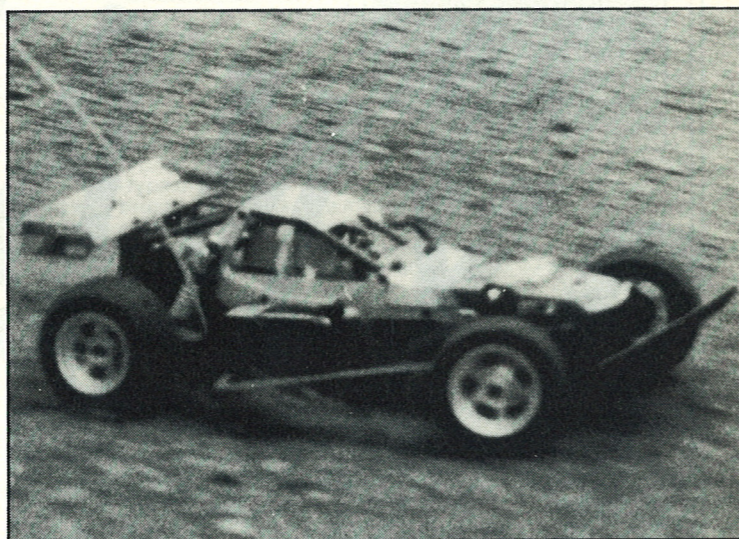


TRACK TEST

Marui have been in the radio control game for a mere three years, yet during this short apprenticeship they have shown themselves able to

Martial Artist

produce some of the finest competitively priced kits available. Their latest 1/10th scale 4WD Off-Road race car, the 'Samurai,' proves the point and provides performance into the bargain. Since our March '86 review of the 'Samurai' Geoff Driver has been enjoying further track time with the car.



For Marui the move to enter the radio control market was quite significant as in the last 30 years the company have concentrated on jig-saw puzzles and compressed air guns.

All Marui cars up to now have had good handling and the 'Samurai' is no exception. Careful design of steering geometry and with emphasis on weight-saving by making the chassis a space frame design have all helped in giving the car predictable characteristics. The chassis is heavily triangulated and as such is very rigid, also the design seems to be quite strong, as yet no damage has been sustained even after the usual rough and tumble of racing.

By using fairly large mouldings in the fabrication of the car weight has been further

saved, the only disadvantage with this is if a part should break, even if it is a small piece from a larger moulding, then the whole of the large moulding must be replaced.

Drive

Front to rear transmission features the now common ladder type chain. The front and rear axles incorporate geared differentials and in the main rear gearbox is a front to rear differential to cut out transmission wind up.

This front to rear differential is lockable, a good idea, but oh dear what a way to do it. By screwing in an adjuster the central differential gears are squeezed together until they are locked up. It all works, but I hardly think that Rolls Royce would approve of such engineering principles.

In truth I am not at all sure that the centre differential is really essential. It might help a little on particularly grippy tracks but at least one wheel would be in the air at some time. I think that the problem of transmission wind-up is not that serious on a racing 4x4. If the differential is not locked it can, on occasions be more of a liability than an asset. I have noticed that under severe acceleration on dusty or loose tracks when the weight of the car is transferred over the rear wheels, the front axle becomes lightly loaded, all the power is transferred to the point of least resistance, namely the front wheels and in a single move all the advantages of four-wheel drive are lost.

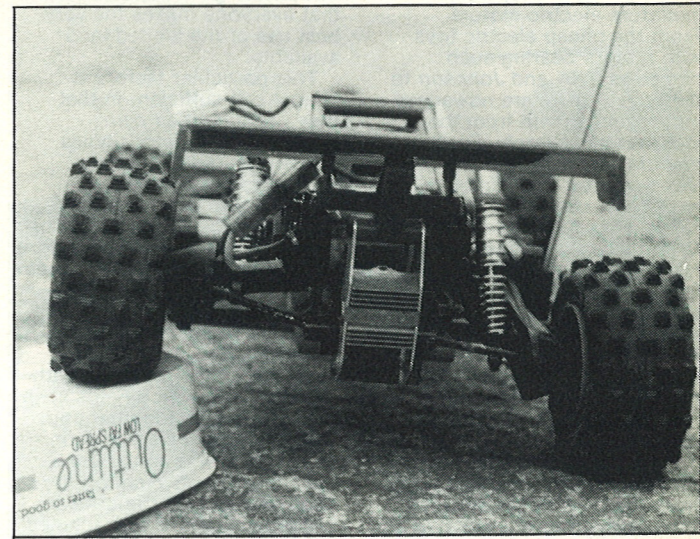
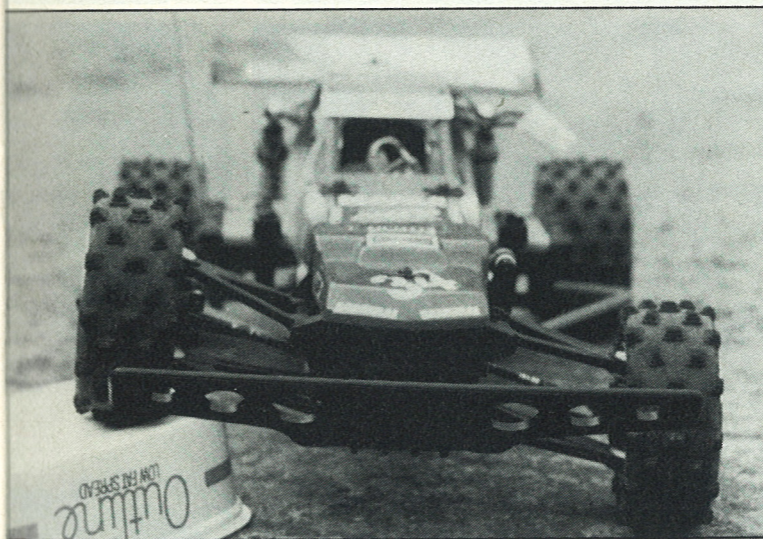
The main chain is easily adjusted by moving the front differential unit. Although there are no guides for the chain I

have encountered no problems with the chain falling off its sprockets. The chain itself is exposed to the elements and is vulnerable to picking up grit and dirt from the track. If the grease supplied with the 'Samurai' is spread over the chain then the mixture becomes a pretty abrasive compound.

I made a small chain guard from an off-cut of Lexan to prevent dirt being thrown onto the chain, and it worked pretty well, until the rains came and then my bright idea just acted as a big sludge collector for the chain to run through. This idea was abandoned. It was easier to clean the chain after each race.

Talking of lubricants I have heard of a number of other 'Samurai' owners using non-recommended lubricants in the gearbox and the gearboxes

Right: 'Samurai' ready for action. Below left to right: in action the 'Samurai' is a creditable performer, more so with a full complement of ballraces on board. Suspension movement front and rear is adequate for most tracks with 30mm of wheel movement to smooth out the bumps. Drive shafts remain in place even under extreme suspension movement.



gearbox and the gearboxes have subsequently developed cracks. I am not sure if there is a definite link between the two but it does seem to be a little more than coincidental. What is quite obvious is that overtightening the gearbox screws will cause the case to crack.

With the three differentials and a lot of plain bearings the car is not the fastest racer straight out of the box. Investing £30 or so on ballraces might seem a lot of money, but it will certainly improve your chances of winning, my only complaint here is that Marui have gone for yet another size of bearing. It would have been so much easier for everyone if they stuck to Tamiya sizes.

Suspension

The independent front

wishbone with its single crossframe shocker provides a useful 30mm of wheel movement and with easily adjusted front torsion bar just about any type of track can be catered for in a matter of seconds. The rear springing is by coil over dampers and adjustable collets.

Not being a great fan of swinging arm rear suspension I looked at the 'Samurai' rear-end with some criticism. One of the main failings of swing arms has been with the bearings of the arms, as soon as wear takes place the drive shafts start dropping out at the sign of even the smallest bump.

Up to now nothing has gone missing from the drive department of the 'Samurai' either from the front or rear drive and the swinging arm bearings show no sign of wear.

Improvements

With the servo mounted servo-saver, the steering is very direct and makes the car particularly responsive, however without either a front or rear anti-roll bar the 'Samurai' does suffer from rolling on tracks with grip. Also I found that thinner oil in the shocks improved matters no end, but the weather during the test, was to say the least a little chilly and as such the oil was more like a thickish glue.

A further improvement in shocker performance was achieved by drilling a small hole in the piston. An idea substantiated by Alec Hudson of Howes Models, who has taken 'Samurai' racing quite seriously with some success. Alec opted for a 1.5mm hole in the piston. Another good idea that Alec put forward was to

drill a small hole in the top of the gearbox to allow access to the motor pinion screw, this makes life a lot easier if you want to swap gear ratios around.

To sum up. The car handles very well and with a small amount of tweeking could do even better, it is strong, light and quite well thought out, but with one exception, the battery pack is so close to the drive chain Marui have found it necessary to include some protective tape in the kit to wrap around the battery.

Most of the necessary adjustments can be carried easily, except changing motor pinions. Perhaps what makes the Marui really attractive is the price, at around £99.00 it offers very good value for money.