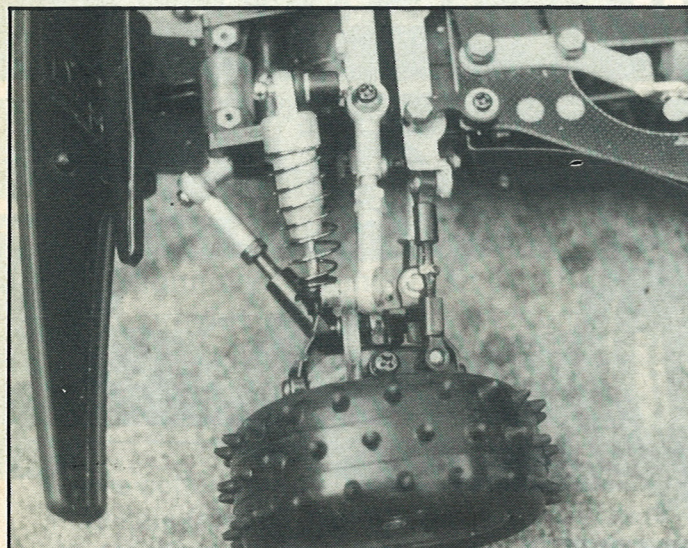
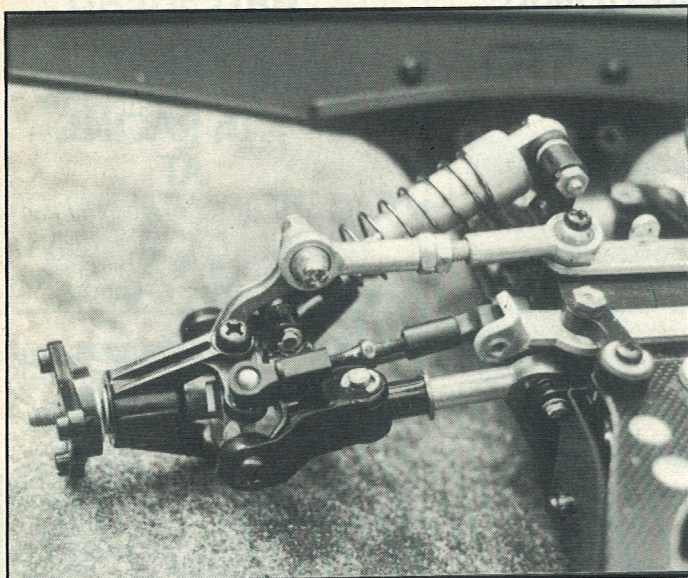


Above: Mini-Mustang/Maxima front bumper fits easily and offers greater protection.



Above: The front suspension is now protected against knocks - note CAT tyres fitted. Below: The revised front blocks look no different but offer better steering.



John Cundell has taken over RCMC's Avante and has a few tips

In the August issue we carried a build up review of Tamiya's first serious entry into the competition world of 4x4 cars. Since then we have had the opportunity to run the model in a club environment and at a couple of Open Meetings.

Lap 1

The first outing was indoors on carpet, straight from the workshop, so to speak, and as at that time, no other motor pinions were available apart from the 21-tooth that was supplied with the car, it was a *fait accompli* as to what ratio to run. Gears available (we've got them now) range from 16 to 23 teeth, so it was obvious that the 21 was going to require a standard motor - and as standards are all we are allowed to run at my local club, Milton Keynes, once again there was little choice.

Our track is relatively tight as we race in a not too large church hall, and in that environment, the "Avante" was very successful without any modifications. Initially there was some understeer, so the toe in was removed to zero at run position, and a little more trim dialled in so that full lock was obtained. By the end of the evening the car was as good as anything else around that evening, including some recognised "competitive" machinery.

Problems were screws coming loose, mainly because our illustrious editor hadn't used any Threadlock during construction, and what at first seemed like minor damage to the nearside front suspension when a colleague (that's my story) struck the boards at the end of our hall with little more than a glancing blow. The car received many admiring glances from other members, and we went home feeling that a successful start had been made. Oh, by the way, the motor used was a well-used Parma "K stock", and an elderly set of cells beyond their best.

Pits

Before we move onto the next outing, just a few words about the radio installation and battery changing.

As can be seen from the photographs, there is not a lot of room to play with. In fact it is impossible to leave the very nice driver/compartment in position if you are using anything other than the combined Acoms Receiver/Speed Controller. I didn't have one of those so out came the driver to allow me to fit the Acoms Electronic Speed Controller, operating through a Futaba receiver. The aerial supplied is one of the Tamiya metal rods, substantial I know, but it kept coming loose however much I tightened it and applied Threadlock, and its illegal anyway, so I fitted a plastic aerial tube, ex "Ninja" actually.

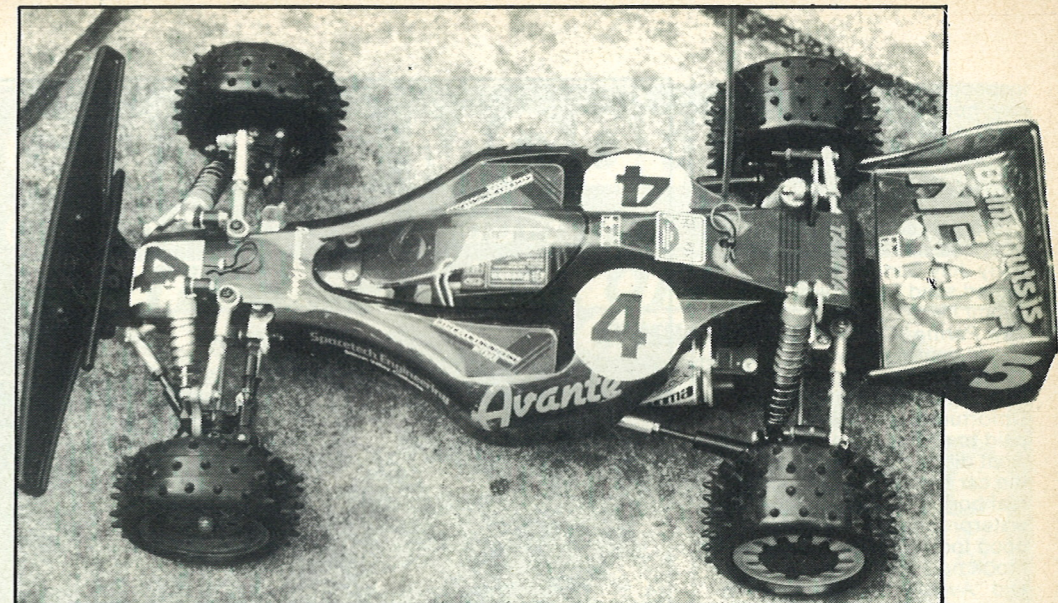
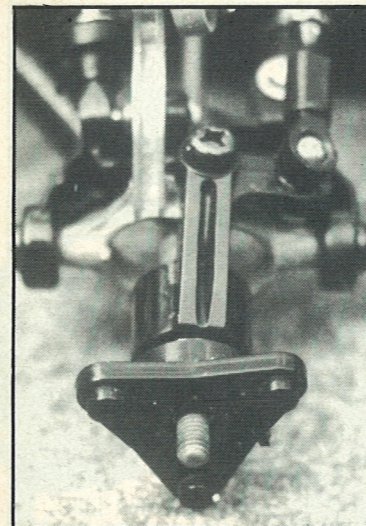
The batteries fit longitudinally between a plastic moulded bracket and butt up against the metal motor plate, being held *in situ* by a substantial plastic bracket. This locates into three holes in the chassis and is held by a small body clip. One point to note is that vibration causes the metal motor plate to wear through the thin plastic casing on the end of some battery packs, resulting in a dangerous and expensive shorting session. So be warned. I used the heavy duty plastic end cases supplied on Parma cells to insulate the batteries.

Lap 2

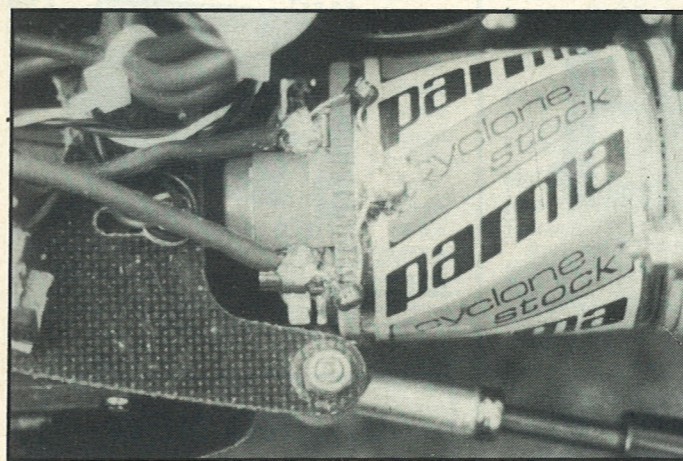
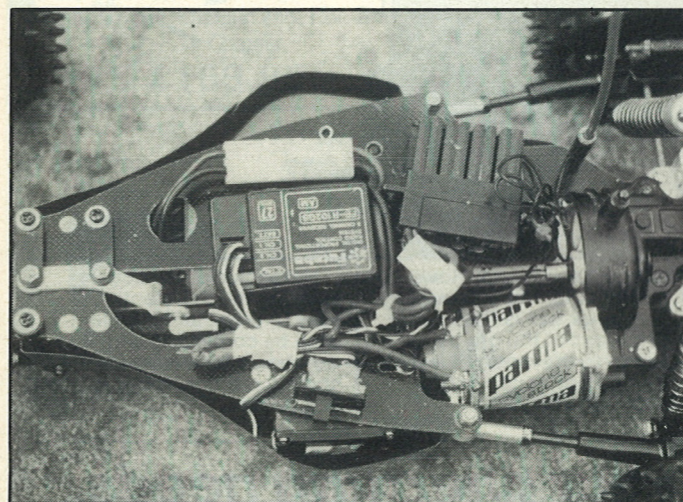
Second outing was also on our indoor track, still with the same set-up, as the gears had not yet arrived. The evening was not successful. The handling was suspect and close inspection of the front end showed that the knock on the previous week had bent one of the metal stub shafts on the nearside front suspension lower rods and opened out the plastic bush. A temporary repair was managed to allow racing to continue, however another slight knock on the front end recreated the problem.

Lap 3

The next outing was destined to be an inter-club meeting between Milton Keynes and Leighton Buzzard clubs, at our track at Elfield Park, Milton Keynes. The track consists of one "curved" straight, a couple of jumps, and a number of



With CAT tyres all round and the large front bumper the Avante looks mean and ready for the circuits.



Centre: The radio installation is a little messy although the bodyshell/undertray keeps it in check. Above: Parma Cyclone motor fitted into the Avante.

sharp and some bumpy turns.

The first and most obvious outcome was that we had gross understeer with the Tamiya tyres supplied. It was possible to balance this out by hardening up the rear and

removing rear traction by altering the camber, but hardly the solution for obtaining maximum speed and a good ride over the bumps. After some unsatisfactory experimenting, I elected to fit

CAT tyres to the front end. At this stage only the wider rears would fit on the Avante wheels. Result was of course gross oversteer. Obvious next step was Cats on the rear as well. We were getting there, but still with oversteer. Final solution was Cat fronts on the front to obtain a balanced car.

Now the Tamiya wheels fit onto alloy hexagonal splined nuts, so standard "Cat" or "PB" type wheels will not fit, but after hunting around in the bits and pieces of plastic left over from our Editor's construction of the "Avante", I found some triangular adaptors which allow PB/Cat wheels to be fitted. Very thoughtful.

Of course they don't look anywhere near as attractive and streamlined as the Tamiya wheels with those neat hub caps, but you can't have everything in life!

The pinions had by now arrived, so it was time to find the fastest combination, still with the Parma "K Stock", but with better cell packs. A couple of runs showed that the 22-tooth pinion gave the best speed on our track. This was faster than my PB "Mustang/Maxima" with the same motor and cell pack, but still slower than the "Mids" and "Cats". Further testing was brought to an abrupt halt when the nearside front suspension collapsed while cornering. Inspection showed that the upper arm of the cast ally hub swivel had snapped. It had obviously been damaged during the earlier shunts.

Tamiya were contacted and it was found that this item has been redesigned and replaced by a more substantial casting.

Pits

Before the next outing, the decision was taken to fit a more substantial bumper. Obviously there are a number of ways of doing this, and probably there are also a number of other cars' bumpers that can be adapted, however I just happened to have a spare PB "Mustang" bumper in the workshop and it was realised that this could easily be made to fit the "Avante" front end by drilling four holes through the bumper and attaching it to the pillars on the existing bumper with four self tappers. The modification has proved spectacularly successful.

Lap 4

The next outing was another inter-club meeting and most of the day was spent trying to get more speed from different motors and pinions. The best combo found was a Twister and 21 teeth, but still not up with the fastest in the clubs. Handling was excellent and another welcome find was the strength of the car.

Many had expressed doubt as to how well "Avante" would hold together, and initially, with the troubles experienced on the front end, I had my own doubts. But the PB bumper solved front end damage problems, and the rest of the car is more than strong enough to hold its own in any shunt. I had a pretty horrendous driving day and there wasn't much on (and off) the track that I didn't hit. We also experienced a number of triple somersaults with rear end landings, (scoring 10 out of 10 for artistic impression), and on close

AVANTE RUNNING REPORT

inspection at the end of the day, nothing was damaged or misaligned.

Lap 5

The most recent meeting attended was on that awful early July Sunday when it rained solid from 10am till 10pm! I was running one of the new *Parma* "Cyclone" motors, needs gearing down to an 18 or 19 tooth pinion and at last we had some competitive speed. Unfortunately the weather put paid to any real evaluation, but what did come to light was that the car handled beautifully in real boggy conditions, and the waterproofing of the sleek, good looking body is excellent. I took no special precautions and "Avante" kept going while many around ground and sogged to a halt.

Finals

All other moving parts have stayed smooth and quiet during testing, the gearbox in particular. No problems have been experienced with the universal drive shafts, and presumably because of their small and neat construction they do not appear to pick up grass and rubbish as easily as their bigger brothers.

Changing pinions and motors is relatively straightforward, although with the slightly longer motors fitted

with brush heat sinks, a motor with gear attached cannot be slid into position. The gearbox top has to be removed for subsequent fitting of the pinion. This is not a good practice as the threads in the

plastic will soon strip. However if a small cutout to suit the end of the motor bell is filed out of the rear end of the grp plate adjacent to the motor, it is just possible to offer up a motor with pinion attached.

In conclusion, the car is showing much potential, is easy to drive, and maintain. I shall be continuing with it as my choice for events for the coming months, without any doubt.

