

# AVANTE GARDE

At last Tamiya have produced a competition

4 x 4 – will the Avante be dominant?

**B**uggy racing all started way back when a company called *Tamiya* produced two cars designed to be raced in the back garden. Those original cars, the "Rough Rider" and "Sand Scorcher" soon became the most popular model cars ever produced and opened a new branch of the sport: 1/10th off road. Since then *Tamiya* have continued to produce ever improving cars in all scales from 1/24 to 1/10, and have firmly established themselves as the largest producers of R/C model cars.

Since those early days when *Tamiya* cars were the only ones available, other manufacturers have taken over the top racing end of the 1/10th market, whereas *Tamiya* have concentrated on the more popular back garden brigade. Now though, *Tamiya* have entered into the competition end of the market with their latest offering the "Avante".

## Specification

The "Avante" specification is pretty impressive: starting with ballraces – this is the only *Tamiya* kit to come with a complete set of high quality ballraces as standard. The drive train is through high quality nylon moulded gears. The suspension is long travel semi-trailing arm on the rear end the same at the front, this is damped by very high quality aluminium dampers which include rubber diaphragms. The car is equipped with three differentials – geared front and

rear and a ball tyre centre diff. Add this to an all-enveloping bodyshell and undertray – adjustable rear wing, fibreglass chassis and UJ driveshafts and it becomes apparent that this *Tamiya* vehicle is aimed at the very top level of competition.

## Construction

Building the "Avante" starts as per usual with the construction of the gearboxes – although on the "Avante" there is a difference. The gearbox casings are bolted onto the chassis (which is all countersunk) before the gears are placed inside – this seems odd but just think how easy it will be to change gears if necessary. The gears run on aluminium shafts and large quality ballraces and slip down into the gearbox casings where they are then secured in place from underneath by the gearbox bottoms.

The differentials (front and back) in the "Avante" are very simply constructed, the diff gears run in a nicely-formed plastic spur gear which is held together by four tiny self-tapping screws.

When complete, the diffs work smoothly and are reasonably light. Now that you have a chassis with a gearbox at either end the next step is to join them together, this is carried out by means of a steel shaft, but also by the centre drive gear which incorporates the third differential. This is simple in construction and uses well-known model car technology with a five-ball system. Next up comes the

chassis top plate. This is also made from black fibreglass and when bolted on top of the gearboxes gives a very strong box construction. The rear shock brackets come next along with the rear bumper and anti-roll bar, when this is complete, construction of the "Avante's" suspension takes place.

## Suspension

The "Avante's" suspension is certainly different in many areas from other available kits. The majority of the pivots on the suspension are high quality aluminium rod ends. These give a very smooth action but do create a small amount of "slop" as soon as they wear in. The rear suspension incorporates these rod ends in conjunction with a plastic moulding – this gives a long travel, smooth action suspension which works very well.

The front end is rather more complicated which can be seen from the photographs. This system is very messy and appears to be cluttered with suspension joints, mouldings and steering rods – altogether this is probably the worst area of the car which I'm sure will be highly susceptible to damage.

A close second in the complication stakes is the "Avante's" steering linkage. This uses a double bell crank system and bolt-on servo saver which when completed works OK but produced an enormous amount of free play – this I'm sure will not aid sharp handling which is what is required.







### Dampers

The dampers in the "Avante" come in two sizes. Large for the rear and small for the front. The damper bodies are formed in aluminium and are anodised gold. The shafts are highly polished 3mm diameter steel and incorporate plastic pistons which are held in place by simple E clips. The top of the damper screws on in usual fashion and holds the rubber diaphragm. When complete the dampers are super smooth and never stick.

Springing is also well taken care of by odd-shaped long springs. These taper off towards the bottom and are held in place by small plastic collets.

The shocks are held by ball joints onto the chassis and are bolted onto the shock brackets. These bolts include a ball moulded in and serve the

purpose for a brace to strengthen up the front and rear shock brackets - whether this is necessary or not is not clear as the brackets are very strongly constructed.

### In control

The radio equipment installation into the "Avante" is either simple or difficult - if the Tamiya controller receiver is used when installation is quick and simple, but due to the super low bodyshell some fiddling is required to get in an FET controller and receiver.

Battery changing on the "Avante" is simple. A small clip holds a plastic moulding which releases the battery in seconds.

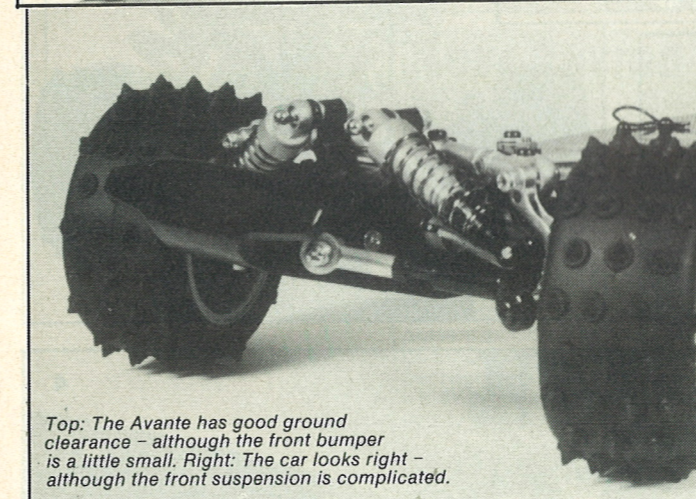
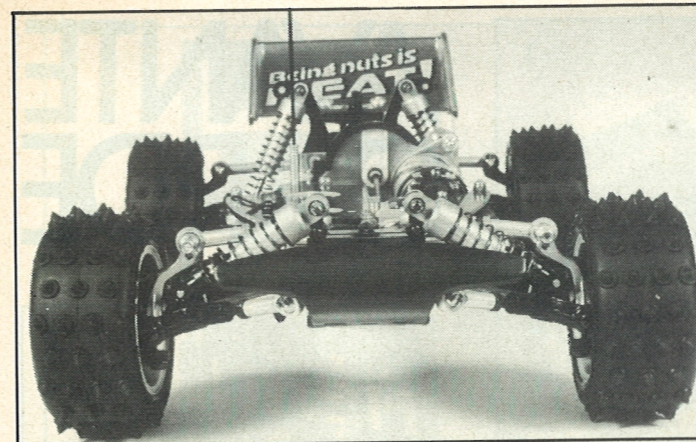
The wheels and tyres on the "Avante" are similar in design to other Tamiya kits. The tyres are the standard Tamiya "pinspike" whereas the wheels are new. These are nicely

ribbed items moulded in yellow which seem very tough. Stuffing is also included in the kit in the form of foam rings which go inside the tyres before fitting to the rims. The wheels bolt on with a plastic "cap" which does not require any tools to fit. The "caps" are

a little fiddly but when fitted look great.

### Looking good

The bodyshell, undertray and rear wing on the "Avante" really are excellent. The undertray is formed beautifully



Top: The Avante has good ground clearance - although the front bumper is a little small. Right: The car looks right - although the front suspension is complicated.

and fits snugly underneath the car producing a super-smooth, slippery underneath to slide over obstacles. The rear wing is a very shapely object with a large sweep and enormous moulded sideplates - although the fixing of the wing is too flexible which would remove any downforce.

The actual bodyshell of the "Avante" is nicely shaped and is super slim - moulded in is a futuristic driver's cabin more

suitable on an aircraft than a car.

Couple this up to Tamiya's excellent decal set and the "Avante" looks great - and ready for the track.

### Ready, Steady, Avante!

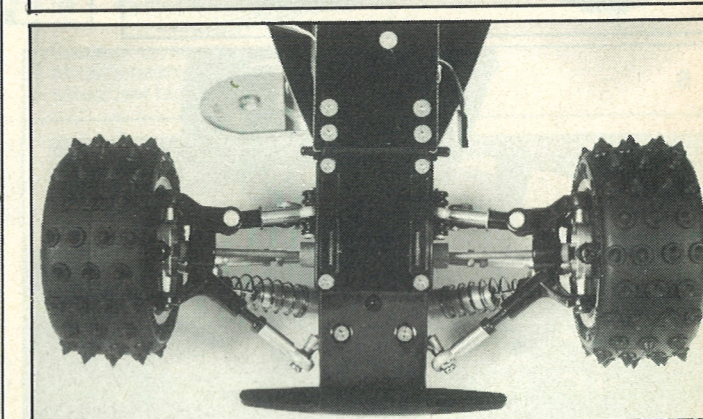
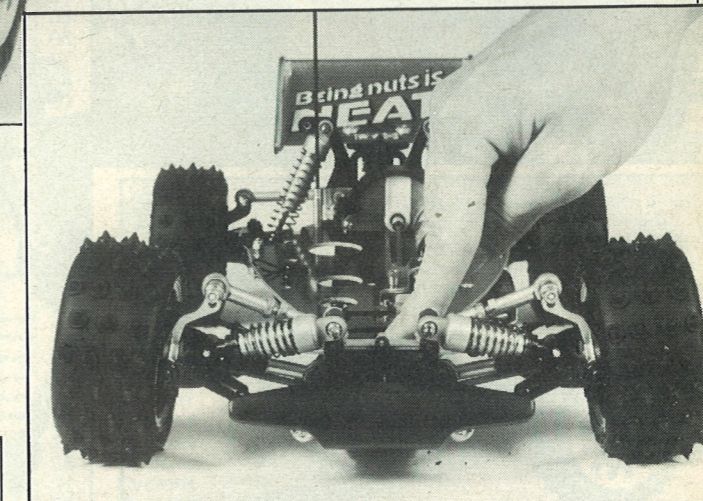
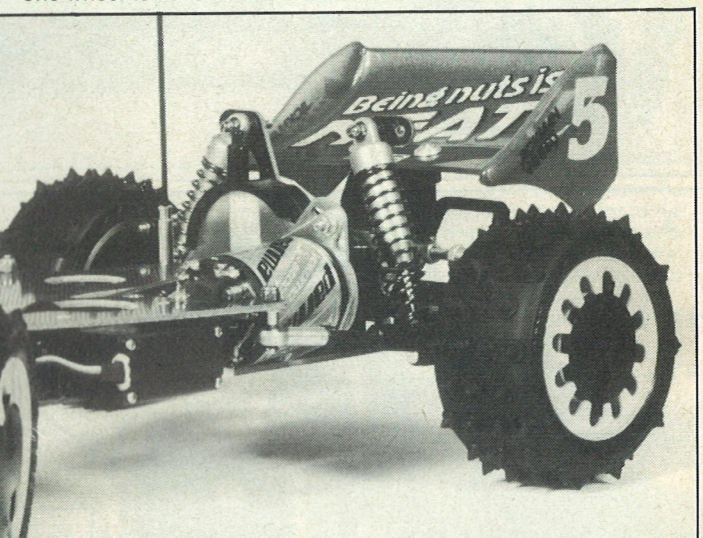
On the circuit the "Avante" does perform how it should. It is very fast and the high quality of the gear train seems to show

no losses over the belt drive systems. The car's suspension works well with the wheels visibly moving up and down over the smallest undulations.

Steering is a little boring - in that I mean the car has understeer and does not seem to bite into the corners, and instead tends to lounge. The centre differential also caused slight problems. This allows one wheel to have all the

"Avante" does not handle - this is not true, the car is easy to drive and is easily better than any of the mid-range cars available, but whether the "Avante" can compete against top competition is yet to be seen - but with the right drivers - who knows.

**Likes**  
Bodyshell  
Dampers  
Ease of Construction



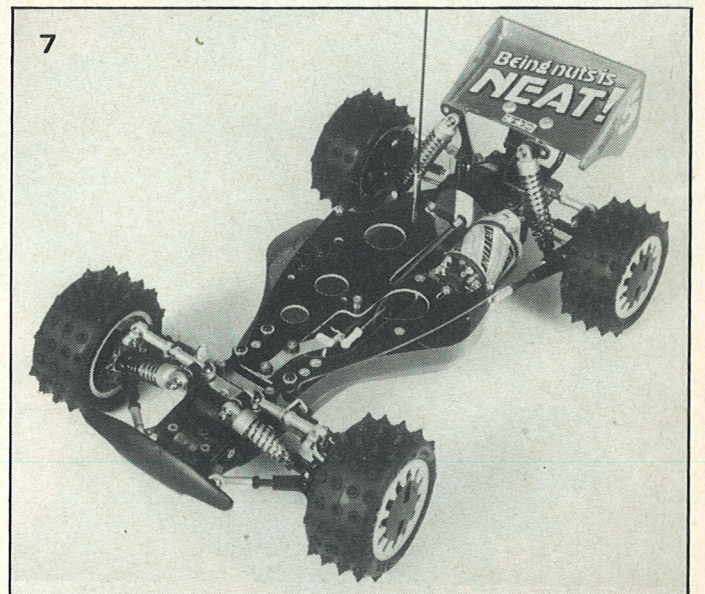
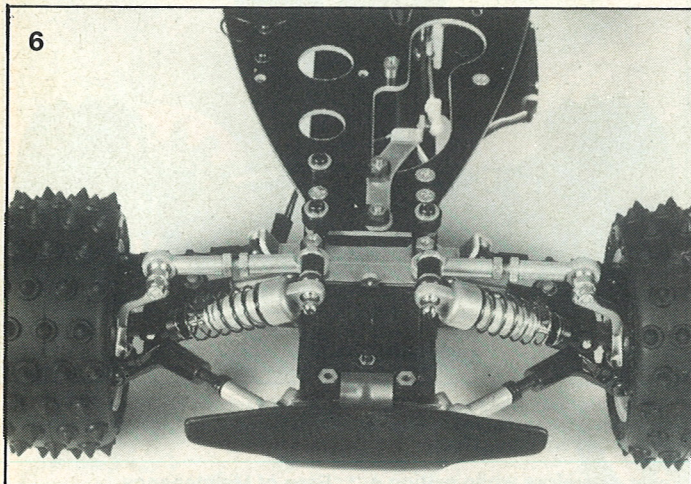
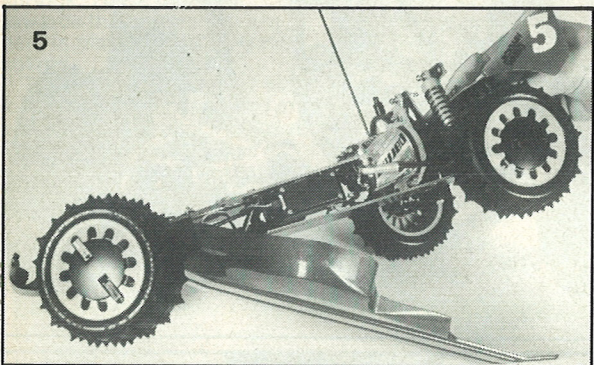
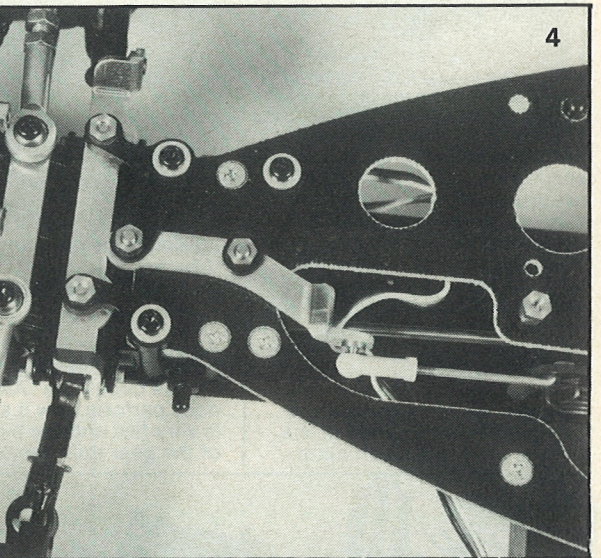
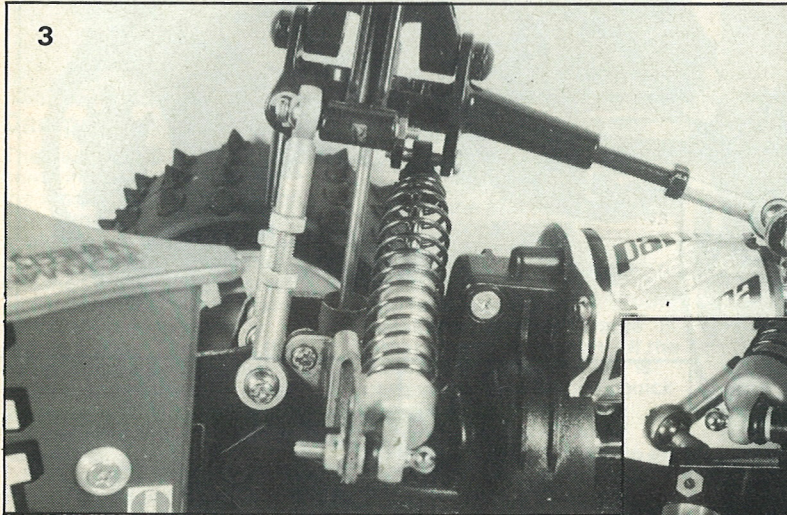
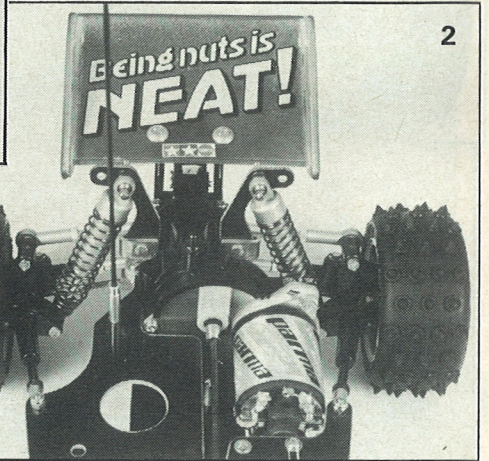
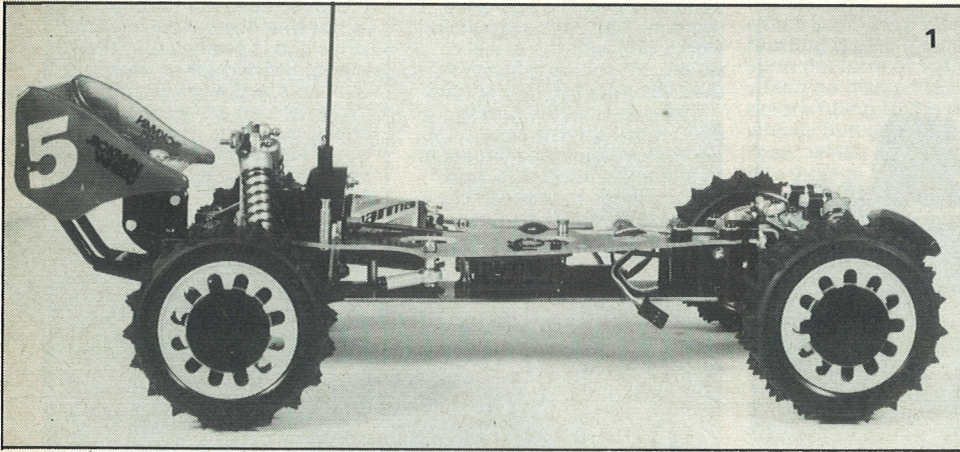
Above: The front of the car has steeply-angled dampers which become almost level at maximum depression. Left: Chunky "Pin Spike" tyres are included, as are front UJs.

power, therefore when exiting a corner excessive wheel-spin occurs on the inside front wheel - thus losing acceleration.

This may sound as if the

**Dislikes**  
Complicated Suspension  
Steering slop  
Centre diff not removable

# AVANTE GARDE



1. The Avante chassis is produced in high quality black fibre glass. 2. Rear shocks are long travel. 3. The motor is off to one side and is counter-balanced by the cells. 4. The complicated steering linkage. 5. Under cowlings is very neat and fits lovely. 6. The front width of the car is almost on the legal maximum. 7. Completed chassis ready for radio installation.