

# Minimal Opposition

## Tamiya M-03 Rover Mini Cooper Racing

First there was the M-01, then there was the M-02, then the M-02L, and now there is the M-03. This new release from Tamiya is arguably the most exciting M-chassis car yet. Unlike its predecessors, this car is not a variation on the original theme, but is a completely new design. The most obvious differences are the new slim-line chassis and revised suspension, which now features a double wishbone/coil spring damper unit arrangement at each corner. Those of you who are familiar with the unusual suspension employed on previous M-chassis cars will immediately appreciate why this car is so exciting. We have shown the review car to many M-chassis racers and it has already attracted considerable interest. When Richard Isherwood brought his example along to race at Bedworth in Round 8 of the Eurocup, the questions on everyone's lips were, 'how will it go?' and 'will it render all previous cars obsolete?'

Well - let's find out!

## What You Get

As is customary from Tamiya, the kit is packaged in the most superbly illustrated box. Inside one finds the usual excellent instruction manual, four sprues of plastic parts, hardware bags A, B, C and D, which are opened progressively as construction proceeds, wheels, tyres and tyre inserts, a beautifully moulded lexan bodyshell, decals and window masks, a 3-speed forward and reverse mechanical speed controller, and a 540 motor.

## What you Need

Items required to complete and run the car are: 2-channel transmitter and receiver, two

## Tamiya M-03 Mini Cooper Review

Track testing  
at West  
London



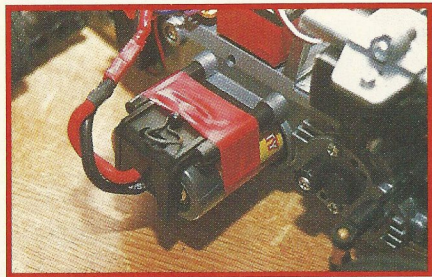
servos, on/off switch harness (take care to ensure that the connector matches that on the mechanical speed controller - note that some harnesses for model aircraft use do not match), 6-cell nicad racing pack, polycarbonate paints, and synthetic rubber cement and cyanoacrylate glue for securing tyres and tyre inserts.

## Chassis

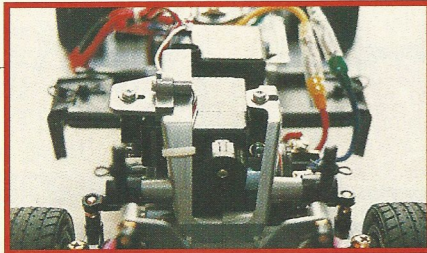
Previous M-chassis cars featured a three-piece chassis, which could be configured to give either front or rear wheel drive. This car has a two-piece chassis and can only be built to give front wheel drive - mind you, for a Mini anything else would be unthinkable! The main chassis components are moulded in a light-grey plastic material instead of the more usual black. How durable this material will be I cannot say - when we've given it a good thrashing I will have to do an update on what breaks! Certain aspects of the design, such as



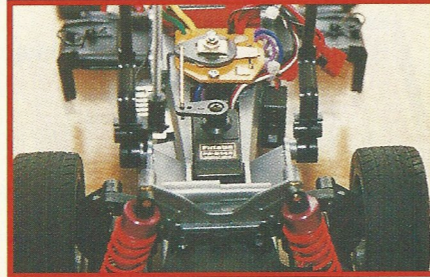
M-03 meets M-02, No.1, but for how much longer?



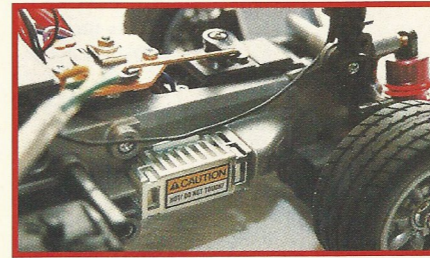
The battery taped in to discourage ejection.



The steering servo is mounted on a somewhat delicate looking structure above the motor.



Rear end detail.



The fairing on the left-hand side, which protects the resistor for the mechanical speed controller, is a nice touch.



Motor is located just ahead of the battery.

the front damper mounting points, steering servo supports, and attachment of the rear section give me some concerns regarding durability and strength, but time and a good thrashing will tell. The good news is that so far nothing has broken in testing - trouble is, we haven't raced it against nine other maniacs yet!

The front section of the chassis carries the front suspension, steering servo, motor and drive train, and battery. The drive train is similar, but not identical to previous cars, whilst the gear differential supplied in the kit is as before. Interestingly, given that the tyre diameter is the same as the Mazda, a 20T pinion is supplied (the Mazda uses an 18T pinion). Now, before all you M-chassis racers start getting excited, Ishy's M-03 hasn't displayed any great straight-line speed advantage over the others, which leads me to suspect that the drive train gear ratios are in fact different. However, if you think I'm going to dismantle the car to count the teeth, think again sunshine! The steering servo is mounted on a somewhat delicate looking structure above the motor. The steering linkage is more direct than on previous cars and is a big improvement. Previous cars had very sloppy steering, but not this one. The battery retainer is taken from the TL-01 and, as a result, has the same shortcomings. This arrangement may be adequate for the parking lot, but it's not really up to the rigours of racing! Fellow Eurocup scribe and TL-01 guru, Chris Fife-Shaw, advises me that many TL-01 racers also tape their batteries in to discourage them from ejecting during a race.

The rear section of the chassis carries the rear suspension, mechanical speed controller, and throttle servo. A nice touch here is the fairing on the left-hand side, which protects the resistor for the speed controller. The throttle servo fits neatly inside the chassis on the centre-line. The rear section is fixed to the front section by just four 3 x

10mm self-tappers. Personally, I prefer the substantial nut and bolt fixing of the previous cars but, again, time will tell how durable the new arrangement is.

## Suspension

At last, an M-chassis with 'proper' suspension! The uprights and arms are more parts taken from the TL-01 and are very robust. The kit-supplied dampers are not oil-filled, but instead are the now familiar Tamiya friction type, in which the piston head simply runs inside a rubber tube. These are adequate for the parking lot, but for racing I would recommend replacing them with the hop-up aluminium oil-filled type. I used the hop-up dampers and assembled them with one-hole pistons for the front and three-hole pistons for the rear. I used 40-weight oil and red (soft) springs for both front and rear.

## Wheels and Tyres

Unlike previous M-chassis Minis, this one comes with 60D size wheels and tyres. The wheels are beautifully moulded and look very realistic. Front and rear wheels are identical. The tyres supplied in the kit look just like S-grips except that they do not have 'S-GRIP' moulded on the sidewall. 1998 Eurocup M-chassis champion, Ben Elliott, reckons they may be D-grips, whatever they might be? When fitting the tyres, take care to fit the inner sponges and to secure them to the tyres using synthetic rubber cement. Make sure that the tyres are properly seated

on the rims and then secure with cyanoacrylate glue as per the instructions. I discarded the inner sponges provided and instead used the hop-up hard inner sponges. Why? Because that's what the experts use! What better reason could there be?

Coincident with the release of this car was

the release of 60D size Type A tyres for M-chassis cars. These tyres have proved phenomenal on touring cars and their arrival in M-chassis has been greeted with much interest. Early experience indicates that they are particularly good on the M-03 especially when it is very wet, but are not suited too well to the more poorly suspended older cars which tend to grip-roll too readily.

Also available for this car are reinforced wheels. These are a little more expensive than the standard wheels, but seem to be much more rigid. I have a set for evaluation, but as yet it is too early to say if they make any real difference.

## Body

As is customary from Tamiya, the body is a quite beautiful moulding, which is perfectly to scale. As we have also come to expect from Tamiya, it comes with a thin film covering the outside to protect it from overspray and a neat set of window masks. Spray to suit your taste, strip off the protective film, apply the relative few decals, and you're ready to go.

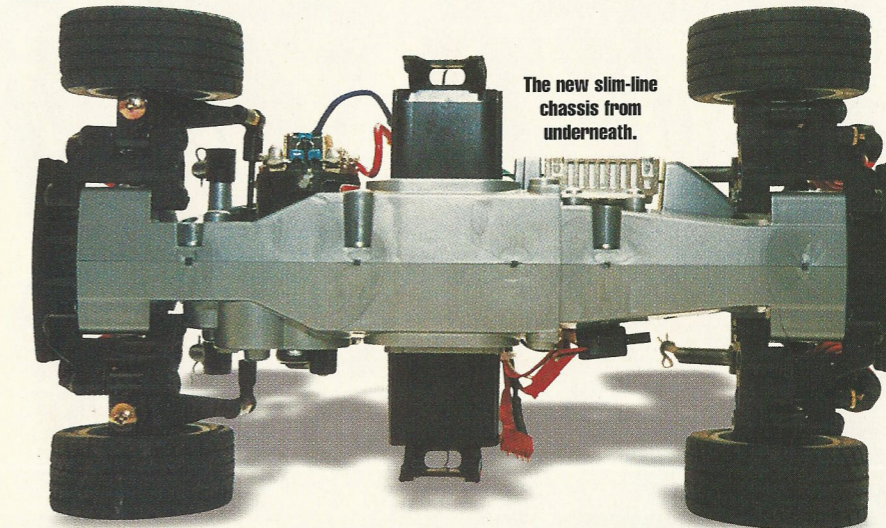
## Track Time

No matter how nice a car is, how good it looks, how perfectly it fits together, or how magnificent are the instructions, the most important thing is how does it go and what's it like to drive!

Well, at Bedworth on its first outing, Ishy's M-03 was very impressive. On Type A tyres, in torrential conditions, it looked superb and took TQ with apparent ease. Eurocup racer Mark Wendon was so impressed that he ordered one right away! Two weeks later, in similar conditions at West London on the first day of the Eurocup Finals, the M-03 again went well. This time, however, in a straight fight, Rob just managed to beat it with the Dave Elliott S-grip shod Mazda. Early experience, therefore, indicates that the M-03 is very, very good, particularly when it is very wet, but it is not unbeatable.

I expected the M-03 to be at its most competitive in the dry, but in fact it seems to be at its best when it is wet. It's early days yet though - there's a lot of sorting and tyre testing still to be done.

I drove the review car for the first time at West London after the Eurocup Finals. The track was dry for the test and the car was fitted with the kit tyres and an 18 turn Eurostock motor. What a delight! After just one lap I had total confidence in the car and could throw it around at full speed. I have to say, this is one of the easiest cars that I have ever driven. What I particularly liked was the ability to adjust its position on the track even at high



The new slim-line chassis from underneath.

speed without either the front or rear end trying to get away. On the kit tyres it understeers a bit, probably too much to be super competitive, but this makes the car very easy to drive - ideal for the novice. What it will be like in the dry on Super Slicks or Type A's I cannot say - as I said, there's a lot of sorting and tyre testing still to be done! There is no doubt that the suspension is much better than that of the previous cars and on the track the car is considerably more stable.

Both Ben Elliott and Rob had some laps with the car. Rob felt that it needed better tyres and a bit of chassis tuning to be competitive with the best of the Mazdas, whilst Ben reckoned that with some work it could potentially be half a lap quicker than previous cars.

## Conclusions

There is no doubt that this is a very good car that will be competitive in the wet and the dry. On paper it looks as though it should render the previous cars obsolete, but I think it may be a closer contest than many imagine. I feel sure that many M-chassis racers will arm themselves with one of these and a Mazda, and then choose the most competitive car on the day.

Thank you for this one Peter E - I can't wait to race it! **RRCI**

For me, Minis just have to be red and white



'the body is a quite beautiful moulding'

## Special Tuning

Because this car looked so promising for racing, I also treated it to the following hop-ups:

- 53267 TA03 Ball Differential
- 53155 Low Friction Aluminium Damper Set (2 packets)
- 53163 On-Road Tuned Spring Set
- 53255 M-chassis 60D Inner Sponge, Hard
- 53340 M-chassis 60D Reinforced Tyres Type A (2 packets)
- 53341 Mini Cooper Reinforced Wheels (2 packets)
- Sealed Ball Bearing Set (12 x 1150 and 2 x 850)

If you merely wish to thrash the car round your local parking lot, these hop-ups really aren't necessary, but if you are a serious racer you should be prepared to part with some readies! Take a deep breath though, as these parts in total will cost you more than the car!

## Quick Spec

1:10th scale FWD electric M-chassis car with independent suspension. Supplied with 540 type motor and mechanical speed controller. Requires 2-channel radio, 2 servos, battery and charger to operate.

## Tester's Gear:

- Futaba FF3 radio
- Futaba FP-R103F receiver
- Futaba FP-S148 throttle servo
- Futaba FP-S148 steering servo
- Infinity 1700 SCR's

## Likes:

- Chassis and Suspension
- Steering
- Handling
- Window masks and protective film
- Excellent instructions

## Dislikes:

- Battery retainer
- No oil-filled dampers

