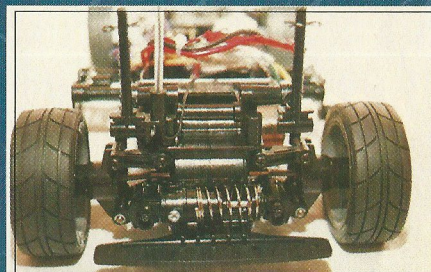
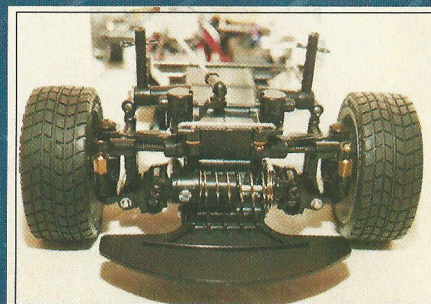


eurocup eurostar?

eurocup eurostar?

Tamiya 'M' Chassis Porsche 911 - A Eurocup racers view



Front and rear suspension is identical, unusual but effective

Back in February, when Peter E was trying to persuade me to write the coming season's Tamiya Eurocup F1 and M-chassis reports, he casually remarked at the end of the conversation "oh, by the way, the reporter also gets to review the latest M-chassis offering from Tamiya, a beautiful 'new shape' Porsche 911 Carrera. I have it right here and it looks really good!" Peter sure knows how to tempt a person and before I knew it the box was winging its way to my door!

The Mysterious M-Chassis

Tamiya first introduced the M-chassis in 1995 in the guise of the Rover Mini Cooper. In keeping with the full-size, the M-chassis Mini was front wheel drive and of relatively short wheelbase, which made it an interesting challenge on the track.

There rapidly followed other models in the series, some in rear wheel drive configuration, some with a 'medium' length wheelbase, and some with different size wheels and tyres. In '96 the Renault Alpine became the racer's choice, but in '97 the Mazda MX5 seemed to be the car to have.

Now, Tamiya have introduced yet another variation, a 'long' wheelbase version utilising touring car size wheels and tyres. At the time of writing, models based on this variation are the Porsche Boxster, Mercedes SLK, and the subject of this review, the Porsche 911 Carrera.

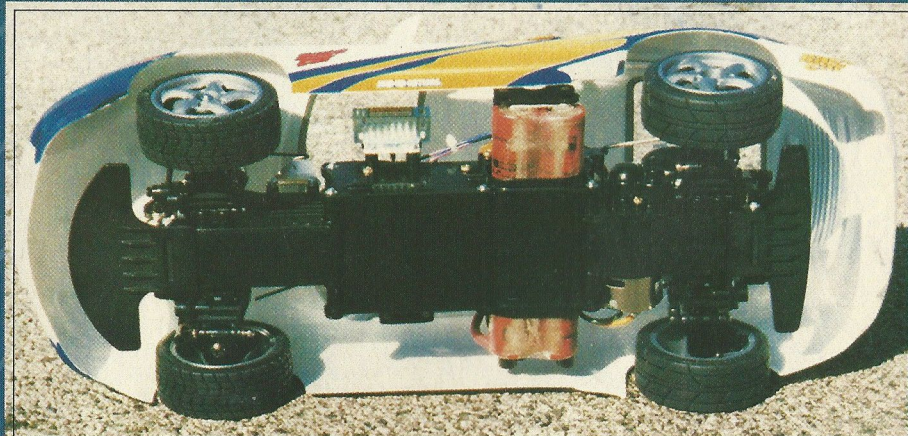
To increase the multiplicity of choices still further, parts can be assembled to give either front or rear wheel drive configurations, regardless of which kit is purchased.

The provision of such choices within a single basic design is most ingenious, and the people at Tamiya have been very clever indeed. The

secret is in the chassis design, which comprises three separate main sections. The centre section houses the battery, speed controller, and servos; one 'end' section houses the motor and drive train and carries the suspension (front or rear, depending upon how the parts are assembled); and the other 'end' section carries the suspension for the remaining end (again, front or rear, depending upon how the parts are assembled). The 'end' sections are interchangeable and can be bolted to either the front or rear of the centre section. Robust locations are provided to ensure accurate alignment and each 'end' section is bolted to the centre by just two bolts.

Although all M-chassis share this same basic design, Tamiya vary the lengths of the chassis sections to give either 'short' wheelbase, 'medium' wheelbase, or 'long' wheelbase versions.

Which of these versions will become dominant on the racetrack remains to be seen, but I have a suspicion that the 'long' wheelbase model with the touring car size wheels and tyres in rear wheel drive form may offer the best handling. I hope so, because we plan to develop the review car for Rob to run in the '98 Eurocup series!



No I did not roll it! This is what it looks like underneath

Packaging Perfection

As we have come to expect from Tamiya, the quality of the packaging is quite superb. The box artwork is stunning and depicts not only the finished car, but also illustrations of the chassis and suspension arrangements, which serve as useful references during the build process.

Inside, one finds the bodyshell, several bags of black plastic parts, wheels, tyres and tyre inserts, four bags of hardware, a 3-step forward and reverse mechanical speed controller, an





RS540 motor, decals and window masks, and an instruction manual.

The inclusion of the speed controller makes this an ideal first model. Okay, an extra servo is needed to operate it, but a servo costs considerably less than an electronic speed controller! It is also useful for Eurocup contenders, where the regulations limit the speed controller to that supplied in the box.

I particularly liked the four bags of hardware, which are clearly identified as Bag A, Bag B, etc. and which only need be opened when a given stage in the assembly is reached. Bag A covers steps 1 to 10 of the assembly and then Bag B takes over, and so on. Brilliant. Don't be alarmed if you find some screws or other small parts are left over at the end of a particular assembly stage, Tamiya are often generous in the quantities of such items that they provide.

Assembly Anecdotes

I do not intend to give a blow by blow account of how 'a' bolts to 'b', since this aspect of the M-chassis has already been 'done to death' in numerous previous reviews. In any event, Tamiya provide the finest illustrated instructions you could wish to find - just follow them and you really can't go wrong.

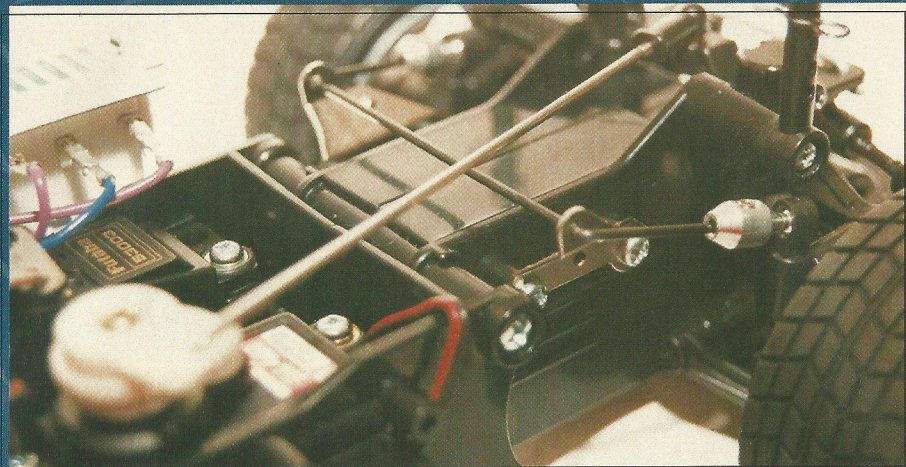
I would advise though, that you make a decision whether to use the plastic bearings supplied in the kit or uprate to sealed ball races before you start building. Some of these are needed at the very initial stages and it would be tedious to have to dismantle the car at some later date to replace them. Basically, if you don't intend to race the car, the plastic bearings provided are quite adequate for the purpose, but if you do intend to race, then you should consider ball races almost as a must.

For me, this kit was an absolute delight to put together and I enjoyed every moment of it. The build quality is superb and the parts fit together with such precision that once you make a start you just can't put it down. With absolutely no previous experience of the M-chassis, I built the basic rolling chassis in under 5 hours and that was taking my time!

Suspension Snippets

M-chassis suspension is identical front and rear and is quite unusual.

Basically, each lower suspension arm is pushed downwards by a torsion spring. These are rather like large motor brush springs and function in much the same way. One 'arm' of the spring is locked to the lower suspension arm by a plastic bracket, whilst the other 'arm' reacts against the side of the chassis. Peculiarly



The front anti-roll bar. Note the fitment of the mounting brackets

though, the torsion spring on the right front is stiffer than the one on the left front, whilst the torsion spring on the right rear is softer than the one on the left rear! I am sure that the clever people at Tamiya know exactly what they are doing, but the logic behind this arrangement beats me. If anyone knows the answer, please write in and put me out of my misery!

When I was fitting the torsion springs, I remembered reading somewhere that they have a tendency to soften after just a few runs, with a corresponding deterioration in handling. The remedy was said to be simple - using two pairs of fine-nosed pliers bend the spring's 'arms' outwards until they lie at 180 degrees to each other (they start at about 135 degrees to each other). When assembled, the effect is to increase the spring preload - the spring rate, of course, remains unchanged. It was claimed that, 'you'll be amazed at the change in handling and the turning precision that results'. Now, that sounded good to me, so I wasted no time in setting to work with the pliers!

In addition to the torsion springs, there is also a single friction damper/coil spring front and rear. This is mounted horizontally and is connected to the right and left side lower suspension arms. It is an unusual arrangement, but seems to work quite effectively.

The kit supplied damper is not oil-filled, instead the small piston head simply runs inside a rubber tube. For general use, the dampers as provided are quite adequate, but if you intend to race, I would recommend replacing them with the aluminium oil-filled shocks as used on Tamiya four wheel drive touring cars.

The coil springs surrounding the dampers can be readily changed and, again, if you intend to race, a Tamiya On-Road Tuned Spring Set could be an useful investment. This set comprises three pairs of springs, soft (red), medium (yellow), and stiff (blue), enabling the chassis to be 'tuned' to the circuit and the conditions.

Wheels And Tyres

The wheels are identical to those on the Porsche Boxster and are quite magnificent. At first glance all four look to be the same, but take care, they are not! The recess for the wheel nut is much deeper on the rear wheels. If in doubt, refer to the box top or the picture on the front of the instruction manual. The front and rear tyres are also different, so take

care to fit the fronts to the front wheels and the rears to the rear wheels. Also, take care to ensure that the rear tyres are fitted correctly for the direction of rotation. Again, if in doubt, refer to the box top.

In my view, tyre choice is perhaps the most critical element in extracting maximum performance from any car. Now, I don't have sufficient experience of the M-chassis to claim to be an expert in this department, but I have learnt a few things that might be helpful. For general use, the tyres supplied in the kit are okay. In fact they might be more than just okay since, according to '97 tech charts, a number of drivers claimed to have made Eurocup 'A' finals using kit tyres and drivers always tell the truth for the tech charts, don't they?

All M-chassis cars utilising touring car size wheels can be fitted with Tamiya moulded Type 'A' or Type 'B' tyres and I have little doubt that these will provide the ultimate in handling. Beware, though, these tyres are not permitted in M-chassis for the '98 Eurocup.

According to the tech charts, the most popular M-chassis tyres in the '97 Eurocup series were 'M' Grip fronts with 'S' Grip rears, or 'S' Grips all round. I would think that these would offer a pretty good starting point. Make sure when buying tyres for this car that you stress that they are for use on an M-chassis using touring car size wheels.

All tyres must be fitted with tyre inserts. Those supplied in the kit are just simple pieces of foam sponge material, which are adequate for general use, but best replaced for racing by Tamiya moulded inserts. The moulded inserts support and maintain the shape of the tyre much better, and provide that all important improved grip.

Hop-Ups What More?

Well, only one more that I want to tell you about - front and rear anti-roll bars. Tamiya produce an excellent anti-roll bar kit, they refer to it as a 'stabilizer set', which can be purchased as an extra to reduce body roll in the turns.

When fitting the rear anti-roll bar, some modification to the left mounting bracket and the rear support for the 3-step speed controller is necessary if the parts are to fit without conflict. This is most un-Tamiya like, but I get the impression that the inclusion of the 3-step speed controller was perhaps a bit of an after-



thought! If you decide to fit a rear anti-roll bar, I would advise fitting it when building the chassis centre section. I didn't and had to dismantle half the car to get it in!

There are no such complications with the front anti-roll bar. The only thing to watch out for here is to orientate the mounting brackets correctly. The illustration in the hop-up bag is contradictory to the illustration in the car instruction manual, again, most un-Tamiya like! Of the two, it is the car instruction manual that is correct.

Body Brilliance

There are two things that I find tedious when spraying car bodies; masking windows and protecting the outside from overspray. Well, joy of joys, Tamiya have thought of everything and provided a neat set of window masks and a body that comes with a thin film covering the outside. When spraying is complete, the film is simply stripped off. Absolutely brilliant. Don't try sticking on the decals until after you've stripped off the film, though! I bet someone has!

Testing Time at Tibby

The Tibshelf track is literally only 5 mins from my home, so it was perhaps inevitable that the car would first turn a wheel there. It was a beautiful day at the end of March, warm, dry and sunny. Ideal for testing!

With the exception of ball bearings, the car was first run in 'box standard' specification. What a delight! The handling was good and it was super easy to drive straight out of the box. With the kit motor it felt a bit slow, but then Tibby is a big, fast track and I am used to Tamiya F1 with loads of power!

I tried the various hop-ups, anti roll bars, oil filled dampers, different springs etc. but frankly could tell little difference. It's not that the hop-ups don't work, I think it is more the case that the car is so good in standard spec. that it is hard to improve it much!

The most notable difference came when I changed tyres. With the kit tyres and inserts the car understeers quite a bit in slow corners. This makes the car easy to drive, but it is limiting for racing. I tried 'M' grip fronts with 'S' grip rears and I also tried 'S' grips all round, all with Tamiya moulded inserts. Now the understeer changed to oversteer, particularly when using 'S' grip fronts. The car now felt much more nervous and it was easy to lose it on entry to a corner. Not so nice to drive,



but I believe potentially faster for racing, provided that you are quick on the sticks!

Having been brought up on electronic speed controllers I was concerned that the 3 step mechanical speed controller might be a bit coarse and vicious. I need not have worried, with the kit motor it is fine. Indeed, had I not known I would have been hard pressed to tell you that it was not an electronic speed controller.

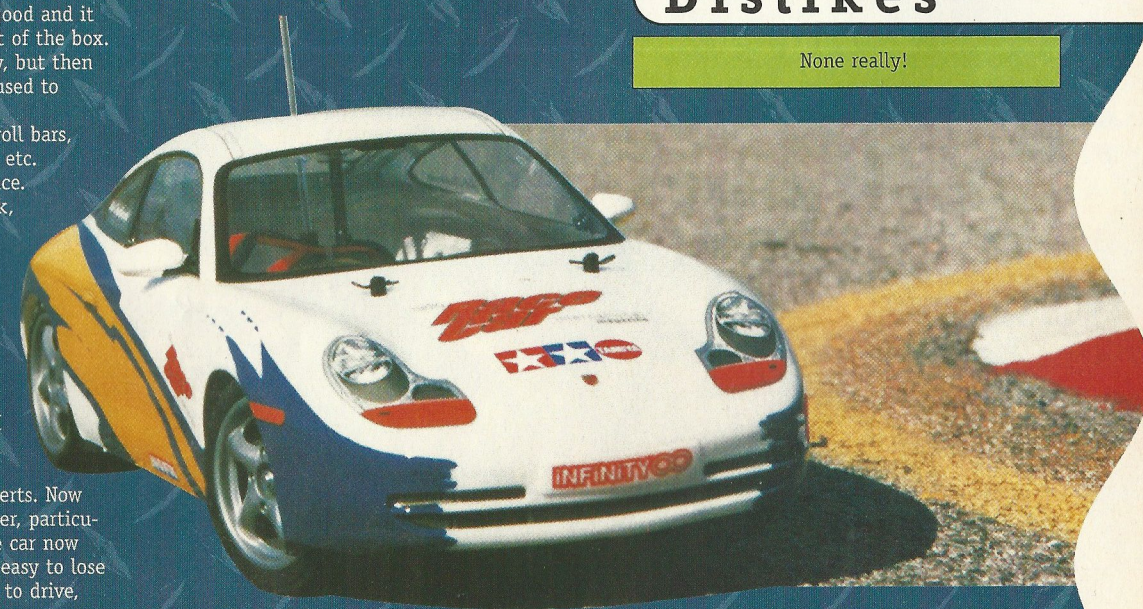
Using the kit motor the run times were phenomenal! I tested using 1400SCR packs and I was bored before running any of them flat.

One last thing, if you want to continue to admire the car at home, remove the door mirrors before running. I didn't and wiped one out with a roll on the first run!

Conclusions

A delight to build and easy to drive. The excellent instructions, 3-step speed controller and kit motor make this an ideal beginners model. The only downside is that, apart from the Eurocup series, it may be difficult to find somewhere to race it as few clubs seem to run classes for M-chassis cars.

Apart from ball races, the hop-up options are probably unnecessary if running the kit motor. For a hotter motor though, as will be used in the 98 Eurocup series, I suspect that they will come into their own - we shall see. There are fun times ahead! **MMH**



Quick Spec

1:10th scale, 2WD scale model for 2 channel R/C. Choice of Porsche Carrera 911, Porsche Boxster or Mercedes SLK bodies. Complete with standard RS540 type motor and 3 step mechanical speed controller. Eligible for the Tamiya Eurocup 'M' Chassis class.

Tester Kits

Futaba FP3 radio
Futaba S3003 throttle servo
Acoms AS-12 steering servo
1400 SCR's

Likes

Excellent instructions
Build quality
Window masks and protective film
Docile handling

Dislikes

None really!