

Model Racing Products PRO 120X

by Nigel Heighton

THE PRO 120X IS RACED with some success in the USA. The factory — situated high up on the western side of America — produces a line-up of kits from a basic GP12 rolling chassis, an unassembled complete kit, an assembled complete kit, ditto with radio installed and transmitter, and, out to the top of the line, model, the PRO 120X. The basic parts are common to all models in the range. The kit comes complete with batteries, speed controller, re-wound motor and differential, but excluding the charging cord and body. Body choice is very comprehensive including TOJ, BMW, TR7 and Lotus Esprite in both ready painted or clear lexan finishes and these are already available on the UK market. MRP's latest bodies are the Busch Hogan and the Frissbee — both GTs.

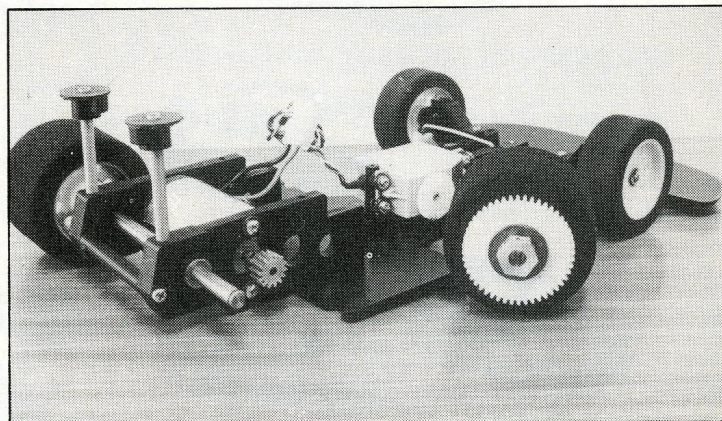
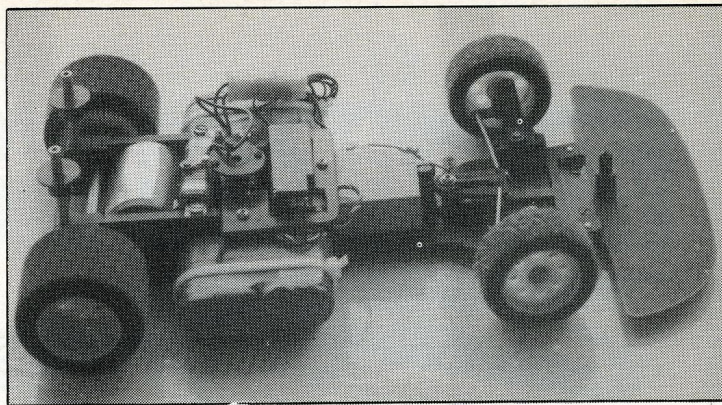
In order to reduce the building time I selected a ready painted body and was impressed with the quality of finish. It is worth the extra money just to save covering yourself in spray paint . . . and also it does not chip off the body as some paints have been known to do.

The kit consists of a black injection moulded chassis with a pre-formed angled platform at the front to take the axle units. These are made up by using metal kingpins moulded into the end of the lower arm, on to which the stub axle unit is fitted before fixing the top support from the kingpins back to the lower arm. Two self-tapping screws hold each side in place. Also moulded into the chassis is a central strengthening rib, the servo saver mounting and the steering servo fixing points.

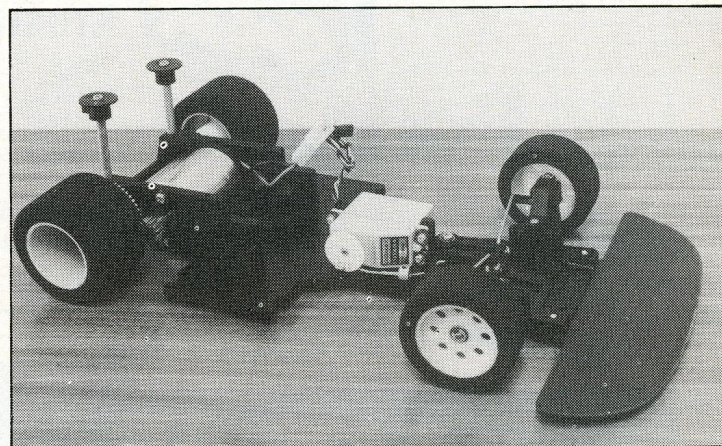
On checking the mounting points I found that the Futaba 17M servos I normally use were too large, but as luck would have it, I also own one 16M which fitted exactly. This prompted me to re-think my whole servo situation, and after comparing the new miniatures with the 16 and 17s, I invested in a pair of them (I now know how the 1/16th scale cars manage to get everything under their bodies) MRP even include a plate for use in conjunction with the mini-servos so the standard steering mountings can still be used.

The rear bearing blocks are also moulded and retained by self-tapping screws to the chassis. A tie bar at the rear keeps the blocks rigid and in line. The body support tubes, which have friction fit moulded body rests slid on them, fit into a pair of pre-formed holes in the bearing blocks. The standard bearings are plain, but ballraces are an option and were used. The rear axle can be either solid or differential. To revert to a solid axle set up the diff. adapter block grub screw is released and

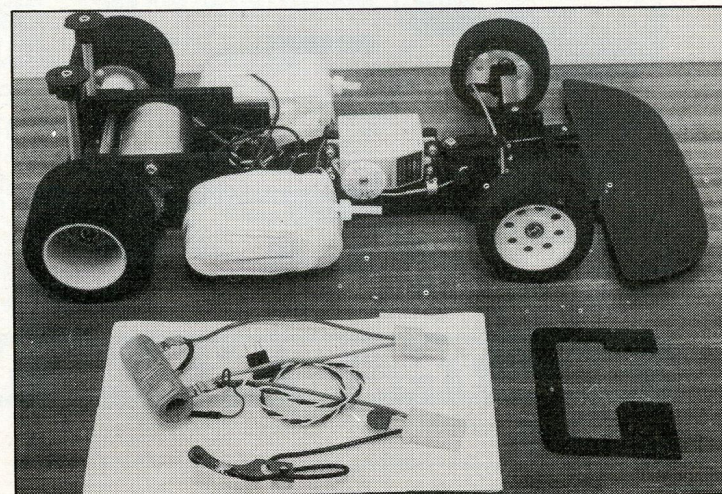
The completed car wheels siliconed ready for its test runs.



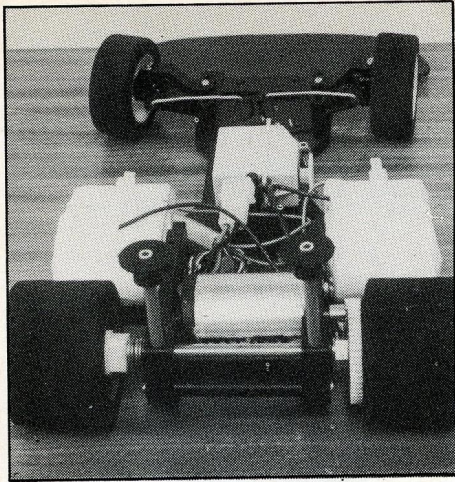
Shows rear assembly and gear arrangements — note circlip wheel fixing.



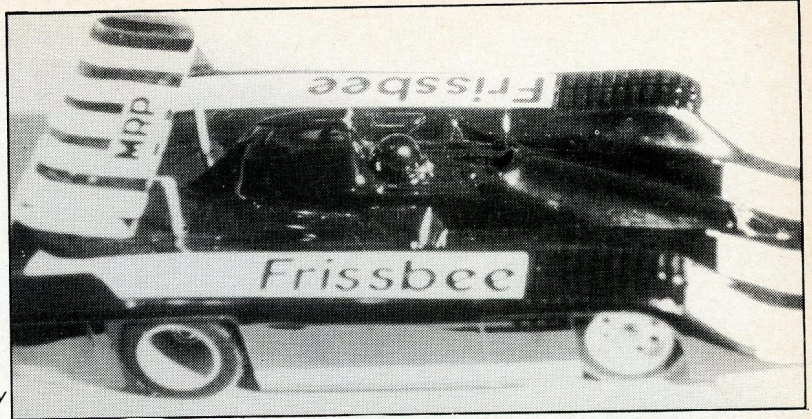
Rolling chassis. Small Futaba 16M servo in place to handle steering.



Nicads added. Ceramic resistor speed controller parts laid out in front. All plugs and sockets provided.



Rear view prior to installation of speed controller.



Car with Frisbee bodyshell in place. Distinctive if not very beautiful.

the diff unit slides off the axle. An alternative gear is fitted and a replacement rear wheel (using the MRP square drive flange as per their 1/8th scale cars). The diff adapter block is made of aluminium on to which a ballraced gear is fitted with a large washer each side. Next a bored out wheel is fitted and then another ball race with washers and a large nut to clamp the lot together. Tightening the nut up until the engine on maximum output cannot slip the ball races, gives the maximum free diff available. More pressure makes the diff stiffer, thus a variety of settings are possible.

The front wheels, which can be fitted with ballraces or phosphor bronze bearings, are held in place by circlips. The servo saver spring action relies on the elasticity of the central pivot arm within the track rod linkage connection plate. By cutting away a portion of the arm it can be adjusted to provide a weaker spring action for weaker servos.

The speed controller is a ceramic wire wound resistor which is fixed to the rear blocks by a bracket, using pre-drilled pick up holes. A separate tray is attached to the front of the bearing blocks and this stretches forward as far as the steering servo's rear mounting post, which doubles as the third mounting point for the tray. The speed control servo fits into one of the pre-cut holes — the mini servo fits exactly — and the receiver into the other.

The wiring instructions are very comprehensive with, instead of a wiring diagram, pictorial step-by-step instructions for the benefit of builders who might not understand diagrams. The kit included all the wire, heat shrink tubing, sleeving and even a diode to enable separate servo/receiver batteries to be omitted. The six cells are soon wired up, providing all the connections are properly tinned prior to soldering up. Once again simple clear instructions are given on how to solder and make correct joints for the novice user. The cells fit three each side on the chassis outboard of the rear bearing blocks, and are held in place with cable ties. The car is now ready to accept the TOJ BMW body in preparation for a test drive. I also sprayed the Frisbee and Busch Hogan bodies with disastrous effects on my shoes. I enjoy working out the colour schemes and painting my own bodies when I have time to spare . . . unfortunately there seems to be less and less of this so the ready painted option appeals more and more.

After a short test run at home in the limited space available a visit to the local circuit on

the next club night followed. As the lap counter was u/s practice heats of eight minutes were arranged. Most drivers were using their time for experiment so that no clear winners or losers appeared. For the first heat the trim on the steering was adjusted and car, bog standard, was brought to the line and as the flag dropped was away. After a couple of laps I could not believe the grip the car had, it just stuck to the track, perhaps just a fraction too quick on the steering after a 270° left hand corner as I fed on the right for 60° righthander as I was closer to the inside edge than I wanted. Otherwise the car handled on the rest of the track just as I would have set it up myself. With mounting confidence I really indulged in throwing it about harder than in normal racing just to see how far it could be pushed. Eventually the "plastic plates" on the corners were hit but the car sustained no damage.

By the end of the evening the grip was failing, however, this turned out to be the

silicon ribber starting to wear off the outer edges of the front wheels. A softer compound tyre may solve this problem as the standard tyres provided are harder than most competitors use in the UK for indoor racing. Further inspection also showed that a large washer was required on the servo saver screw to retain the two halves, but, all in all, a very satisfactory shakedown. A few days later a MRP custom wound ballraced motor (Type 553) was tried in a "back to back" test with the kit motor. It was just like the day I fitted a tuned pipe to my 1/8 scale car for the first time, with bags of get up and go. However, it has yet to be raced.

As mentioned earlier MRP bodies and now motors are readily available in the UK and some of the main model car stockists are carrying the car, so keep your eyes open and you should see one in the flesh (metal?) or if you want something a little different buy one of your own — you won't be disappointed.

Assembly Drawing

