

Tamiya



◉ **Front end detail. Notice short bumper and speed disc wheels.**

If you are a relative beginner looking for an excellent first or second car, but don't want to see your bank balance blushing, then read on. Equally if you're looking for an inexpensive car that can be upgraded to a superb beastie do the same, because you may well find that the Tamiya Madcap is just what you are looking for.

The Madcap is a two wheel drive off-road buggy with all the usual attributes, i.e. rear wheel drive and front wheel steering. This

information, however, is not enough to base an opinion of the car upon, as many cars fall into this category, but not all perform as well as the Madcap.

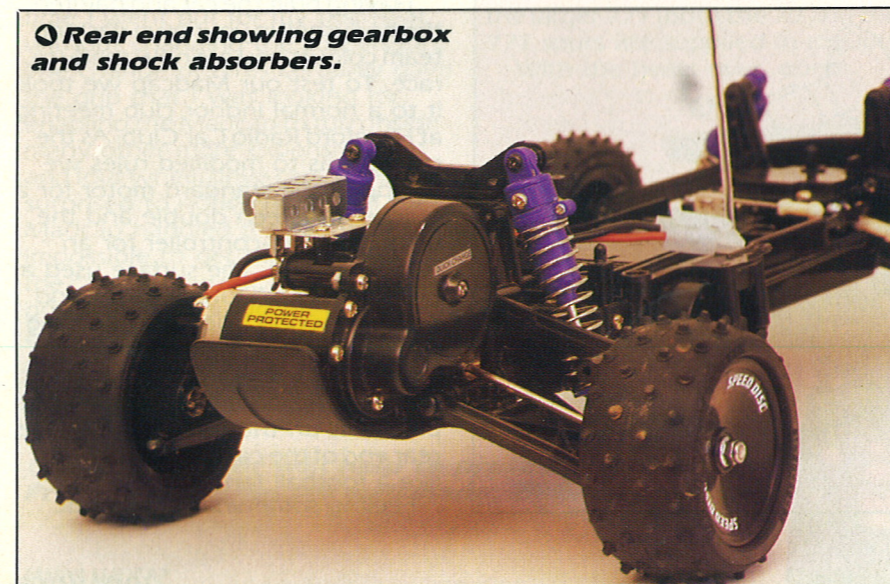
As usual for Tamiya when you open the box you are presented with nothing less than a work of art that is simply begging the more aesthetic side of you not to cut open the blister packs and tear apart those exciting looking plastic bags! However, a man's got to do what a man's got to do, and if that

MADCAP

JAMES ASHTON reviews Tamiya's latest kit, the Madcap



◉ **Rear end showing gearbox and shock absorbers.**



means opening blister packs then so be it!

Construction starts with Tamiya's now familiar ball diff, which although a thoroughly simple affair, appears to work quite well, though it is essential that it is well greased with the diff grease supplied. The only complaint I have about the diff is the means of adjustment. The usual method of tightening or loosening a ball diff is via a tension adjusting screw which pulls the plates together or pushes them apart depending on the direction in which the screw is turned. Tamiya, however have opted for a different method. With their diff you have to actually

Pin spike front tyres provide plenty of grip. From this shot you can see how much ground clearance the car has.

dismantle the unit and add wafer thin spacer washers until the desired tension is achieved. In the process of doing this though one ultimately finds oneself either trying to do a "Moses trick" by parting the carpet to find a diff ball, or chasing one across the lino, that the kitchen fitter said was flat! Having said that though, the standard diff setting should be correct for most tracks.

The rest of the gearbox falls together (well nearly!) and results in a very smooth, free, and pleasant looking unit.

Having completed the gearbox you find yourself bolting on that bit which attaches the front wheels to the back ones — that's right — the chassis! The chassis is a black, plastic bathtub which looks very strong and should cause no problems. At each of the four corners of the chassis are a pair of solid, double wishbone suspension arms. The bottom wishbones are held in place by what I call a screw shaft, that is to say a shaft with a head and a small amount of thread on one end

so that it can be screwed into the wishbone mounting, preventing it from vibrating out. I did find it necessary to put one 3mm washer over the screw shaft between the wishbone and the mounting to remove unwanted slop and to increase the precision of the car's handling. Six different shock mounting positions are available at the back end of the car and three at the front. The caster angle is fixed due to solid top wishbones but could be replaced very easily with threaded rod links to enhance the car's dialability.

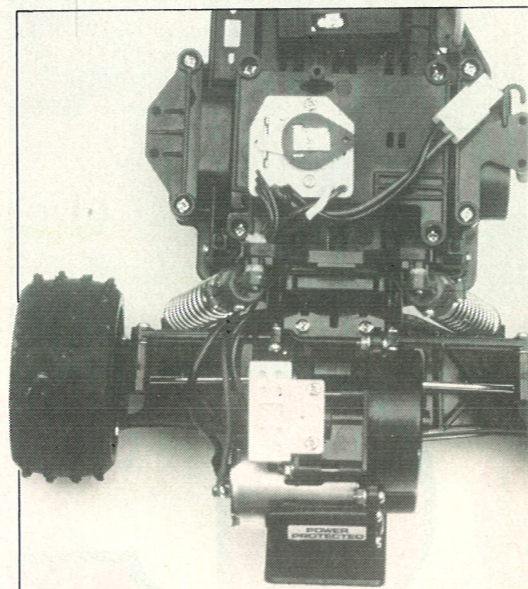
The shocker units supplied are plastic coil over friction ones which, whilst new seem to work quite well, but I should imagine that after hard use may become sloppy; however only a track test will tell.

The stick pack battery is held transversely across the chassis and is retained at either end by flexible plastic clips which overhang the

battery housing. This means that by merely flexing the clips out of the way the battery may be removed.

The steering system is very simple but effective. Basically it comprises of a servo, with a servo saver attached to its output pushing a steering bar. On the other side of the steering bar pivot are push rods going to the stub axles.

The Madcap is supplied with a three-step forward and reverse speed controller and a Mabuchi 540 standard motor which all fit in place neatly, leaving plenty of room for the radio gear of your choice. A comprehensive sticker sheet is also supplied with the Madcap, that in conjunction with even the most basic of paint jobs can produce an attractive finish. The body is held in place by three body pins, one at the front and two at the back. Though



Rear end detail. Notice shock absorbers and "3 step" speed control.

about the ability of the car to handle these trying surfaces I decided to have a practice. Immediately two things became apparent. Firstly, the car understeered due to its hard front tyres and secondly, it was too stiff and high, making it unstable. These two problems are typical of 'out of the box' cars designed for off-road where having hard tyres doesn't make much difference and where it is essential to have the car more than 3mm off the floor! However, as this was not an off-road meeting things had to change. To cure the understeer a set of soft spikes were scrounged from a very good friend of mine, who is presently wondering whether he'll ever get them back! Being a devout follower of the philosophy that you should only make one modification at a time I went out for my first heat without changing the suspension. The change of tyres certainly gave the grip that I was looking for, enabling the Madcap to turn inside many other more expensive two and four wheel drive cars. I was also surprised to notice how well the Madcap handled the wood; it was impossible to get the rear end of the car to swing out, but front end grip was now sufficient to get you around the corner with ease. The car was still rather high though and tended to be slightly unstable (due to the ride height).

Front bumper will help to protect the car. Front lower arms are well made, and very strong.

The outcome was that the Madcap came in second (luckily behind the chap who lent me the tyres!)

For the second heat the plastic friction shock absorbers were changed to oil filled types. This lowered the car substantially and the car went even better thanks to this modification.

For the third and final heat the only modification was another change of motor. This time a fifteen double was used, to see just how strong those gears were! — the outcome, they're strong enough! The only problem was trying to point this guided missile in the correct direction; a task easier said than done. Obviously the change from a nineteen double to a fifteen double required the gearing to be changed. On the nineteen double the standard 23T pinion driving a 70T spur was suitable, but with a fifteen double the pinion used was a 20T and the spur was the larger 77T (both the 70 and the 77T spurs are supplied in the kit).

With the heats over, open

practice was allowed whilst the finals were sorted. During this break several drivers who usually drive more expensive 2WD cars were handed the transmitter for a quick go. The only problem was getting it back off them! They all agreed how excellently the Madcap handled and were, like myself, particularly impressed with its performance on the very slippery wood.

When the finals were pinned up I discovered that the Madcap had enabled me to get into the 'C' final, first on the grid. Admittedly two places down on what I can usually attain but nevertheless a most pleasing result using a new car on a surface that didn't suit 2WD, and considering that it was, in fact, the first time that I'd ever driven a 2WD buggy.

The final proved to be, in a word, carnage, with the Madcap coming off worst in the "end of straight pile up". However due to its excellent speed, cornering ability and generally user-friendly handling a final placing of third was attained.

Throughout the process of building and racing the Madcap I have been pleasantly surprised with its quality and durability. So far the Madcap has been thrashed by a number of different drivers and is none the worse for wear.

Tamiya offer a range of upgrading parts, including ballraces to replace the plain bearings in the kit, oil filled shock absorbers and their usual range of wheels and tyres, etc.

Tamiya have certainly broken new ground by releasing the Madcap. How many cars can you think of that are suitable for even a beginner, yet are upgradable, at a modest price, to become a top class racing model?

The Tamiya Madcap — King at all levels — available at all good model shops. ●

