

John Cundell has been let loose with RCMC's example of Kyosho's M3 BMW

From the early days of rail car racing at 1:32 scale, through slot and then flat tracks, buggies, stock cars and rally cross, in general terms the scale has increased – or decreased, however you care to look at it; and in the States we have even seen 1:4 and 1:3 scale radio controlled cars. The problem with rail and slot cars was of course that a special track had to be built, which tended to restrict their spread until *Scalextric* came to the rescue, but when all is said and done, you do not have the ultimate control of the car. Radio control was the answer, but radio sets were relatively large, so correspondingly were the cars. And whilst a special track does not have to be constructed, for real excitement one does need a fairly large outdoor space or hall for successful racing – and that again can be a restriction. What was obviously needed was a small car that could be operated in small areas and we all know now the result, *Tamiya's* 'Tamtech.'

Now quite likely there are many clubs and groups running 'Tamtechs' and no doubt successfully too. However in this reviewer's personal opinion, *Tamiya* went just that little bit too far with the scale of the design, 1:24, making the car still too large to operate on a table top, yet too small for the average hall.

So have *Kyosho* come up with the answer in their range, two cars at the moment at the larger 1:20th scale? Perhaps yes, with one or two important provisos mentioned later. What this scale does allow is design of the car to follow current 'normal' practice with gearbox and full suspension. There is still not enough room for any 'normal' sized receiver and electronics, so one requires the micro receiver/speed control unit and servo developed by *Futaba* and originally used in the 'Tamtechs.' In fact the unit I installed in the review car was borrowed from my 'Tamtech' and this did give rise to just

one minor problem, but more on that later.

The cars

As mentioned earlier there are two bodyshells currently available on a common chassis. They are the Mercedes-Benz 190E and the BMW M3, the latter currently doing very well in the Touring Car Championships, driven by amongst others, Mike Smith. The wheelbase is 130mm or just over 5in. by 110mm (4 3/8in.) wide.

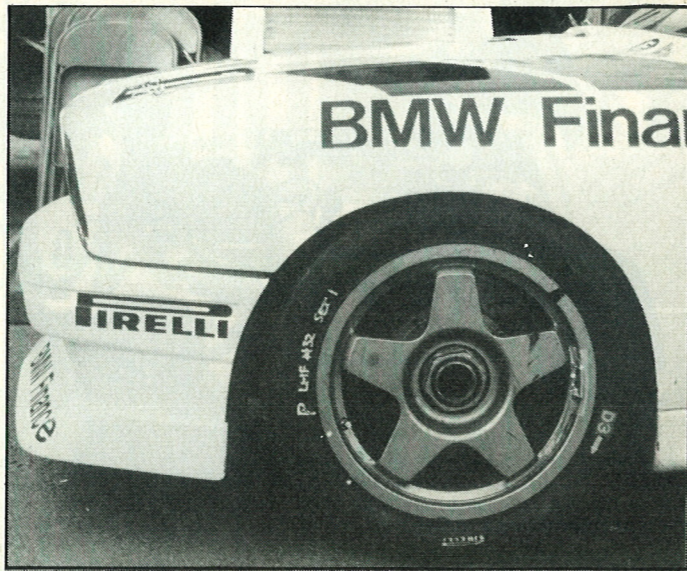
The motor is one of the small *Le Mans* DM20 types and derives its power from a 7.2 volt, 270mAh Ni-cad pack. A suitable charger is available. Tyres are beautifully moulded and cut and the bodyshell and driver compartment moulding are in Lexan.

Construction

The building procedure is very similar to that required for any other typical radio control car. The rear-mounted gearbox is the first item to be assembled, after making up the differential, a little fiddly at this scale, but not at all difficult, followed by insertion of the diminutive metal drive dog cups and then the motor with pinion. Only one pinion is supplied, although presumably other ratios will become available from the distributors, *Ripmax*, in due course.

The rear suspension is added, bottom 'A' frame and non-adjustable top arm (so rear camber cannot be altered), with damper fitting between bottom 'A' frame and a suitable mounting point on an aluminium bracket which is screwed to the front of the gearbox. The mounting point for the damper on the 'A' frame can be changed, although we opted for the stiffest set up, and even at that, the rear of the car has very little ground clearance.

The whole rear assembly fixes to a full length aluminium chassis, which also carries the battery pack, receiver and



servo. It's all very tight and compact but it all fits without any problems.

The front end consists of a bottom trailing arm, swivel block and top arm. Again there is no provision for adjusting the camber, but if you really wanted to do that, it would be possible to extend the hole in the forward aluminium mounting bracket to achieve this. The same comment goes for the dampers.

The latter are exquisite little units and do not use oil! That was popular with the wife! Damping is effected by slipping two tiny neoprene rings on the piston rod before assembly and then the whole unit, made from aluminium, screws together. The dampers are fixed to the chassis with screws, plastic nuts and at the

front end, very fiddly circlips which need deft handling. No spares are provided in the kit so don't lose any! (I dropped one on the grass! You can imagine the language!).

Electrickery

If you follow the instructions, there will be no problem with installation of the R/C equipment. An aside here on the instructions. They follow the normal format, although my copy did not have any English translation at all, except for identification of the pack numbers, but this certainly did not cause any problems and by the time the kit becomes generally available in the shops, presumably an English version will be included. But back to the electronics.

We did have one slight problem in transferring the gear from the 'Tamtech', which probably will not occur if you purchase the radio separately for this car. The unit incorporates a tiny microswitch which is built into the 'Tamtech' car and which is operated by a specially manufactured rotary switch, which is an integral part of the 'Tamtech' chassis. The *Kyosho* instructions show a box into which this switch can be inserted to turn it into a 'normal' on-off slide switch. Presumably this box comes with the radio gear. One can hardly expect *Kyosho* to supply this box for those who transfer the gear from a 'Tamtech', but it would be a nice touch!

The switch is intended to be mounted just behind the nearside front wheel underneath the top plastic cover which houses the servo and receiver unit. One could fit a small slide switch by cutting the wire and soldering, but this is not an easy task. I found that the micro switch could be wedged between the switch mounting bracket on the upper tray and the side of the steering servo and then held in place by a scrap piece of plastic cut to accept the rectangular shape of the micro switch and stuck to the side of the servo with double-sided adhesive tape. With this arrangement, the switch is permanently 'on', but this is not a problem as the layout of the wiring harness can be so arranged that it is a simple matter to use the battery plug and socket as the 'on-off' switch.

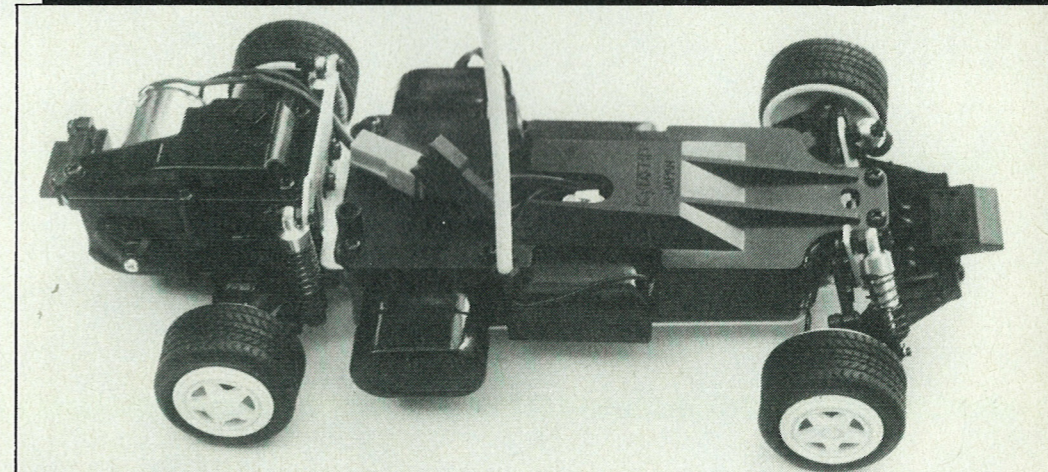
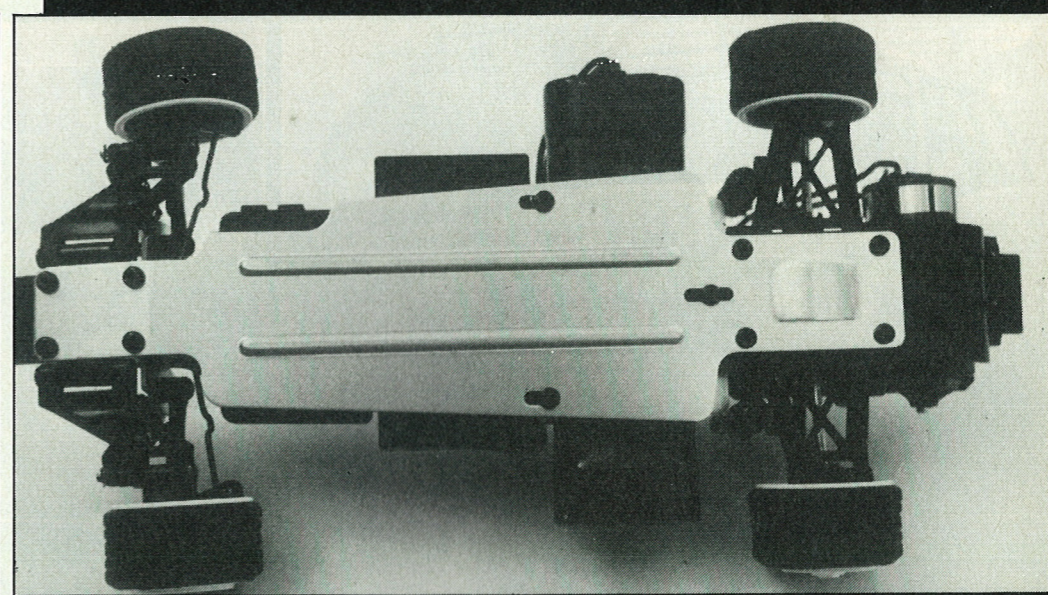
Final bits

The tyres are fitted to the wheels and whilst *Kyosho* recommend that they need to be fixed with Superglue, I have not found this necessary.

The bodyshell and the driver compartment tray were painted in the normal manner and we elected to go for the Mike Smith look – not though with the bent front-end complete with BBC TV camera, which was the result of his last Silverstone outing! The car also features working headlights which is a nice touch.

On the track

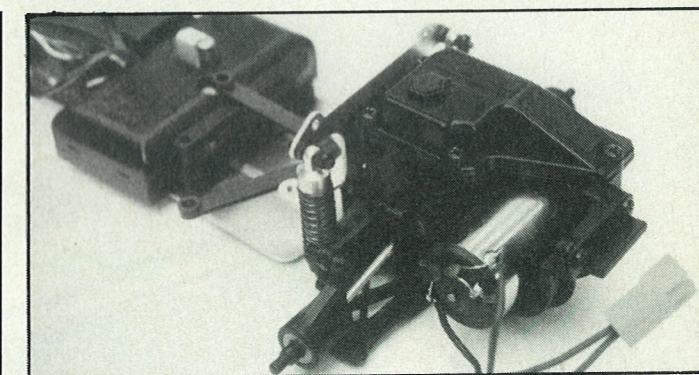
I couldn't resist a quick try as soon as the car was finished and the only area available was a very slippery tiled kitchen floor. The tyres gripped superbly and turning circle is about 3ft; offering potential for the bigger area.



Top: flat aluminium chassis has 'ribs' for strength. Above: a little tricky but once installed the radio equipment looks neat. Below: rear suspension and motor placement.

On our club's carpet, the BMW was great fun. It handles well with neither over or understeering tendencies. The major problem is the lack of speed. I suppose in scale terms the car is doing around 40 to 45mph, hardly racing car speeds. Also, as we said earlier, there are no other pinions provided and it is doubtful that the motor would have enough power to drive a higher ratio anyway. By the way, at this level of performance, the cell pack lasted nearly ten minutes, so there is obviously something in hand.

A presumably 'hotter' motor is shown in the instructions, however, we have not yet had the opportunity to try this. Until one arrives, we will try to fit the 'Tamtech' black motor and this should give the opportunity to



fit some of the different sized pinions available as 'Tamtech' spares.

Despite the above comments, we still feel that the scale is about right and certainly if a bit more performance can be

obtained, which will give the car much needed 'drivability', then *Kyosho* could have a great new class.

Importers/distributors are *Ripmax* and the recommended retail price is £79.95.

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