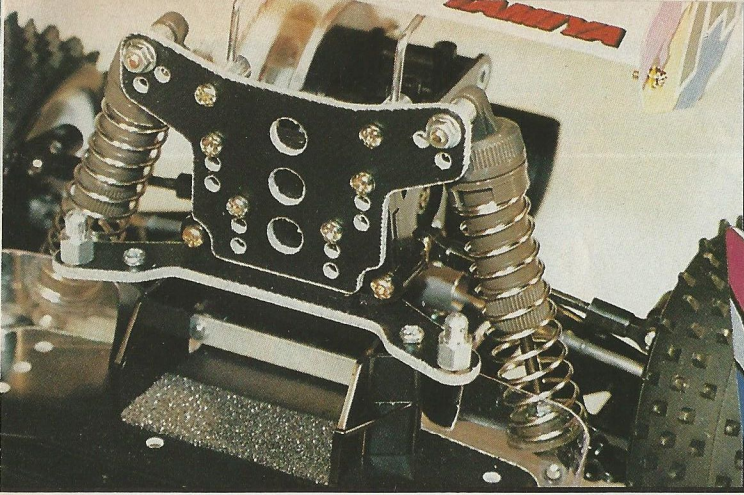




# ASTUTE SUPER



⊙ Rear end suspension detail.

## RRC reviews Tamiya's latest 2WD model — the Super Astute

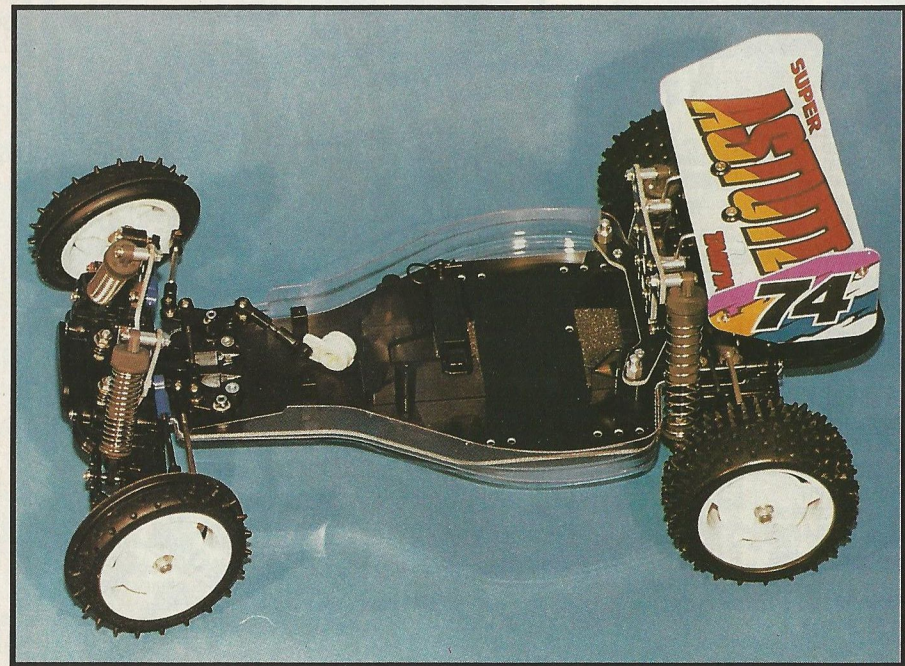
Tamiya are a company known for their build quality and vast appeal to the mass market. In the past, some Tamiya designs have had a short life-span, before upgraded versions have been introduced. This policy has maintained the interest of the general public, and has done a great deal to help the growth of the R/C car world. Unfortunately for Tamiya, this policy has left a hole at the top end of the market for competition cars, which are less concerned about fashion and are designed for winning races.

A couple of seasons ago Tamiya decided to attack the competition end of the market and set up a team of very high quality drivers. With their vast resources, gained from a control of the mass market, Tamiya have in the past two seasons, attained some very impressive results. The 2WD Astute and the 4WD Manta Ray were their competition flag ships. From the experiences of the last two years we now have the Super Astute.

The Super Astute is an upgraded, or updated, version of the Astute which includes many of the improvements evolved by their team.



⊙ Rolling chassis.



### The design concept

After their policy change, Tamiya needed a competition car and they needed it fast! This is probably the reason why the Astute looks very similar to the established competitors, the Cougar and the RC10. It has the now standard rear motor and 'in line' nicad configuration.

There is nothing new in the conception of the design, other than detail changes, which will be explained later.

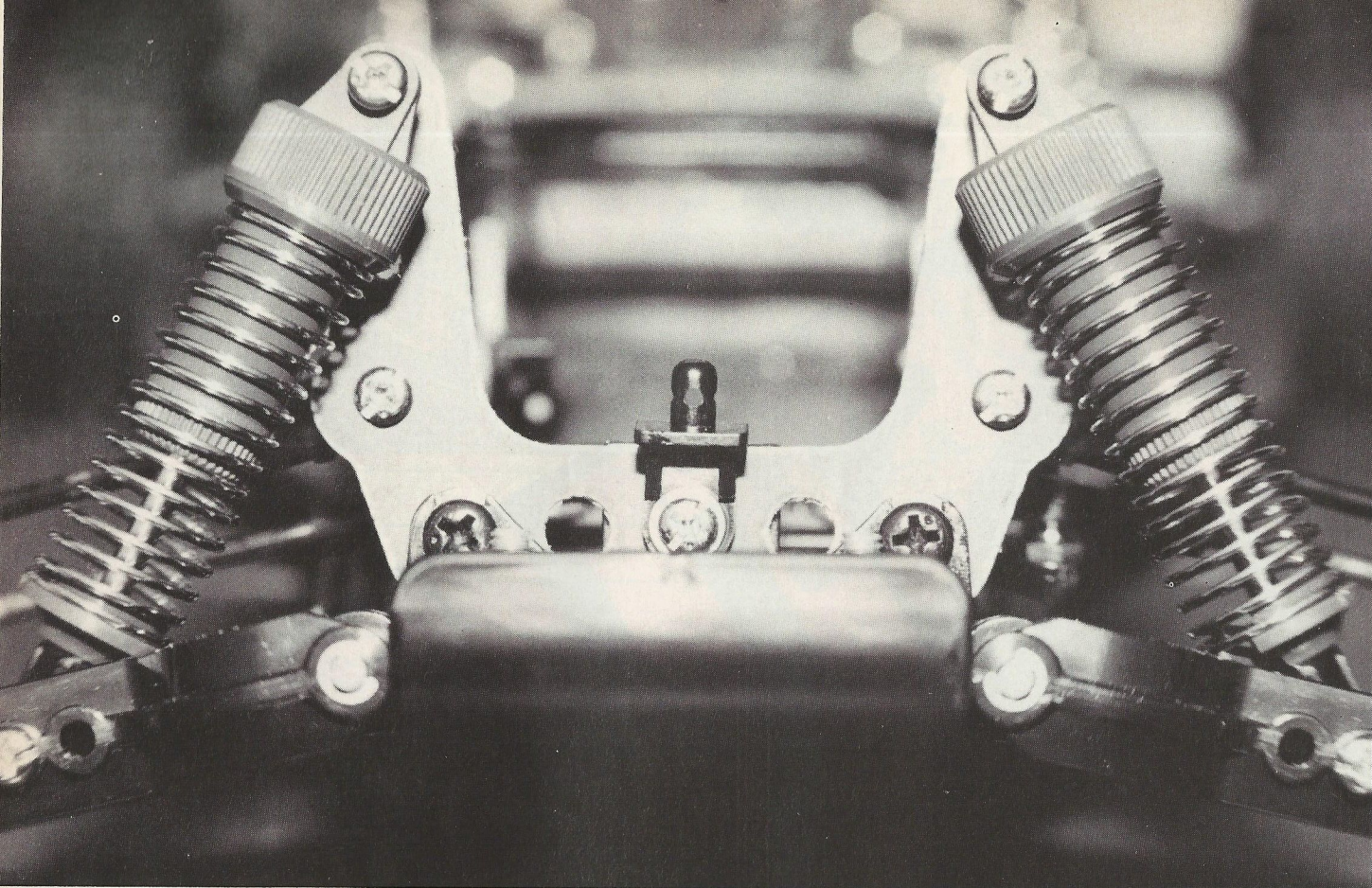
### Transmission

The Super Astute uses geared transmission with the drive being transferred via an idler gear. All axles run in sealed ball bearings which look identical to those used by Schumacher. The main spur gear is connected to the lay shaft through a neat, single plate, slipper clutch, a first for Tamiya.

This can be adjusted to prevent or minimise 'wheelies' and/or wheelspin. It also protects the delicate looking gears from the shock loads, resulting from 'touch down' after large jumps. The differential, to my surprise, is geared rather than the widely used ball type. As a slipper is used to protect it, the diff should stand up to the test of competitions, and it does give a very smooth action indeed.







The most novel feature of the transmission is a 'servicing' hatch in the chassis, which allows the diff to be dropped out without removing the gearbox!! The main spur gear is well offset to the right to allow the motor to be positioned on the centre line of the chassis for perfect balance.

Ball-pin drive shafts are used to transmit power to the rear hubs which are also fitted with ball bearings. The drive shafts are quite crude and lose out greatly on efficiency especially at the extremes of suspension travel.

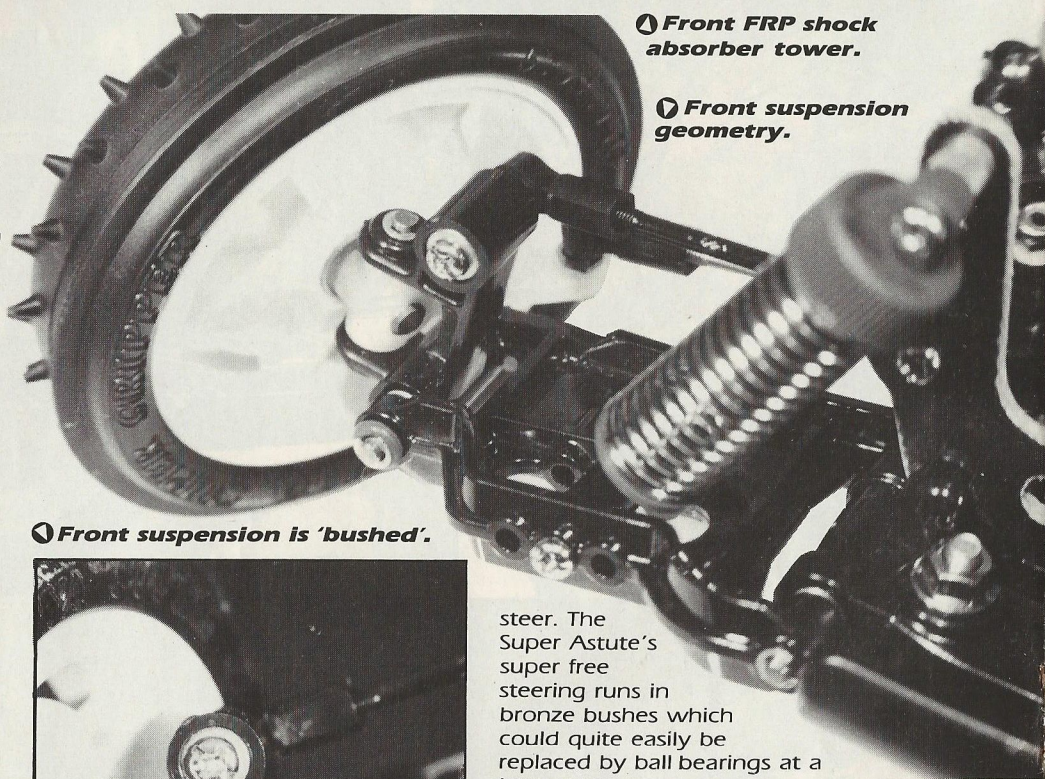
### Running Gear

The Super Astute is based around a fibre reinforced flat pan chassis, which is around 3mm thick. It is dyed black to make it look the part, but is much more flexible than a graphite chassis and does not have the weight advantage. A small rear top deck is used to strengthen the rear of the car and is fitted with neat body posts.

Suspension again is similar to the RC10 and Cougar. Extremely high quality moulded lower 'A' arms (wishbones) are used front and rear; together with adjustable top links, to enable camber adjustment. All the inboard pivots for the 'A' arms use bronze bushes to reduce wear and potential play/slop. The wishbones are quite large in order to maintain rigidity and should prove to be very strong.

The front suspension geometry is somewhere between an RC10 and Cougar II; and should give good handling. As with other competition orientated 2WD cars the wheelbase can be changed at the rear to alter the balance of the car. This is done very simply, by placing spacers either in front, behind or either side of the rear hub.

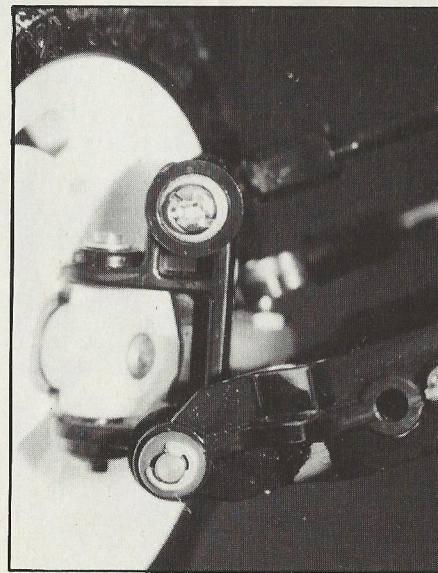
The steering is in the now usual twin bellcrank design to prevent any bump



Front FRP shock absorber tower.

Front suspension geometry.

Front suspension is 'bushed'.

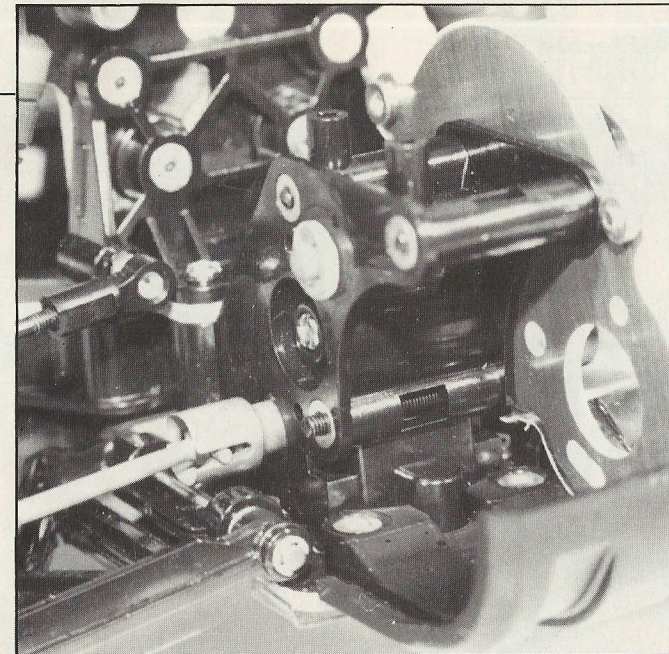


steer. The Super Astute's super free steering runs in bronze bushes which could quite easily be replaced by ball bearings at a later stage.

### Shocked!!

Next the shock absorbers. We were most surprised to see that the Super Astute comes with plastic shocks similar to those found on the lower range models. Another area of concern was the fact that the front wheels run on bronze bushes, an unexpected compromise for such a high class car.

Suspension adjustments are limited in comparison to other cars, but adequate to tune the car to most tracks. Shock position, oil and springs will be the main



adjustments, with rear wheelbase used occasionally. There is no castor or kick-up adjustment but the car will probably not be lost without it.

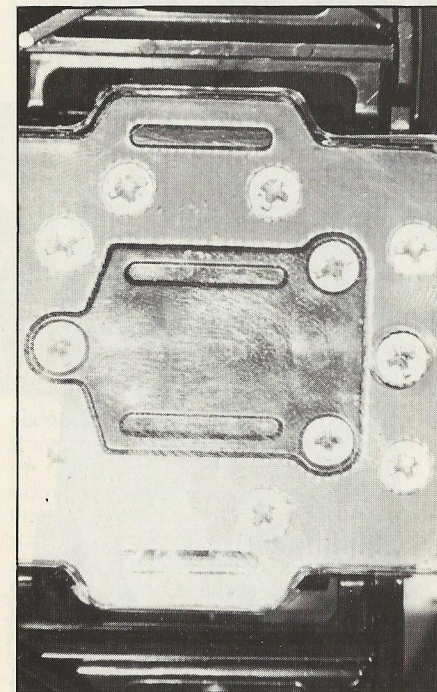
### Performance

The Astute is fast, but is a little more noisy than the RC10 and Cougar II, due mainly to the drive shafts.

The efficiency of the car straight out of the box is a little down on the competition, again the drive shafts are the focus of the problem.

### Handling

As with any modern competition car adjustments can be made to suit driver styles and conditions. Refer to the instructions and experiment, after all that's most of the fun of R/C car racing. The Super Astute is basically stable and

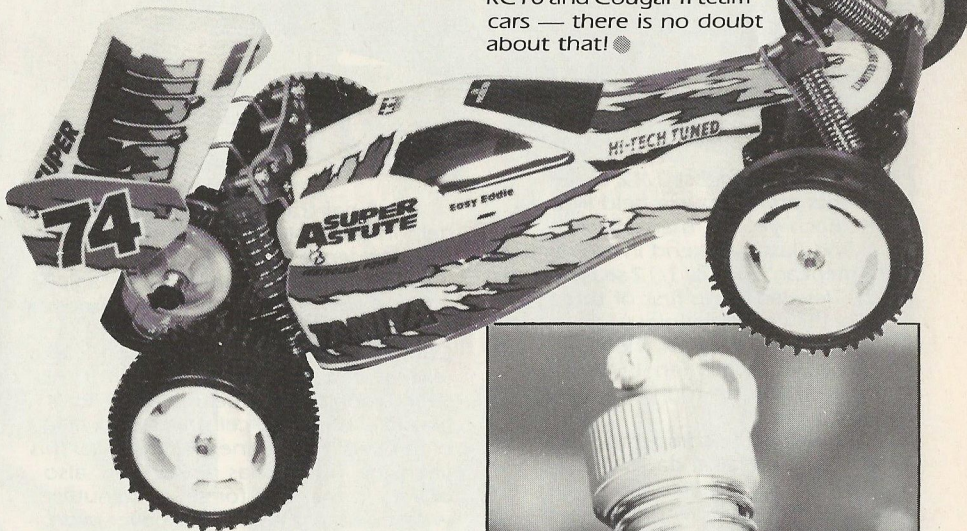


Small differential inspection hatch is located on the underside of the chassis.

inclined to wheelie with hot motors. The slipper works well to combat this and is quite user friendly.

### Build Quality

As with all Tamiya kits, the instructions are idiot proof and the kit falls together. The body shell comes ready punched for extra peace of mind and the quality of the 'stickers' are second to none. The only finishing that is required is on the

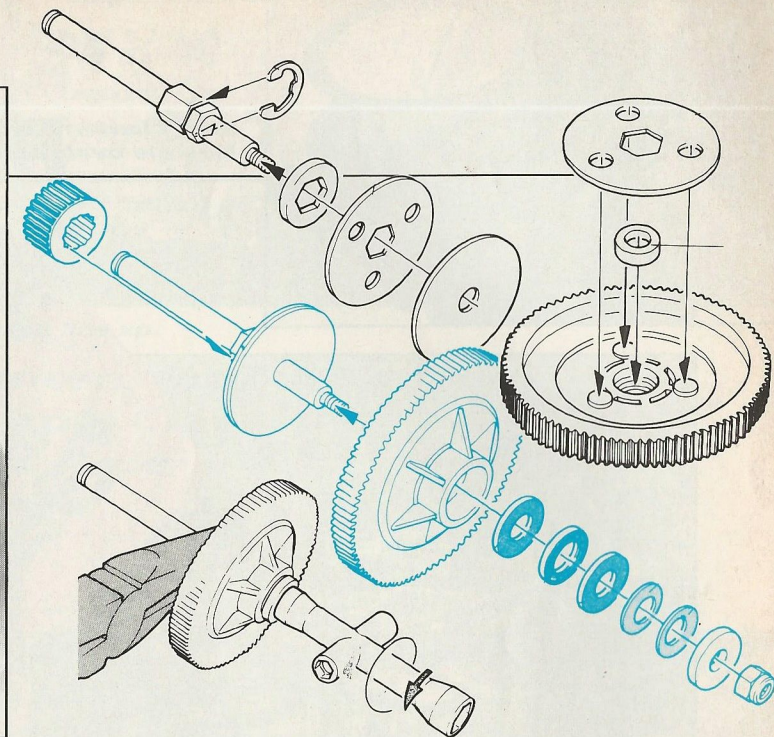


FRP chassis and shock mounts. All lubricants are included, but there is no speed control, motor, nicads or paint.

### Conclusion

The Super Astute doesn't make any great advances in chassis technology, and is let down a little by compromises, included presumably to maintain price and weight. The Super Astute represents a major 'hop-skip-and-a-jump' in the right direction for Tamiya, and I hope they maintain their momentum.

Plastic shock works well, but may need replacing with Hi-Cap items if you intend to use the car for serious competition.



You must part with £140 for the pleasure of owning a Super Astute. For that you get a very competent performer which is a pleasure to build and drive.

Fit the Astute with hi-cap shocks, ballraced front wheels and possibly steering, not to mention universal joint drive shafts, and it moves up a bracket in line with the RC10 and Cougar II team cars — there is no doubt about that!!

