RRC KIT REVIEW

by JOHN VARLEY

Hobby World TURBO
1/12th scale suspension car

When pictures appeared in an earlier edition of Radio Race Car, showing an independent front suspension assembly unit, on view at the Nuremberg Toy Fair, my thoughts turned immediately to the possibility of getting my hands on one, especially with my interest of scratch-building almost all 1/12th models I have ever raced.

My interest was therefore heightened when a virtually complete race car kit arrived from Hobby World, of their TURBO suspension car. A quick glance soon showed that the builder required motor, batteries and radio only to complete the kit.

Let's get our head into the box then and see what it throws up in the way of new innovative ideas. I suppose if we are perfectly honest, it will show us nothing that can be termed new, but it is a further variation on a theme, and all questions will ultimately be answered by how it compares in use to the current opposition, and we know that there is enough of that.

Our initial interest is invariably drawn towards the front suspension assembly. Moulded in red and black, which contrasts well with each other, it constitutes five main nylon mouldings, and the two spring suspension struts.

The central mounting block in red nylon, right and left hand suspension arms in black nylon and steering arms in red.

Assembly is very simple, king pins, stub axles and suspension pivots, all parallel steel pins held in place each end by circlip.

By paying close attention to the fit of all parts, I found that the slot in the moulded suspension arms was fractionally narrower than the mounting block it was pivoted from. This caused the effect of spreading the arms out when sliding them into position on the block, and then they were subsequently pulled back into position, once the pivot pins were put into place.

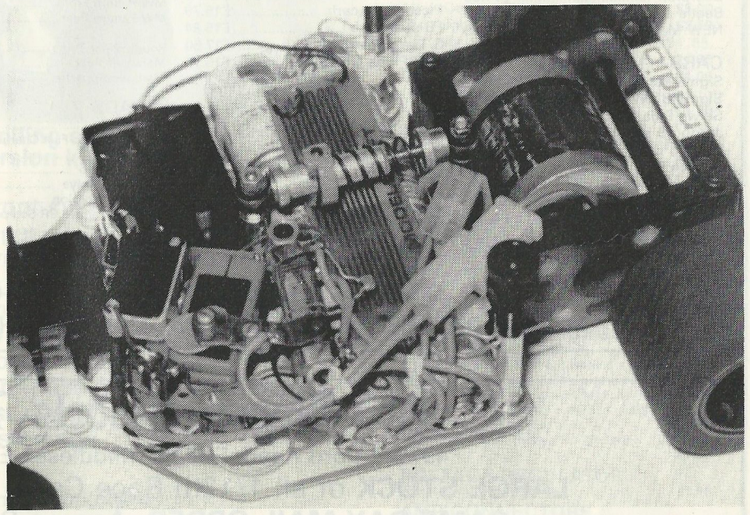
This situation caused too much friction between the sliding parts, giving the fairly low rated springs too much work to do in order for the suspension arms to return to the set position against the chassis.

To rectify this, I lightly sanded with fine glasspaper, each side of the central mounting block. This, as well as getting the thickness correct to match the suspension arms, also gave me perfectly flat surfaces for the suspension movement because the original moulding had very slight 'sinking' from when it cooled after injection. Once done, and a vigorous rub each side with a wax candle to reduce friction, and I had the right kind of fit and movement to suit the application.

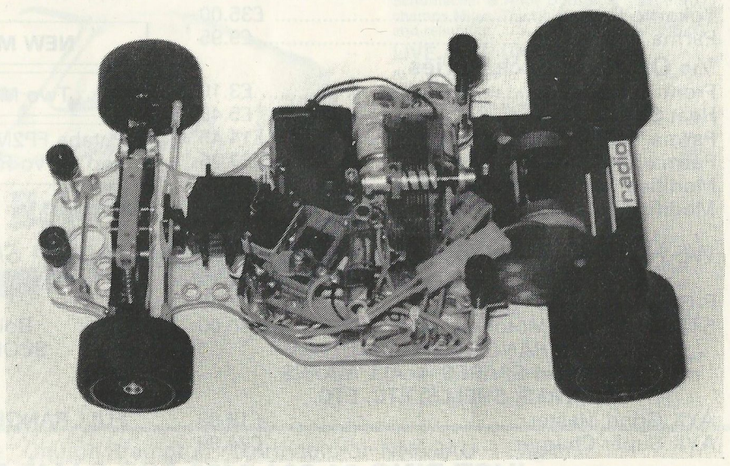
Suspension struts are simple affairs, top pivots from the corner of the mounting block and bottom pivots effected from a small moulding between the suspension arms. Spring rates can be obtained by adjusting the length of spring engagement on the bottom pivot mount.

Here again, I wasn't entirely satisfied with the fit of the springs on the struts. I therefore fitted a small piece of silicone fuel tube over the central wire strut, leaving the spring to slide nicely over the tube, thus keeping the spring parallel whilst under compression. With careful cutting off the length of this soft tubing, it also gave me a very good damping effect on the front.

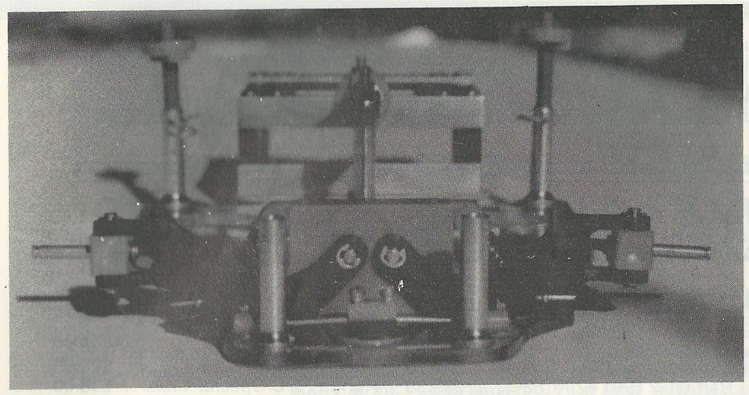
Another small point that can easily be improved by the manufacturer, is the hole through each steering arm, through which passes the king pin. It was found to be too easy a fit, and allowed the steering arm to move on the king pin.



Close up showing shocker, wiper speedcontroller etc. Schumacher body posts not standard but suited installation. Note the vintage modelcraft aerial board!! Waste not want not eh John? Ed.



The latest "Turbo" car from Hobby World Hong Kong.



Front suspension system prior to fitting out. Note "split" front anti roll bar — this was later changed to a one piece roll bar. This is how the kit arrived, almost built.

This should be a very close run fit between pin and arm, but when measured a difference of 0.014 inches was found between the moulded hole in the steering arm and the diameter of the king pin.

The entire front suspension assembly is attached to the main chassis with two slotted countersunk screws. The chassis, uncommon to most new kits nowadays, is made from 3mm polycarbonate. With the problems that TEAC can bring upon polycarbonate chassis, this may deter some people, but I myself never use TEAC, and therefore still believe that polycarbonate makes an excellent chassis material.

Polycarbonate has exceptional strength with flexibility and will not tweak or set as we get with fibreglass.

The rear motor mount bearing blocks are attached to the chassis with a fibreglass 'T' shaped flex plate. This plate I found a little broad at the point where the flex takes place, and trimmed this down a little by file, in order to arrive at a more flexible setting. (This I hasten to add was for my own personal choice.)

Rear blocks are nylon moulded in red, and obviously had come from a previous kit, because it was noted that the original body post holes were still in evidence. The blocks are inverted to fit this new car, and without any mods to it, fitted the bill quite well.

Lengths of aluminium angle are bolted across each corner of the blocks, to form a solid box section. No bearings were supplied with the kit, but I felt it absolutely necessary to fit such items, thus replacing the nylon bushes that were supplied.

A single oil filled shock absorber with adjustable compression coil spring is supplied, fitted between the front edge of the rear power pod and an aluminium post mounted mid chassis.

Four similar tubular aluminium posts, with tubular nylon extensions coupled with adjustable nylon collars from the body mounts.

A Schumacher type differential is supplied. The gear is made by Schumacher, the remaining parts appear to be made by Hobby World or one of its home-based suppliers. The differential is made up with a solid steel axle, and whilst this keeps down the cost considerably, and is more than adequate for the beginner, a lighter axle would be the order of the day for a more seasoned racer.

To finalise the build, I used the lightweight resistor supplied, along with its aluminium mounting posts, and fibreglass mounting arms, that allow it to be secured direct on to the servo mounting lugs. (In this case a Bantam Midget servo.)

A two-part anti-roll bar is fitted to the front suspension, this is joined together with a small brass connector. At the time it seemed like a good idea, in that adjustment could be made for tweak on either suspension arms (but more of this later).

The bottom pivots for the suspension struts are made from cotter pins, and the open eye end of these pins is used for the location of each end of the anti-roll bar (very novel).

To finalise, I cut out and painted the lexan body supplied, fitted steering servo, batteries and motor. I didn't use the tyres supplied, only for the fact that they were an unknown quantity to me for carpet racing. Therefore UFRA yellow on the front, and Parma medium on the rear were fitted, and we are ready to go.

Right from the start, the car proved very easy to handle on the tyres fitted, and with the suspension settings straight from the box. It develops a lot of front end grip, allowing fast entries in each corner with braking coming from the tyres and not from the resistor brake through the motor.

This also allows early acceleration out of each corner with a minimum of understeer apparent. I slackened the spring on the new damper to its softest setting, to help the rear, which does not have a lot of flex, and the car continued to go wherever I pointed it.

There was one thing however, that became apparent from running the car. The anti-roll bar would twist in its connector from an impact with another car, or track piping, thus leaving one suspension arm badly tweaked. Also the roll bar would be knocked from its end location completely.

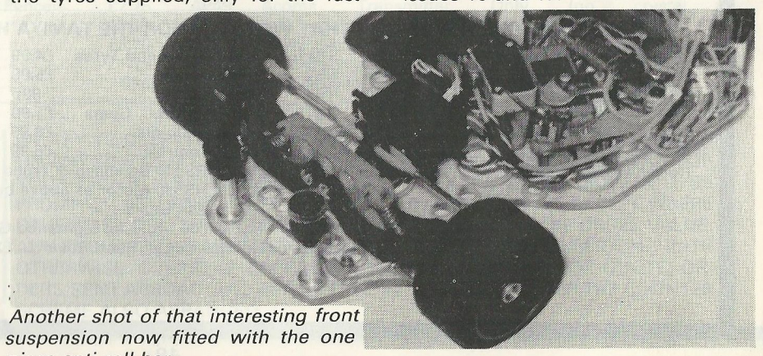
I solved this by making a one piece roll bar, with slightly longer extensions each end, to stop them coming out of their locations, from even the hardest knocks.

To conclude, the kit is good value for money at £48 with the complete rolling chassis, resistor and lexan body. It will work well with little if any setting up problems. The polycarbonate chassis is immensely strong and has the advantage mentioned earlier of not suffering from static tweak.

The mouldings once more as mentioned earlier, could be tidied up a little and the steering arms definitely need smaller holes for the king pins. Small points really and no real detriment to the overall kit.

A good starter for any would be racer, who could probably work his or her way through the ranks to compete with the best, and still be using the same car.

All enquiries and further details from Hobby World, L2–19 New World Centre, Kowloon, Hong Kong — see Issues 16 and 17.



Another shot of that interesting front suspension now fitted with the one piece anti roll bar.