

SCHUMACHER

RRC reviews
Schumacher's latest
2wd competition
off-roader.



COUGAR

Early 1988 saw the release of the 'Top Cat', Schumacher's attempt to become as successful in 2WD as they have been in 4WD. One of the most intriguing and long-awaited cars of all time, the question, "can it compete with the likes of the RC10, Ultima and JRX27", was on everyone's lips.

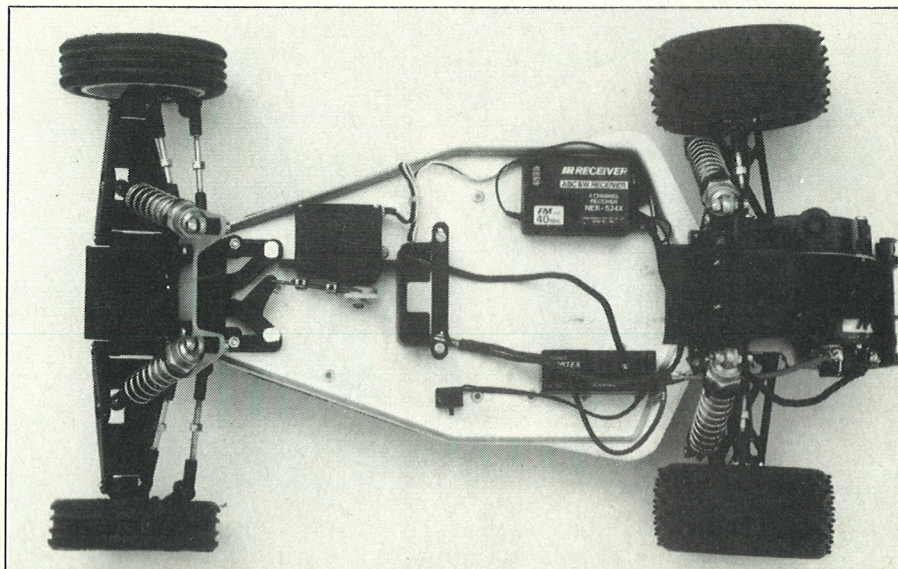
The answer was "Yes it can!" Indeed the car found considerable popularity with racers of all abilities throughout the world. It incorporates all the best design features found on its 4WD

Top view of the Cougar. You can clearly see the wide front end, that provides so much stability. The rear end of the car is virtually the same as the one on the Top Cat.

predecessor, including a belt driven ball differential gearbox, telescopic driveshafts and the unique "crash back" front end. The new car also exhibited a very different type of front end suspension design, quite unlike anything previously seen.

Opinion on the new design was divided, with some people considering the inboard dampers "the way to go", while others remained unimpressed and thought the typical "vertical type" arrangement was the only set up for 2WD buggies. Whatever your opinion, there is no doubt that the car works.

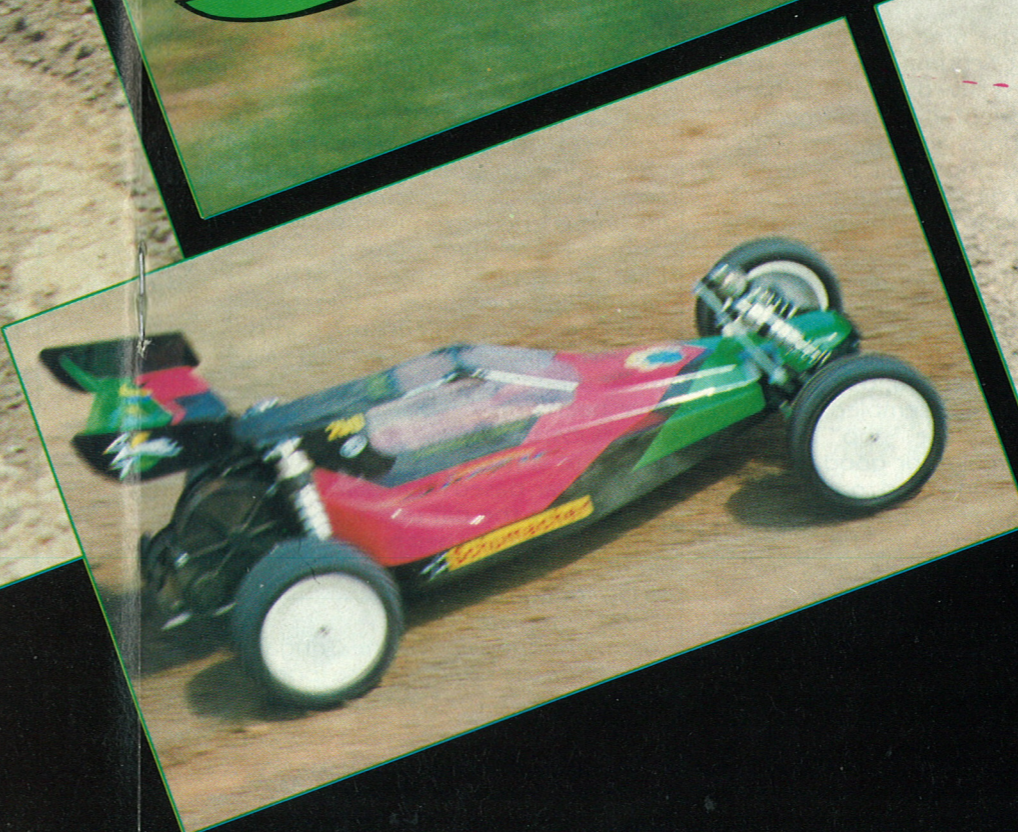
It seems, however, that the inboard shock absorber arrangement was not immediately accepted by the racer, despite

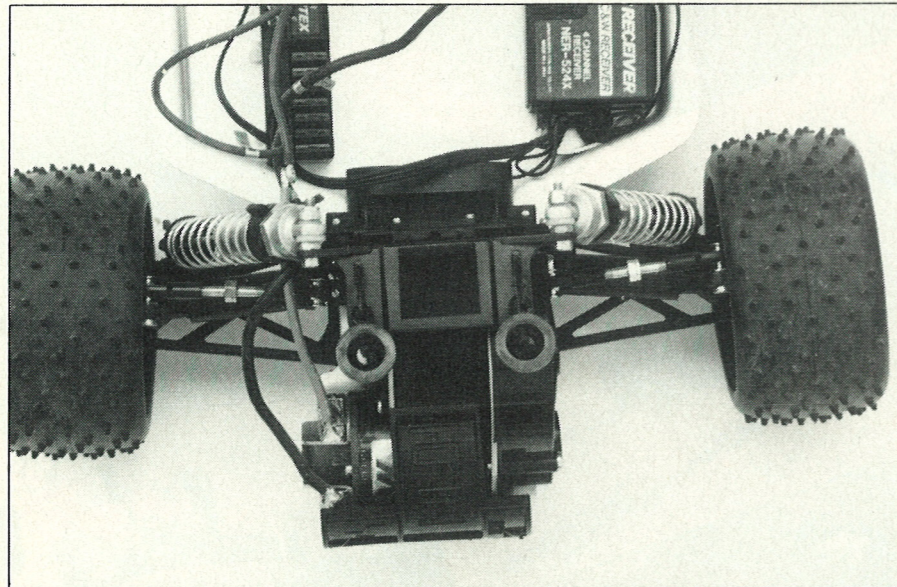


Radio
**Race
Car**
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GOUGAR





Rear tyres have some "toe in", for increased straight line stability. The motor sits centrally to make the weight balance as even as possible.

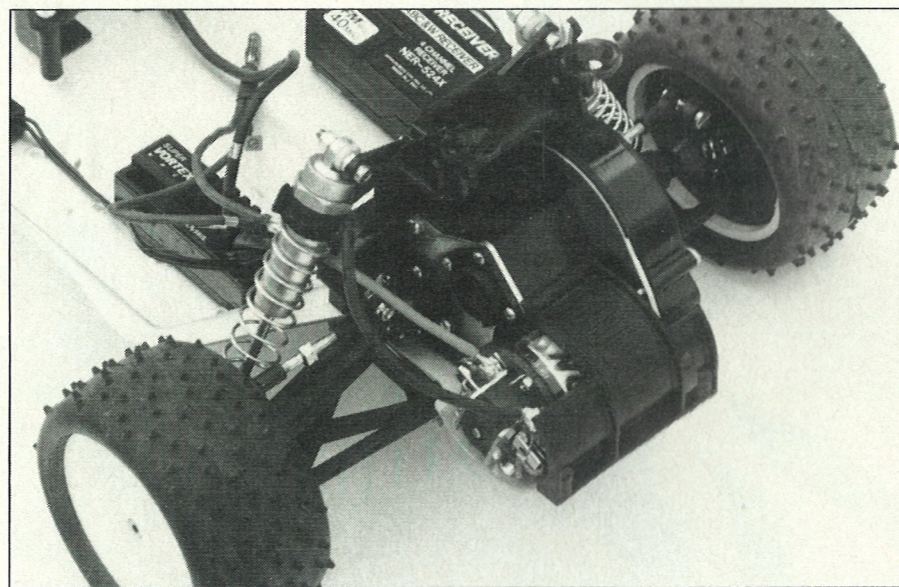
being very neat, and sales were not, therefore, as high as expected. Schumacher have now recognised this, and the result is the release of their latest 2WD competition car, the Cougar.

Specification

The Cougar is very similar to the Top Cat, in as much as it utilises the same rear end, gearbox, chassis, shock absorbers and wheels. Perhaps the most significant difference between the Cougar and the Top Cat is the front end. The Cougar uses the "normal" type of front end as found on most other 2WD cars, in other words, a lower wishbone, upper adjustable link, vertically mounted shock absorbers, connected to a shock tower.

Construction

So, having looked at what's new about the Cougar, how does the car go together? Construction commences with the rear end. The wing and body mounts are attached to the bulkhead, which is in turn attached to the pressed aluminium chassis. All of these components, indeed most of the car, is held together by pan head self tapping screws. The lower, rear wishbones are held to the chassis by "pivot blocks". These are simply small blocks of plastic that the "pivot pins" pass into, allowing the arms to swivel vertically. The pivot blocks are then screwed to the underside of the chassis, using two self tapping screws.



Schumacher's tried and tested coil-over, oil-filled shock absorbers are the next items to be assembled. These are the time-honoured design that Schumacher have used since we first saw the Cat way back in 1986. A set of silver, intermediate tension springs are supplied with the kit, and once built and fitted with a light oil, the shock absorbers are very smooth and should provide excellent damping.

Putting the shock absorbers aside, we now turn our attention to the front end assembly. The steering blocks, to which the front wheels are attached, use just one ballrace. Once assembled, however, they are "slop" free, which will make for good, positive steering response and roadholding. Once the steering block assembly has been attached to the wishbones, the whole units are then fixed to the front lower suspension plate, which includes the smallest bumper I have ever seen!

One of the most impressive

features on the new car is the bellcrank/steering system. Both the radius arm and the steering lever use bushes to achieve a super-smooth action. Again there is no "slop" once they have been finished.

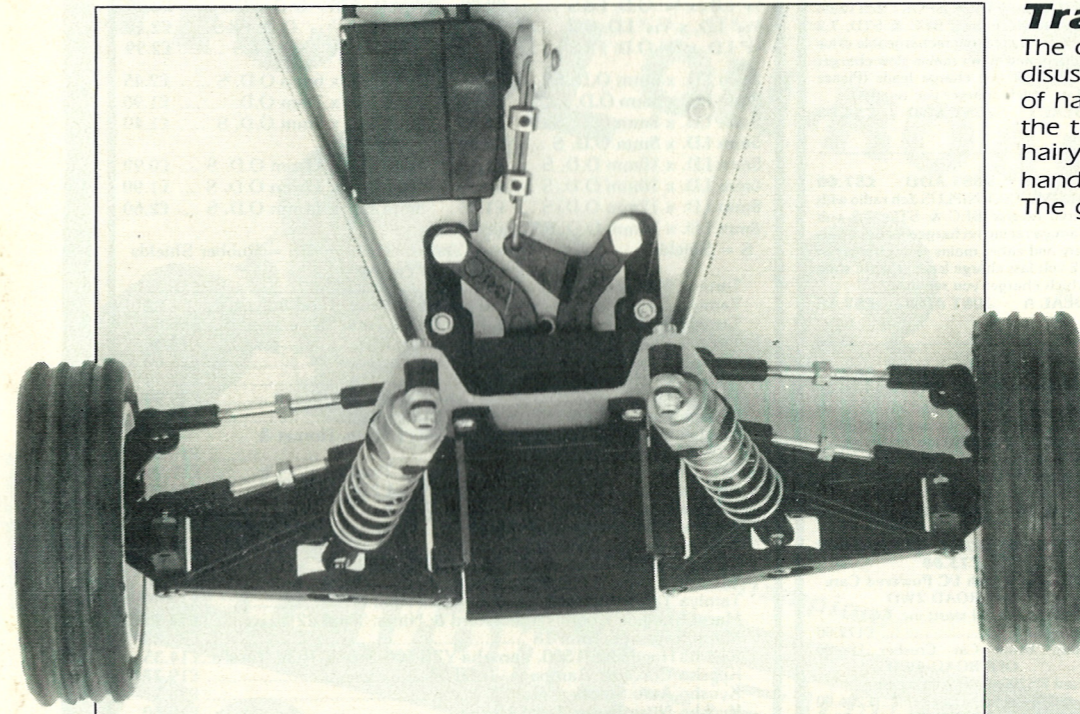
An interesting feature of the new car is the ability to adjust the castor angle between 15 and 25 degrees. This is achieved by the inclusion or omission of plastic spacers, seated between the front shock absorber bracket and the upper suspension plate. If the spacers are included the castor angle is decreased, and vice versa. By this time the car is almost complete, apart from one essential

item; the gearbox!

Schumacher's gearbox/transmission assemblies are renowned for their reliability and efficiency, and the system used on the Cougar is the same as that used for the Top Cat. The differential is a fourteen ball, limited slip type and is fully adjustable, so that it will suit most tracks. Once assembled, the diff unit is encased in two pully flanges. These items prevent the drive belt slipping off the side of the differential when drive is engaged.

The next stage in construction is to fit the telescopic driveshafts. When the male half of the shafts have been connected to the rear drive hubs, the right hand gearbox side plate is fixed into place. The usual kevlar-based drive belt is then passed over the diff unit and layshaft. Once the belt tension has been set, and the quick release 48 Dp spur gear installed, the car is almost complete.

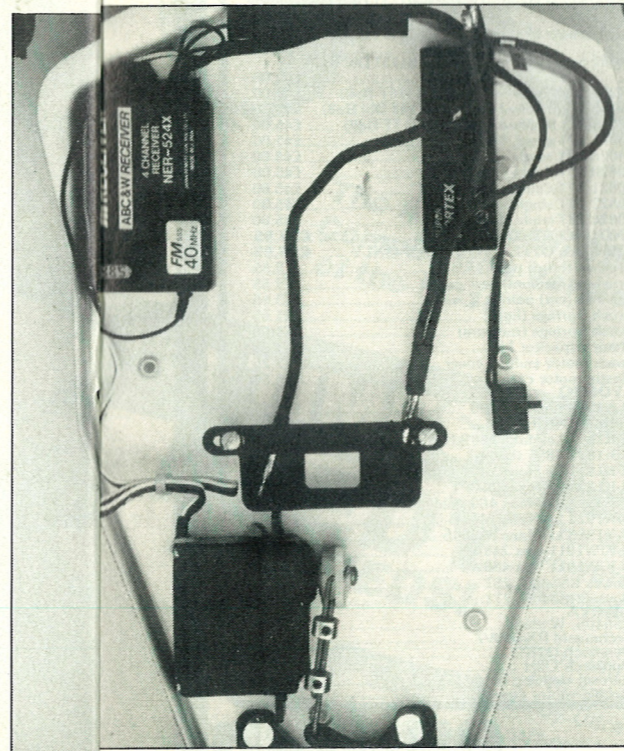
As mentioned above, the Cougar wheels are the same as those found on the Top Cat. The tyres, however,



Front end detail. The new geometry works well. (Notice the excellent servo saver steering set up).

are different, with mini spike, low profile rears and ribbed fronts. Both pairs are moulded from Schumacher's new "Blue" compound natural rubber and

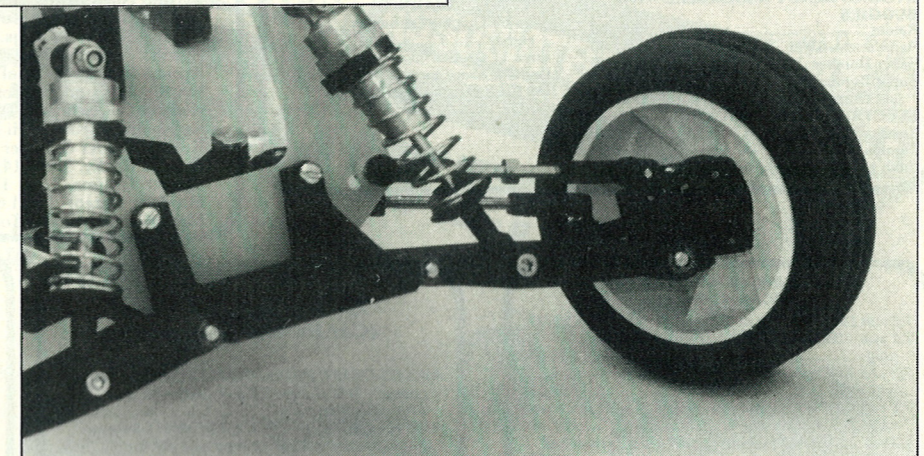
There is plenty of room for most types of radio gear.



Track Testing

The car was initially tested on a disused BMX track which was made of hard compacted dirt, similar to the tracks found overseas. A fairly hairy motor was fitted and the car handled it with no problems at all. The gearbox was, as expected,

The front suspension system is very strong. The single wheel bearing is fully enclosed to protect it from the elements.



should give plenty of grip.

The body follows the lines of the Top Cat although it's slightly different at the front to accommodate the new shock absorber tower. As with most professional kits, no radio gear is supplied leaving you to choose and fit your favourite equipment, and there is plenty of room in the chassis for most types. The kit comes with provision for the nicads to be positioned longitudinally down the chassis, but Schumacher's "Quick release" saddle pack clamps will fit, although they are not supplied in the kit.

So there you have it. The latest 2WD competition car built and ready to race. If you follow the instructions carefully you shouldn't have any problems in building the kit in a couple of evenings. It is also recommended that you follow the "set up" hints included in the back of the instruction booklet.

faultless. It was set up to allow a small amount of slip, because of the surface, and the car accelerated rapidly in a straight line! The tyres were excellent on the hard slippery surface, with the rear tyres providing ample grip and the front ones producing slight understeer, which is ideal for the type of surface on which the car was being run.

The shock absorber units themselves were very effective, providing a smooth and progressive action and the geometry, particularly on the front, seemed to work very well.

In conclusion, the Cougar looks set to be one the cars to beat in the coming season. Its pedigree and affordability will make it a sure winner.

Congratulations Mr. Schumacher!!

Available from your nearest Schumacher stockist. ●