



**T**he Serpent Impact 10 is officially described by its manufacturers as being a RC gas (Internal Combustion Engine) powered 1/10th scale on-road racer. As such it is presently in a class on its own. It may seem odd that an avid enthusiast of eighth scale circuit racing should want to be bothered with writing a review of a basic tenth scale car powered by a small relatively low performance 1.7cc Magnum engine. Indeed I have to confess that when I was first offered the car to review by Serpent I accepted the task more out of respect for all the apparently more desirable products Serpent had sent me in the past, than a desire to build and review the car, it even crossed my mind to wonder if I could get away with passing it on to someone else for a review without offending Serpent.

All that changed when I opened the box and saw the car. Its so beautifully engineered and proportioned that I fell in love with it immediately. By the time I'd fitted the radio gear and a carefully painted body shell I was hooked. It just somehow seems so right and so full of character.

**Fully Assembled**

The fact that it comes virtually fully assembled requiring only the fitting of radio gear, the painting and fitting of the body shell, and the gluing and truing of the wheels was a most welcome

# impact!

Serpent's 1/10th Scale On-Road Racer impresses Colin Leake



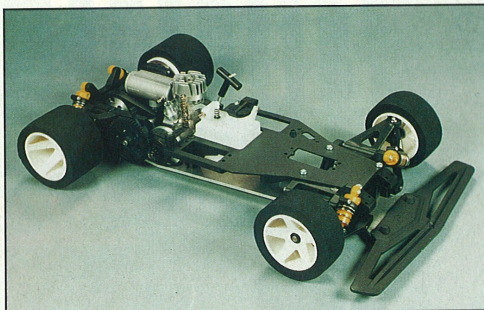
fact in the middle of a busy racing season.

On the subject of the gluing and truing of tyres I have often moaned in the past that manufacturers simply instruct the builder to do this but never provide the means of doing so. Happily this time Serpent seem to have become one of the first manufacturers to get the message and have included a special mandrel in the kit on which the wheels can be mounted the held in a drill chuck for truing. When fitting the rear tyres to this it is necessary to remove one rear wheel adaptor from the car and fit it to the mandrel.

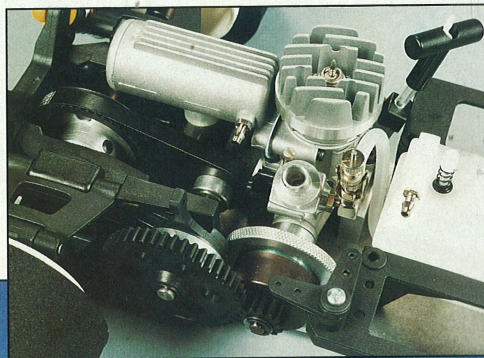
### Minor Preferences

I did take the precaution of making some small changes to the ready assembled car. I removed the grub-screws and refitted them using a thread locking compound. There are so few used that this task was completed in minutes. I also fitted the optional steel rear drive shafts as I anticipate that our car will do a great deal of running. At the same time I cut a suitable length of silicon fuel tube and fitted it down the centre of the solid rear axle so that it exerted gentle pressure on the ends of the shafts to stop them floating about.

*Impact!*



**Sturdy alloy chassis - Serpent's 1/8th scale cars supply much of the running gear. 1.7cc Magnum engine with recoil starter.**



I also noticed that the top front wishbones had not been locked in place and were free to slide backwards and forwards on the mounting pin. These are intended to be adjustable to enable the caster to be changed. I locked them in position as far back as they would go as I intended to let a number of novices have a go with the car, and hence wanted the maximum camber to make the car as stable as possible. No mention of this adjustability is made in the manual.

The car is based around the mechanicals of Serpents well proven eighth scale cars and as such can be expected to be very robust and long lasting. The chassis is a sturdy alloy affair on which is mounted all the normal running gear of the Serpent eighth scale cars with unequal length wishbones and coil over shockabsorber suspension. The only exceptions to this is the front steering blocks, which come from the same companies Tenforce car and the use of plastic oil filled shock absorbers.

Serpent's adjustable metal shockabsorbers are available as a tune-up extra, but the plastic ones seem to work so

well that I can see little point in bothering. Likewise different rate springs and different viscosity silicon shock absorber oils are available but since those supplied with the kit seem so well chosen to match the car, why bother with them in this basic version of the car? Front and rear anti-roll bars are available as reasonably priced tune-up extras. As Serpent kindly supplied them with the kit I did fit them to the review car. Our experience with our eighth scale cars would suggest that these are well worth fitting.

### Bearings

The standard Impact is officially fitted with plain bearings. These take the form of replaceable plastic insert bearings. These can be removed and replaced by an optional pack of ball bearings from the tune up part range. As a pack had been supplied with the review car I fitted them. In doing so I noticed that the layshaft was already ball-raced so it seems that some change in the specification may have taken place. If the car is to be used purely for fun then I have no doubt that the standard plastic bearings supplied with it are more than adequate. If you do opt for ballracing the car, do it before you run it for any length of time as if the shafts become worn to any extent the bearings will not fit properly on them.

The final tune up option available at present is a ball type differential. The car does handle reasonably well without this but it is a desirable option since it will undoubtedly make the car easier to drive and reduce the tendency for the back end to drift out in hard cornering, thus making it easier to avoid embarrassing spins.

The factory tell me that by the time this gets into print they will also have a tuned pipe silencer system available which is very similar to the ones we use in eighth scale. This will no doubt make the engine more powerful and responsive.

### R/C Installation

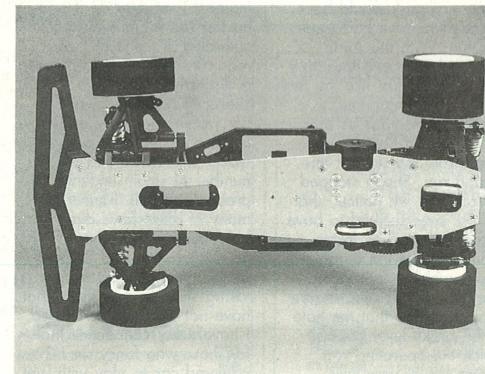
The radio plate is a very

well designed single plastic moulding. To fit the radio gear all that is needed is four cable ties for the servos, two screws for the switch and two screws with washers for the receiver. Batteries are housed in a traditional plastic battery box that snaps firmly into position between the chassis and the radio plate. Fitting the radio gear takes literally a few minutes. Likewise because all the linkages are preformed and cut to length they are very easy and quick to fit. I particularly liked the clever way in which the effective track-rod length can be altered to adjust the toe-in. It's the quickest and simplest system I have ever come across. Another idea I liked was the pair of plastic mouldings that interlink inside a spring to form the throttle linkage in such a way as to allow linkage to compress when the brake is applied.

### Power Plant

The moulded plastic fuel

**Note how silencer pipe is cleverly directed through the suspension components and outlets at rear of car.**



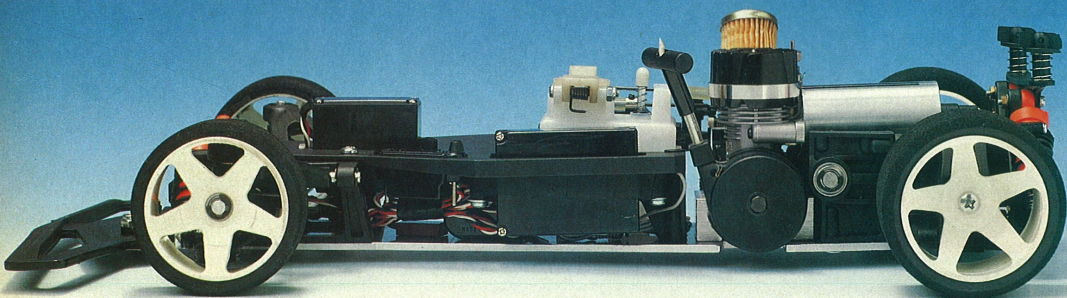
tank is fixed directly to the chassis. To help starting it has a primer pump fitted to it. The tank is pressurised by the exhaust when the engine is running and is fitted with a well sealed snap shut lid.

The engine is a 1.7cc Magnum which is fitted with a recoil type starter. I was happy to see that one is not totally reliant on this form of starting. The engine is fitted with a conventional flywheel that projects just below the bottom of the chassis making it possible to use an electric starter. In fact I discovered that the car fits straight onto my eighth scale starter box. Being a conscientious reviewer I resisted the temptation to use the starter box and opted for the recoil

starter instead. I would like to have been able to say that I primed the engine using the pump and having followed the instructions it started first time. I can't though because the fact is that to start the engine for the first time it took me a good ten minutes.

The problem is of course that until the engine has run you have no idea where the correct mixture setting is. However having got over that first hurdle by starting with the needle closed and gradually opening it out, the engine ran smoothly with a good tickover and reasonable pick up. Subsequent restarts with the engine both hot and cold proved to be trouble free.

The drive from the engine is taken up by a two shoe pre-fitted centrifugal clutch, then on to a layshaft by gears and finally to the back axle by a belt drive. This belt drive may look skimpy to the uninitiated but it is the same as the one used on Serpent's eighth scale cars. Given that a single belt there lasts well over a season no problem should be encountered in this



application.

The brake is in the form of an internal expanding shoe design and works on the rear wheels only. In this very basic car it is adequate, but something very much better will be needed for later high performance versions of the car.

The silencer and associated pipe work is cleverly contained within the rear power pod and exits at the rear of the car. It produces a muffled realistic sounding note and does a sufficiently good job of to ensure that noise should not produce any complaints provided reasonable common sense is used.

### Body

The body provided with our car was a very realistic looking Audi Quattro. It needs to be painted with a good quality fuel resistant paint from the inside and cut to fit the car. It is mounted on four body posts and securely held in place by clever rotating body clips which are integral parts of those body posts.

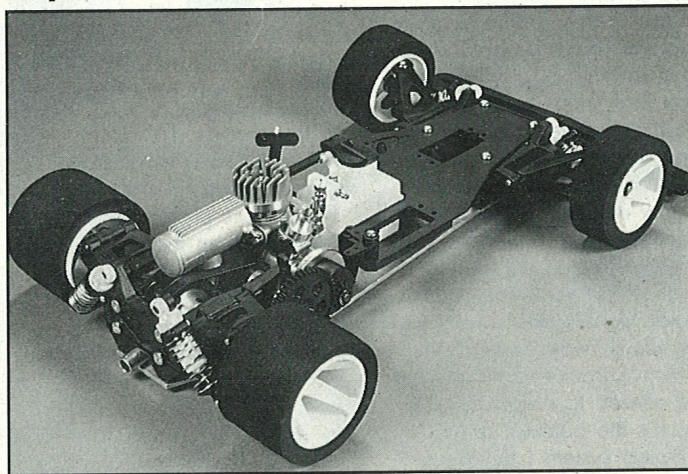
### On Track

Normally when I review a car I always take it to a race track and enter it in competition with its rivals so that its potential can be accurately assessed. One of my pet hates has is reviews of competition machinery that end with "We ran it round the car park and it seemed alright" or "We'll report on how well it went in a future issue". In this case though I made an exception. Firstly there is no class for it to race in yet and with the possible exception of the Shumacher Nitro 10 there is nothing to race it against yet. Since most potential owners of this car are going to purchase it purely for fun, rather than racing, I decided that we would take it outside into the square in the cul-de-sac, in which we live, and see how much fun we could have with it.

The first run was made with the engine set very rich to run it in. Even so the performance was much brisker than I had expected for such a solid car with an engine of this size. Running rich the fuel lasted for five

minutes and whilst the noise did not generate any complaints it did attract some spectators from the houses. I had expected that with a solid rear axle there would be a tendency for the rear end to want to come round during power on cornering and cause the car to spin. To my surprise it exhibited no such tendency. Whilst you could do a Nigel Mansell for the benefit of the spectators you had to be very brutal with the steering and throttle to spin the back end round. In general the handling was excellent and the car easy to drive.

**Car comes almost ready-to-run. Just fit the R/C, squirt in the fuel and away you go - well it's almost that easy!**



After returning to the garage to make a hole for the aerial in the body we leaned the motor out and put in a second appearance. Now the little car really got a move on to such an extent that what one could do with it with the throttle open was somewhat limited by the space available. What we really needed was to have had the kind of room an empty car park would have provided to have had some real fun. With the Audi Quattro body on it looked and sounded just like the real thing.

Unfortunately for us disaster was less than two minutes away from the start of this second run. Shaun stopped the car and we noticed that the tick over seemed to have become very much faster. Then we smelt the burning plastic which was coming from the clutch. What had happened was that the hole in the brake lever through which the operating rod passes leaves very little

clearance for the rod to pass through. On this occasion as he closed the throttle the lever had twisted slightly and locked itself onto the rod. As the servo tried to close the throttle the brake locked and prevented the throttle from closing. The obvious result was that the clutch quickly burned out.

It was annoying fault at the time but hardly a serious one. The fact is that it seems to have been an isolated incident that happened to us after several minutes running and as far as I know it has not happened to others who have run the car in the U.K..

The cure is simply to make the hole slightly larger. When this is done it becomes impossible for the same thing to happen. No doubt now that Serpent are aware of the problem they will take steps to rectify matters. If you buy a kit were they have not had time to do so just drill out the hole slightly.

So what did I think of the car? I loved it from the moment I set eyes on it and having run it I'm even more enthralled. It's one of those rear cars that seem to possess a distinctively attractive character all of its own. Our car was from a very early batch and, much as one would expect, I found a number of small niggling problems with it. I know that many of these have already been dealt with in the production kits, and Serpent assure me that they are taking steps to cure those that have not yet been addressed. I have every confidence that for those who fancy an I.C. powered car to play with, yet

don't want to get involved in eighth scale, this kit will provide endless hours of fun and prove to be both reliable and long lasting.

If anyone out there would like to buy the review kit from me hard luck. I'm keeping it to play with myself. Then I'm going to get a new body shell, paint it pink, and give the car to my grand daughter to get her started in model cars. True at seven months old she's a little young but my son-in-law seems to think she will be able to manage to hold a transmitter soon!

Serpent are planning a future Evolution-series of the car to be known as the Impact 12 and Impact 15 that are aimed more towards racing. The Impact 12 will feature a 2.1 cc engine with a Group C body shell. The Impact 15 will be fitted with a powerful 2.5 cc racing engine and an F1 type shell. Judging by how well the basic Impact 10 goes the Impact 15 should turn out to be a veritable Pocket Rocket. Driving such a small light car with two wheel drive and all that potential performance will test the skills of even the best drivers. Definitely one for the race track rather than the car park! No firm date is available for these yet, indeed Serpent tell me they are having great difficulty making enough of the present car to satisfy world wide demand. I assume also that they will have to spend some time up-rating the brake and clutch to deal with all that extra power.

One good thing is that the basic Impact 10 can easily be up-graded to the 12 and 15 specification by drivers who, having got the taste of IC powered cars want to move on to more serious driving and perhaps start competitive racing.

The car is imported into the U.K. by Richard Kohnstam Limited and will no doubt be readily available from all good Model Shops. At the time of writing demand is outstripping supply. Hopefully by the time this gets into print the situation will have improved. It is expected that the price will be in the region of £239.00, not a bad price for a package that is so complete it even includes a fuel bottle.