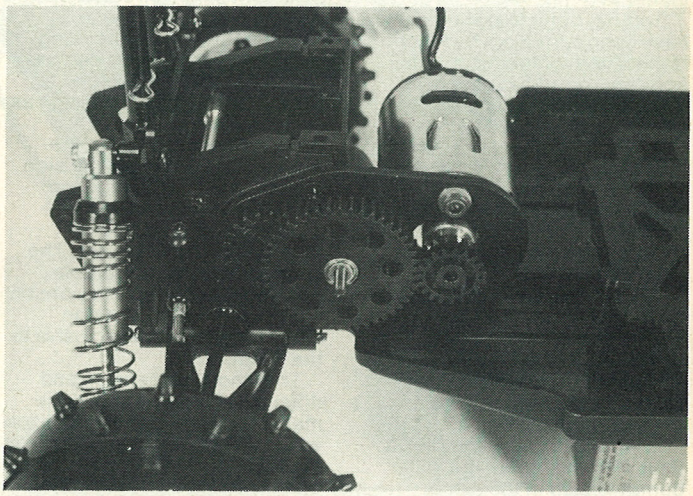
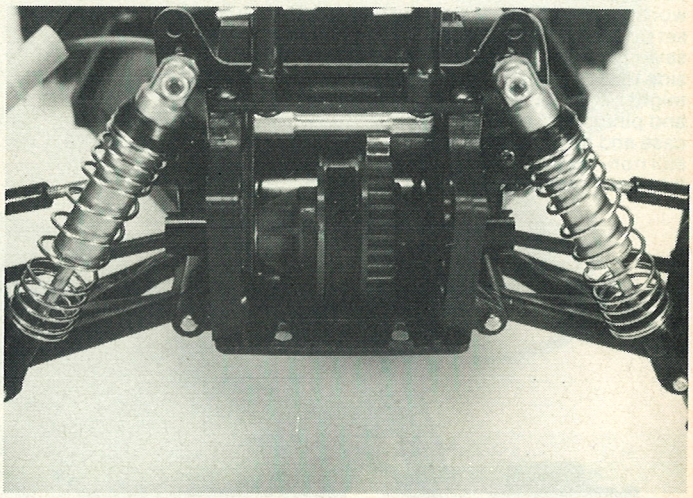
ALIEN MID4

Hirobo's belt driven 4WD system receives an update with this latest release. Geoff Driver assesses the 'Alien'





"In the electric driven 1/10 off load cars, under the name of the fastest troop Zerda has won victory in off load races of various places.

Besides the belt drive 4WD system, and four-wheel W wishbone suspension, the midship installation of the motor between the front and the rear axles is adopted. It is this car ALIEN that in a car running performance under gap and reduction in drive loss have been pursued."

Before you split your sides with laughter at *Hirobo's* version of English, ask yourself how many readers can speak Japanese and perhaps more importantly how many US and European models sell well in Japan.

It is a sobering thought that a mere handful of non-Japanese kits make their way into Japan's model market. So, although Hiroblish (*Hirobo* English) may seem a bit of a joke I wonder who has the last laugh, the Japanese or the English.

Hirobo have been noticeably quiet in the UK for quite some time, although they have produced two new cars in Japan, the 'Tomcat' and more recently the 'Bearcat,' both of these cars being two-wheel drive. We were treated to a glimpse of an interesting prototype called the 'Jealous,' but the unofficial word is that this car is not scheduled for production. However *Hirobo* have taken their now aging 'Zerda' and had a go at updating and improving the design.

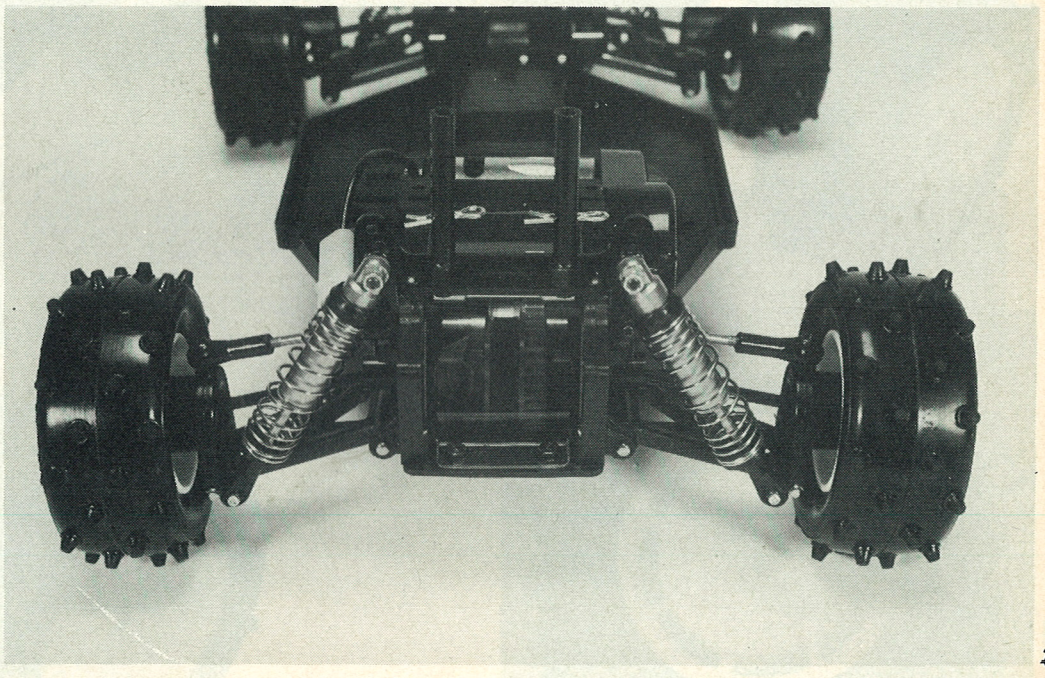
The 'Alien' relies upon the now well tried and proven toothed belt system of transmission with gear differentials built into the main drive cogs. It was in fact *Hirobo* who started using toothed belt transmission in 1/10th before anyone else.

The primary reduction from motor to main front to rear drive is by gears. Gone is the short toothed belt of the earlier cars. This change to gear reduction comes with the change in motor position. In common with so many cars currently made, *Hirobo* have decided to bring the motor inboard, thus giving the 'Alien' its full title of 'Alien Mid4.' This bringing of the motor inside the wheelbase should alter the handling characteristics significantly.

The kit, unlike the other recent offerings from *Hirobo* is indeed a kit, not ready built. A complete set of ballraces is included; (14 in total).

The most unusual feature of the car is most definitely the body. For all its unusual style I suspect it is in fact very aerodynamic, with many flowing lines. I doubt that the aerodynamics will have much effect on race times however.

Those then are the main design features of the 'Alien.' There are a host of other points worthy of mention, some good, some not so.



Top: mid-mounted motor drives through a gear reduction to the rear gearbox. Centre: the rear differential and drive belt sprocket. Right: rear suspension and damper placement.

The attractive white plastic wheels carry pin spike tyres and the whole wheel is mounted on the traditional *Hirobo* large single ball race. This is not, in my opinion, really adequate for a serious Off-Road car these days. Even with the car newly assembled the wheels flop around sufficiently to render the toe in, toe out adjustments ineffective.

Another point that should have been sorted out by *Hirobo* is the length of their stub axles. For years now I have seen 'Zerda's' shedding wheels because the stub axle thread was simply not long enough for the nyloc nut to fully lock in place. A simple enough problem to cure, so why not do it?

Drive shafts are the ball and pin type.

The front suspension top arm is adjustable and the lower arm is a standard fixed length wishbone. For those who can remember, it is the same design as the 'Zerda.' The car has an unusually small bumper at the front which is below the BRCA limit. However there is a wider bumper listed in the extras. Whilst at the front of the car, it is worth mentioning the steering set up. Using a spring loaded saver the servo drives a bar from side to side. First impressions might suggest it is a sort of rack and pinion, but this is not the case and the steering motion is still non-linear. It is however an interesting development and does provide a good substantial fixing point for the track rod ends. I was a little disappointed to discover that the steering servo is held in position using nylon ties and double sided tape. I think it is about time we moved away from string and sticky paper technology.

All four dampers are aluminium barrelled coil-over units with single oil seals. In an age when most Japanese manufacturers are producing some really innovative designs of damper, *Hirobo* decided to stick with a traditional design as used on the 'Zerda.' The dampers are mounted at the front of the bottom suspension arm and anchored at the top end on aluminium brackets provided with a number of alternative locating holes. The dampers are in a vulnerable position mounted as they are on the front of the suspension arms, but this is not exclusive to the 'Alien.'

The whole suspension and differential unit is fitted to the main chassis pan of the car which is made from injection moulded plastic. With the belt guards acting as a backbone the chassis pan is very rigid.

Rear suspension is similar to the front with an adjustable upper arm. Once again the dampers are provided with a number of alternative upper fixing positions. The motor (a faithful RS540) is mounted in front of the rear suspension and is almost centrally located across the car. The primary reduction is from the aluminum motor pinion (there are three provided) to the main plastic reduction gear. This drives another reduction gear to the main transmission input shaft. The range of ratios available are from 7.7:1 to 11:1.

To set up the meshing of the gears the instruction book even identifies a strip of paper that must be cut and inserted between meshing teeth to get the correct clearance. The tension of the main drive belt is controlled by shifting either the front or rear transmission unit, the screws which hold the transmission units in place passing through slots in the chassis. Although this adjustment will alter the wheelbase, it is such an insignificant amount that it is not worth worrying about!

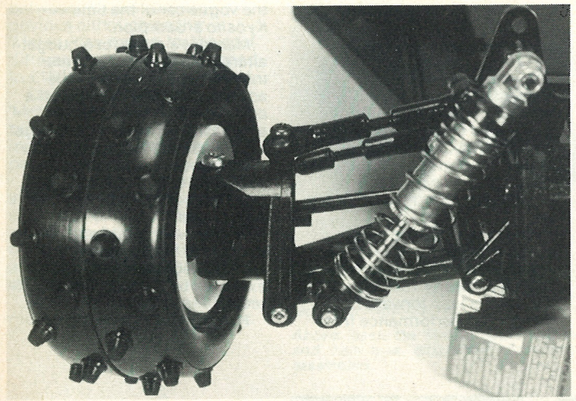
Above the chassis pan is fitted the radio plate which, in addition to adding strength to the whole structure provides the platform onto which is fitted the wiper board for the speed controller.

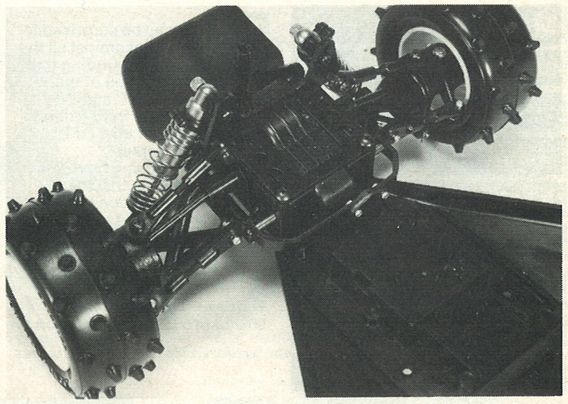
In a previous issue we mentioned the potential problem of cars overheating. As was anticipated the 'Alien' is one of the cars that comes with a temperature sensitive fuse. The fuse is fitted to the block that holds the ceramic resistors, when the temperature exceeds 119 deg C the fuse blows. A plastic cover is provided to fit over the speed controller wiper board and servo, but not the resistors.

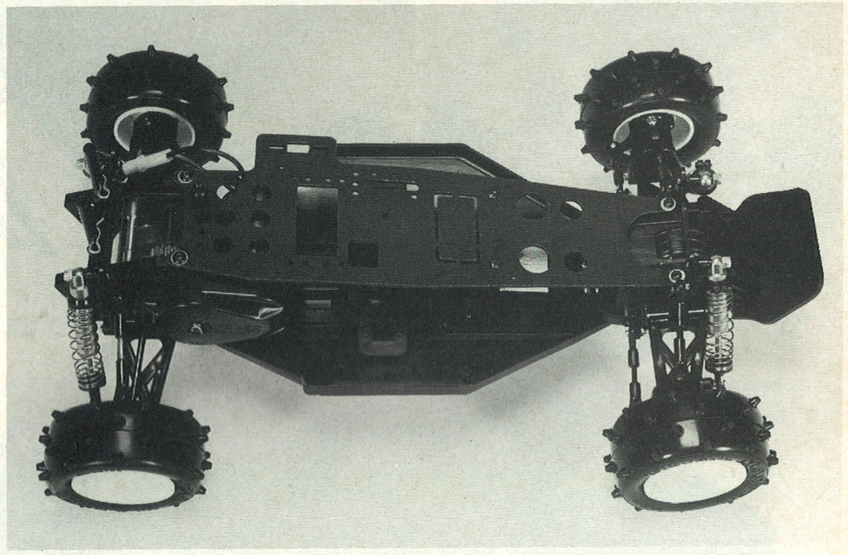
The instructions are well illustrated and contain hints on setting the car up. A useful feature of the instruction manual is that all the parts are illustrated with a part number alongside. Building the kit is quite straightforward. Mainly self tapping screws are used to hold the kit together. In each bag of components are the correct number of screws to fit the part in place, unlike most other kits where you are given a separate bag of screws from which the correct one must be identified.

Conclusion. A good quality kit with some useful improvements over the earlier *Hirobo* designs. I think that in some ways *Hirobo* have missed the opportunity of updating such things as suspension and dampers which could be made better and of course those irritating single ball race wheels and short stub axles.

The body is best described as controversial. I must admit to getting to like it after a while. The change around of the transmission unit was one modification that many 'Zerda' owners carried out for themselves, it looks as though *Hirobo* got to hear about it and made it official and all credit to them for learning by experience. Overall I like the car. In my opinion it will suit both the experienced racer and the beginner to the hobby.







Opposite page: futuristic bodyshell from Hirobo and inset. One piece hubs. This page top left: front suspension close-up showing adjustable upper arm links. Top right: steering set-up is centrally located. Centre: completed rolling chassis. Below: from underneath showing flat moulded chassis pan.