



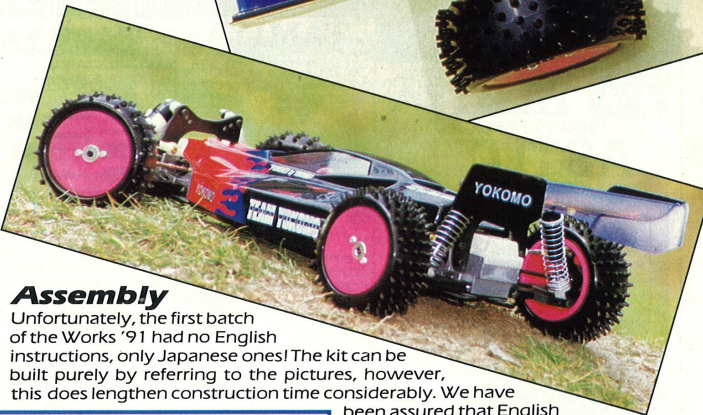
Super Dog Fighter

At last, the real Works '91 is here. RRC brings you the first review of the production car you can buy!

The Yokomo 'Super Dog Fighter' is the current off-road world championship winning model car. Masami Hirotsuka took it to first place in Sydney, Australia, in 1989 to attain his third off-road world title.

Since then, the car has continued to score numerous successes both here and abroad, although the Schumacher Cat remains the most popular car (numerically) in the UK.

After nearly two years of development and constant testing the new Yokomo 4WD racer is available, sporting many of the modifications that have been available separately for some time, as well as some totally original designs and components.



Assembly

Unfortunately, the first batch of the Works '91 had no English instructions, only Japanese ones! The kit can be built purely by referring to the pictures, however, this does lengthen construction time considerably. We have been assured that English instructions will appear with the kits very soon.

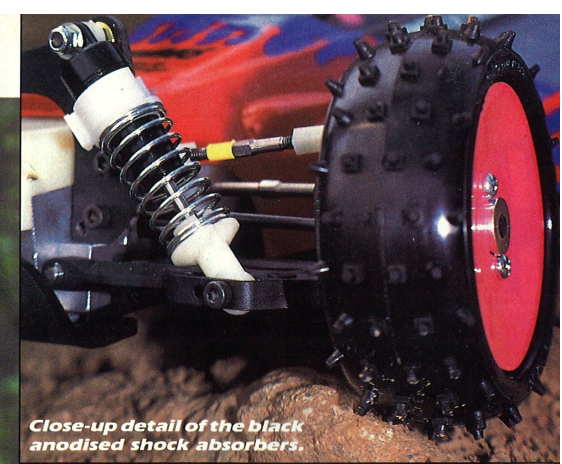
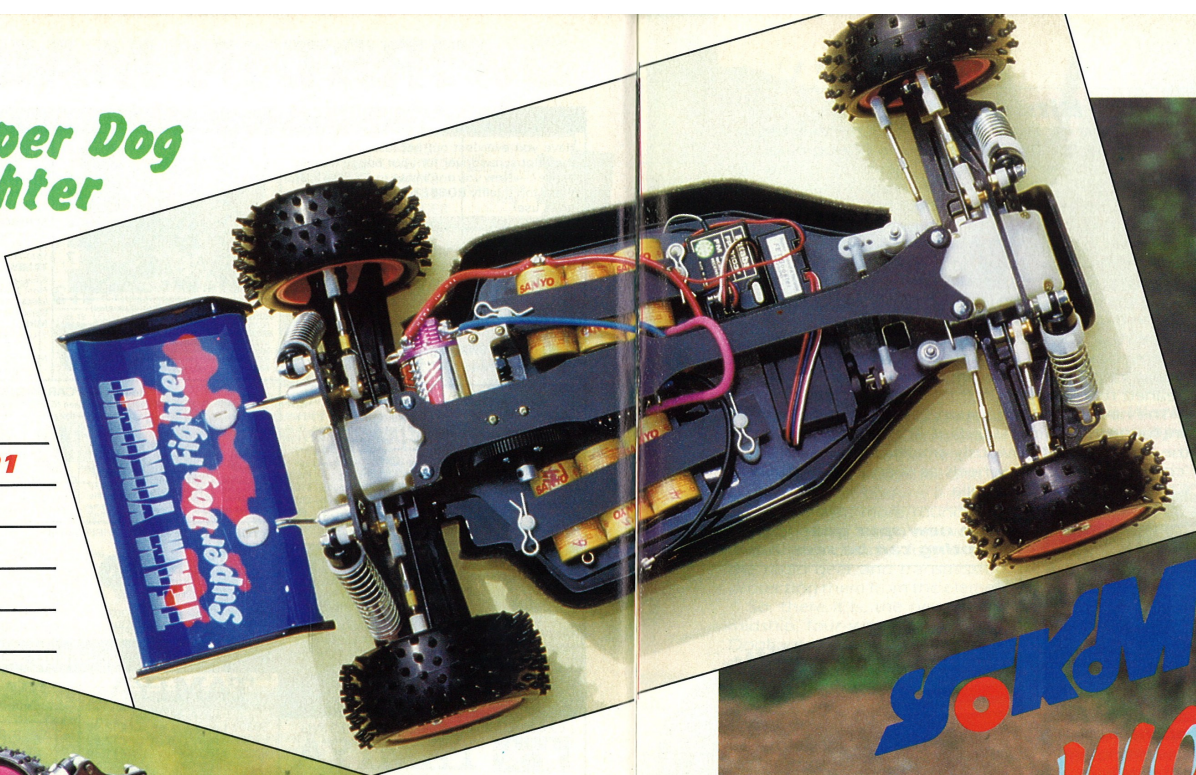
The Differences

The most noticeable difference between this and the old car is the chassis. Firstly it is carbon fibre/graphite, which gives a rigid, light basis for the suspension to work off.

The shape of the chassis is also different in as much as the cells are positioned at an angle pointing in towards the centre of the car. Possible reasons for this design could be: the cells are wider at the back therefore giving plenty of rear end grip while the weight is brought closer in to the centre of the car, therefore reducing the tendency to roll, because the weight is biased towards the centre rather than at the side of the car. (More scientific explanations would be appreciated!)

As usual with top class 4WD racers, space for seven cells is available with four slots in the right of the chassis to compensate for the motor which sits slightly to the left of the centreline of the car, in front of the rear axle (i.e., it is 'mid-mounted'). Belt tension has been made easier and requires just four aluminium crosshead countersunk screws to be moved to enable the rear gearbox to be moved forwards and backwards.

A new 'top brace' is included in the kit and gives good longitudinal rigidity to the chassis structure. The front and rear shock towers are, like the chassis, made from carbonfibre/graphite for optimum stiffness. This is important because the last thing you want is flexible shock supports as it defeats the whole point of using shock absorbers in the first place! It is the shock absorbers and not their supports that should provide the damping for the car. Four upper fixing positions are available for the rear shock absorbers and three for the front, to give a choice of roll stiffness settings.



Close-up detail of the black anodised shock absorbers.

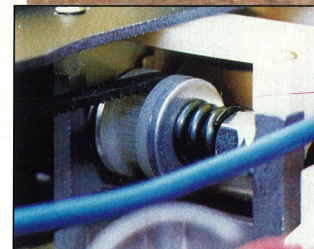
YOKOMO WORKS '91



Shock Absorbers and Suspension

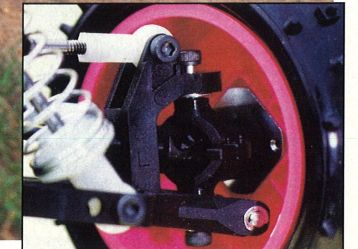
The 'shocks' in this new kit are much better than the original ones found in the Super Dogfighter. The springs feel a little on the hard side, however, but of course only track test/racing conditions will tell. They are oil filled coil-over spring units and utilise attractive black anodised chambers.

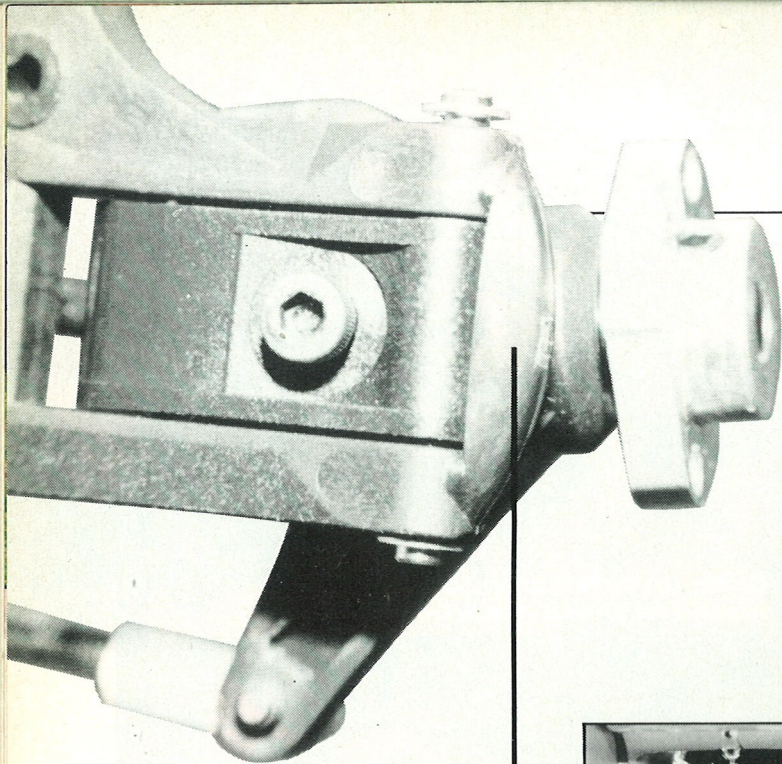
New titanium upper suspension links are used on this new kit because they are extremely light and strong. They are the now standard 'turn buckle' design, which means they have opposite threads on them so they can be



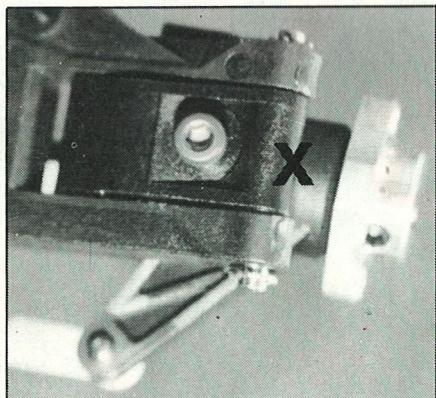
Fine pitch belts are used in the Works '91.

The front end is now very similar to the Kyosho Laser.





NOTE: **DON'T REMOVE Moulding,** AS THIS STRENGTHENS THE WISHBONE!



adjusted by simply turning the centre to increase or decrease their overall length.

Wider, new design wishbones are included and they are very neat mouldings indeed. It is important to note that on the Works '91 kit (ie, the *final* production design!) the front wishbones have a brace moulded on the outer edge. (At first this looks like 'flash' and builders of some of the first kits have been known to cut them off — **DON'T!**) These mouldings help to strengthen the front wishbones unlike those found on early pre-production models.

Even though the wishbones and driveshafts are wider the Yokomo is about 5mm short of the maximum legal width, so there is room for adjustment and modification.

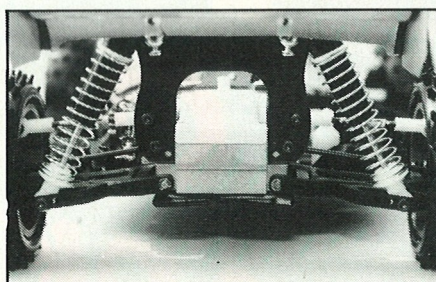
The front end has been redesigned and looks very similar to the Kyosho Lazer to say the least! The new stub carriers and steering blocks are more than reminiscent of those found on Kyosho's top 4WD contender. When assembled, the front and rear suspension is super smooth and hardly any play or slop is evident.

Other Bits and Pieces

Yokomo have chosen fine pitch belts as the way to go in their new kit. This is supposed to offer greater efficiency and therefore faster, longer running time. The disadvantage with fine pitch though, is that the belts can 'clog up' easier, ie only small bits of dirt need to get into the drive train to ruin its efficiency, and of course being fine pitch the belt can slip a lot easier. To prevent this it has to be a lot tighter than the heavy pitch type which automatically lessens the efficiency. Only time will tell if the fine pitch works okay, especially on the muddy UK circuits.

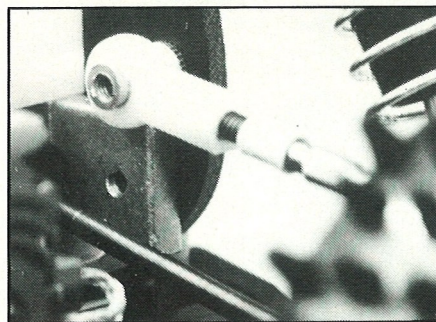
The new Yokomo is fully ballraced with new improved bearings. These are excellent units and should give a long trouble-free life provided that they are cleaned regularly.

The new ROAR regulation 2.1in. wheels and tyres are found in the kit as standard. These are larger than the old type and obviously smaller than the 'controversial' 2.2in. wheels as seen at the World Championships in Australia.

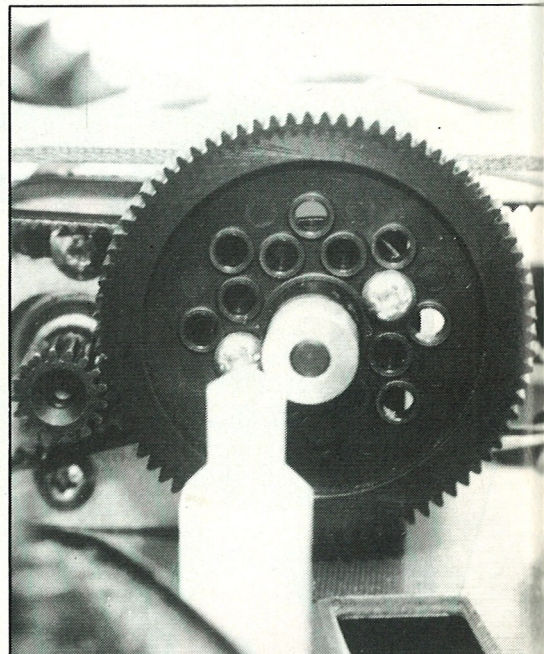


Overall view of the new rear end.

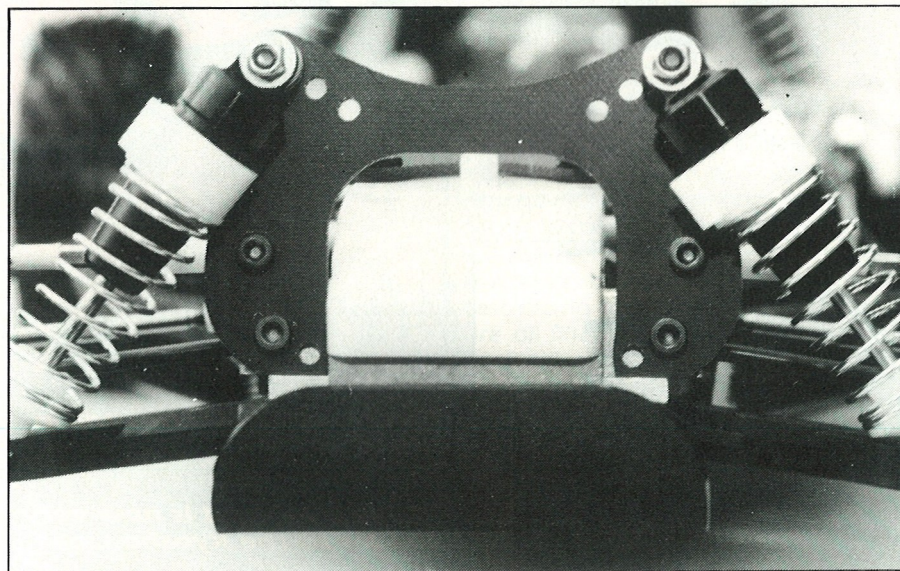
New turnbuckle links, balljoints and longer driveshafts can be seen here.

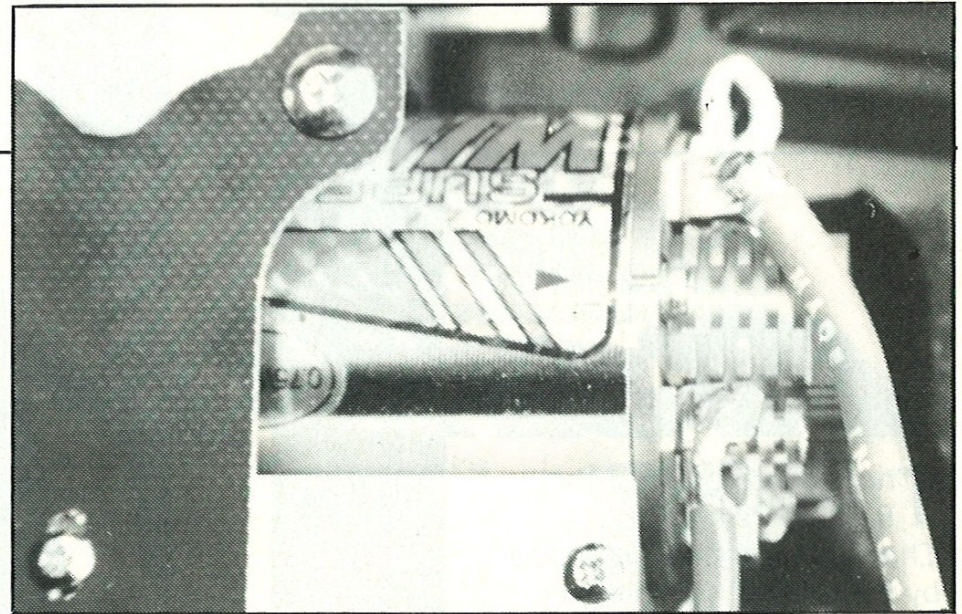
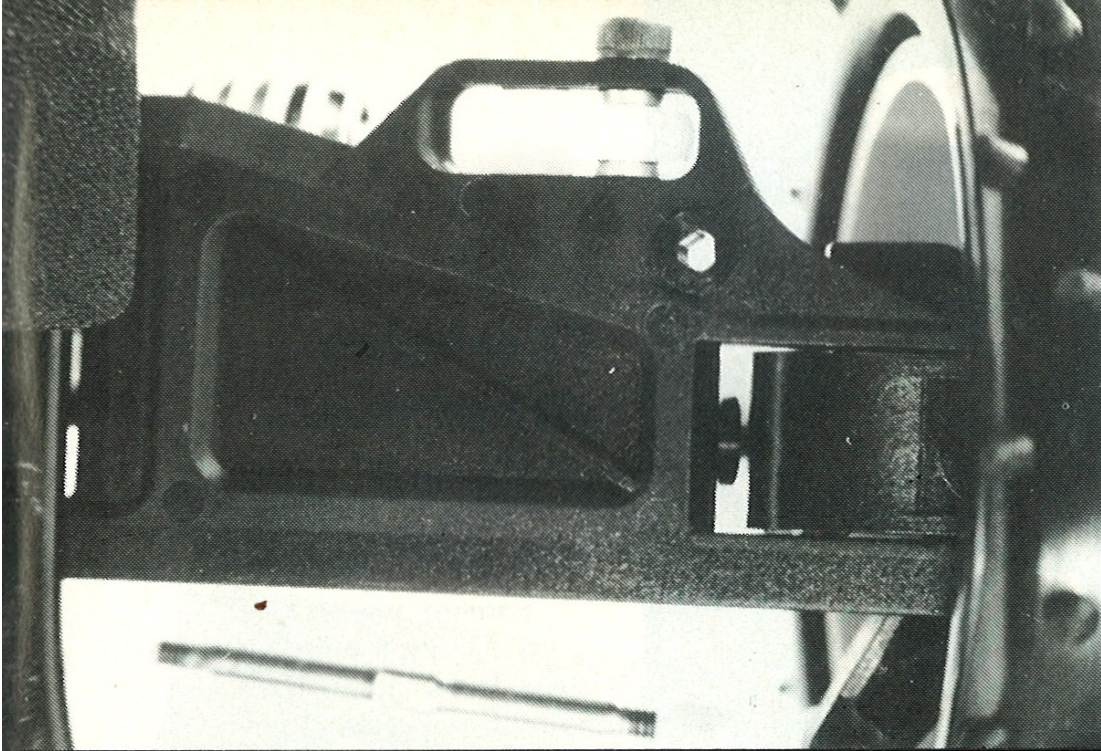


The new spur gear mounting can be seen here.



New front shock absorbers and graphite shock tower.





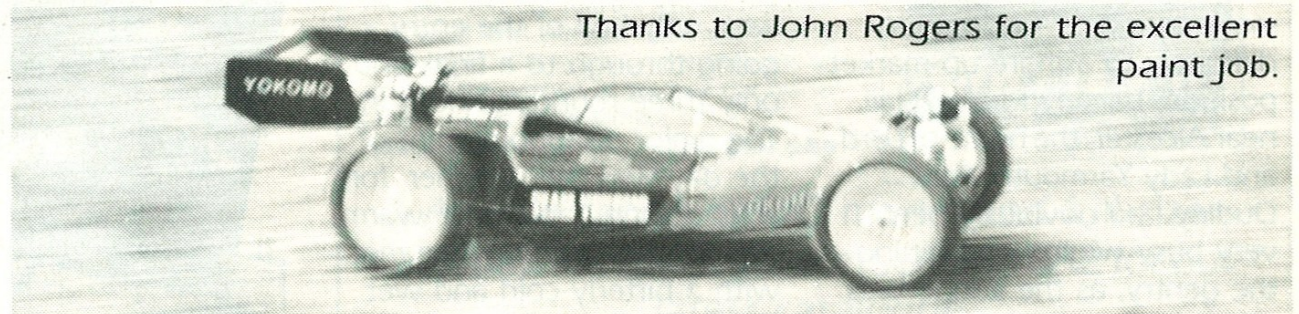
And Finally.....

To finish off what is almost entirely a new car, we have a new polycarbonate bodyshell and undertray. The body is a much sleeker, lower, more rounded moulding and when married up with the undertray, fully encloses the radio gear and transmission, protecting them from the elements.

So, there it is, the new Yokomo, midship, four-wheel drive Super Dogfighter Works '91. The only thing that isn't new is the transmission design and differentials. Even though the switch has been made to fine pitch the original design principle remains the same, basically because it is so efficient and simple to maintain.

⊙ **The Works '91 has new longer suspension arms front and rear.**

⊙ **Yokomo 13 turn motor provided plenty of power!**



Thanks to John Rogers for the excellent paint job.

Conclusions

This car is a definite improvement over the original Yokomo Super Dogfighter and will certainly be very competitive. It is easy to drive and maintain and should prove popular, even though it breaks the £250 barrier. Is this too expensive for an R/C model car? Possibly, but then again it is one of *the* very best on the market.

Available through CML Distribution. ●