first, there was a degree of high speed understeer, similar to that experienced at Mendip, but having had time to ponder over possible improvements, this was totally cured by increasing the amount of silicone 'goop' in the damper. Some lap times were taken using practice cells, A group, C body, and despite the sun shining off Southampton water, a fast 13 lap/slow 14 would have been recorded. Since only two people have recorded 14 laps, Jimmy Davis, and Glyn Peglar then again this is proof that the car is more than capable of holding its own against the toughest competition.

Unfortunately my practice session was cut short by a major lack of concentration which led to one of the most

spectacular 'wall blasts' possible. Going down the straight flat out, I failed to take the correct line into the sweeper, clipped the apex, and speared off the circuit at unabated speed straight into a handily placed concrete fence post. Expecting to find the car reduced to kit form, I was amazed to find that there was absolutely no damage to any of the chassis components. All the electrics, motor, batteries, servo, receiver, speed controller had been ejected from their mountings, and this led to the only damage which was a chipped and broken Corally MMS speed controller. (Velcro really isn't man enough for the job!). I can't think of another car which would have survived a 45mph+ impact without anything more than a small chip off the front of the chassis, which just goes to prove how effective the test work done by the team drivers was all those months ago.

#### Conclusions

As with the SP12, Corally have done their best to maintain their reputation for superior quality and design. The SP10 must be the easiest car in the world to work on, and coupled with a chassis set up which guarantees maximum grip, this must surely make it one of the most popular cars next season. The car is very strong, as proved by my Southampton shunt, and the handling safe and predictable, without any obvious vices. This should make it popular with all levels of drivers, but more so with newcomers to the sport, who want a car which is consistent and predictable. Obviously such quality does not come cheaply, but by comparing the car with others of similar price I think the end result is a better made and designed car, and hence value for money.

In the UK, the car is distributed by Ian Spashett at Intronics (Tel. 0323 763688), who would no doubt be delighted to hear from you once you've sold the dog, telly, wife, etc., to raise funds.