

COMPETITION 1/8TH SCALE circuit racing is undoubtedly *the* prestige sport of the R/C car hobby although by no means the most popular. Nevertheless, this type of racing is virtually a direct reflection of full-size Formula 1 Grand Prix racing, top drivers are sponsored to drive a particular make of car, chassis design technology is every bit as complicated and 'works' backup for the 'team' is almost as comprehensive.

So it is that the introduction of a new chassis design onto the R/C car Market is afforded the same sort of reception in our world as the unveiling of the latest *Brabham*, *Lotus* or *Ferrari* does in Formula 1. Even more so when that product is backed up by a racing pedigree second to none and a list of major wins as long as the Southampton straight. The 'Nova', *PB Racing Products* latest creation, can lay claim to such a boast and on past reputation alone looks set to be a winner, still the proof of the pudding may be sometime coming as the racing season is still in its early stages.

The 'Nova' chassis uses many of the components featured on the 'Alpha 82' and 'GP' models. Suspension bulkheads wishbones and many other

PB racing products Nova

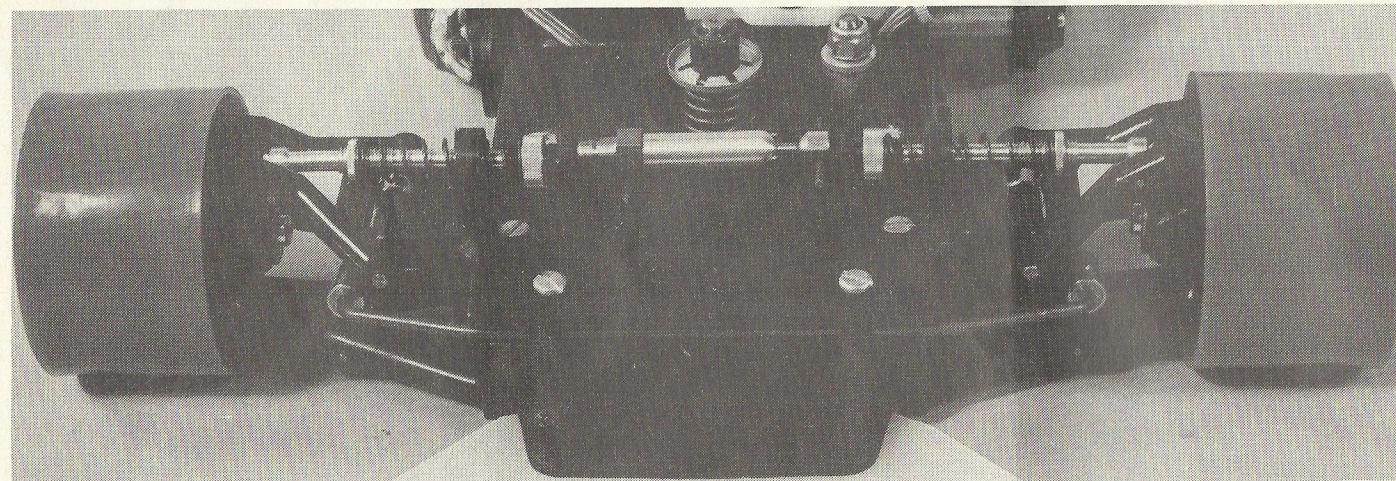
'Model Cars' takes a look at the hottest property in 1/8th scale circuit racing

moulded parts are the same but are dyed black instead of red, only the wheel hubs have remained scarlet, the impression of red wheels around the circuit is something *PB* would like to retain.

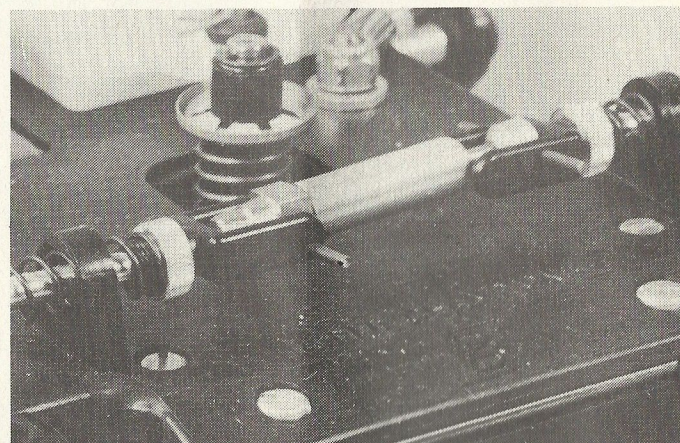
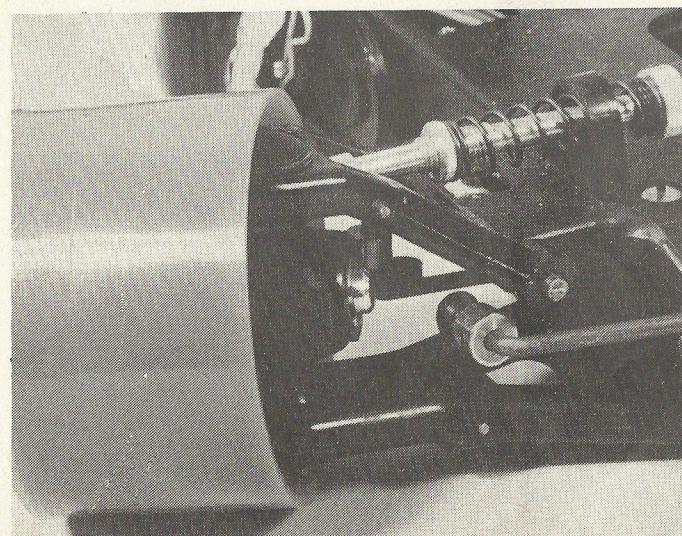
In contrast the main chassis and front end are total departures from *PB*'s previous cars as the conventional chassis and shaker plate layout has been discarded in favour of a one piece alloy tube. This tube (or

monocoque as it is wrongly described) forms the centre chassis section onto and into which the front and rear ends are fixed. What this type of layout gives you is total chassis rigidity and a firm base from which the suspension can work.

The only drawback to this is that, 'give' or 'flex' under impact is not allowed for and if a hefty wallop is encountered the chassis could bend and remain bent. Having said that the

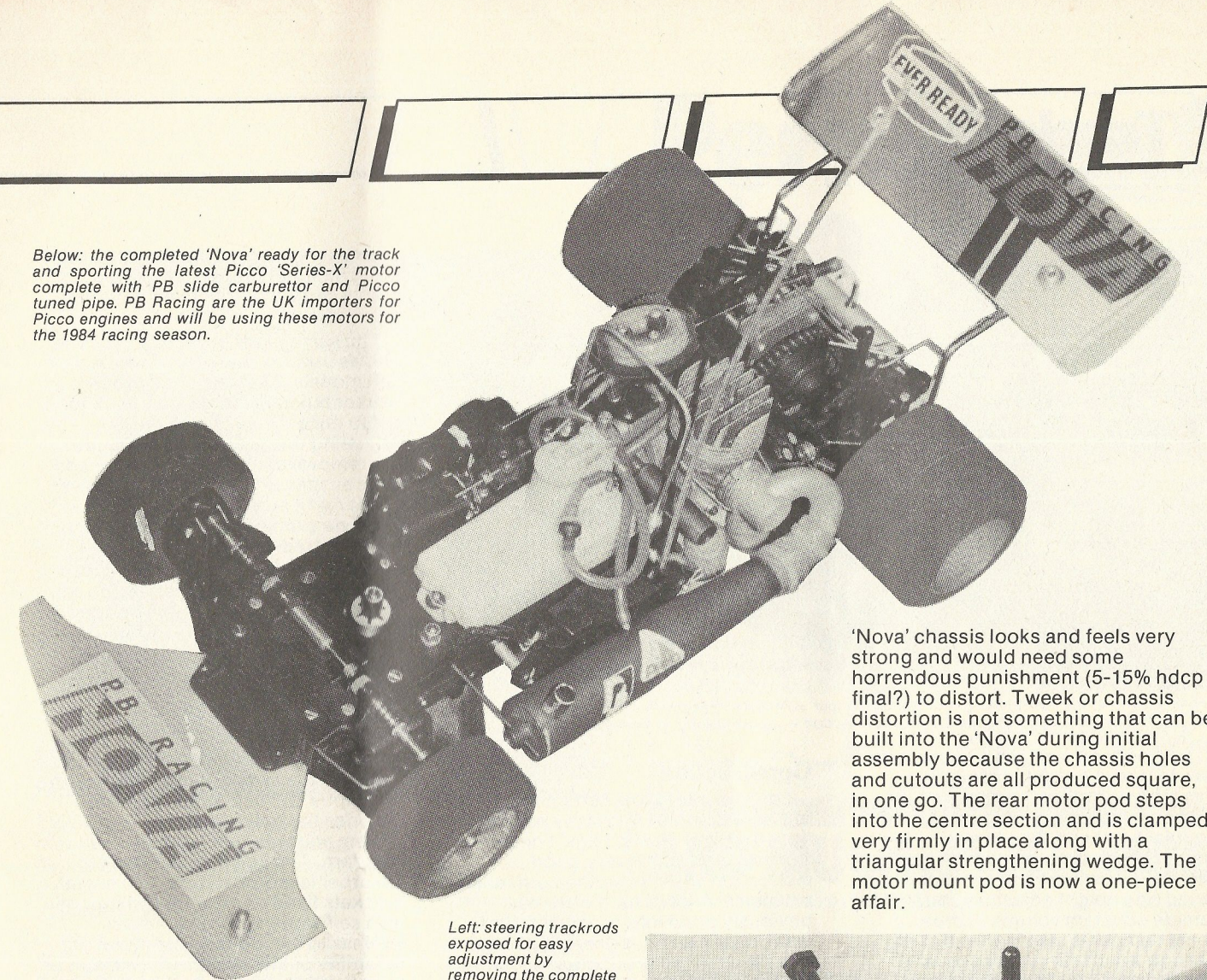


Above: the 'Nova' front-end features a 'plug-in' bulkhead moulding with built-in wishbone suspension mountings and front damper guides. The front, anti-roll bar can be adjusted to give stiffer or more flexible operation. The monoshock damper is a constant volume unit coupled to coil-spring ride height adjusters.



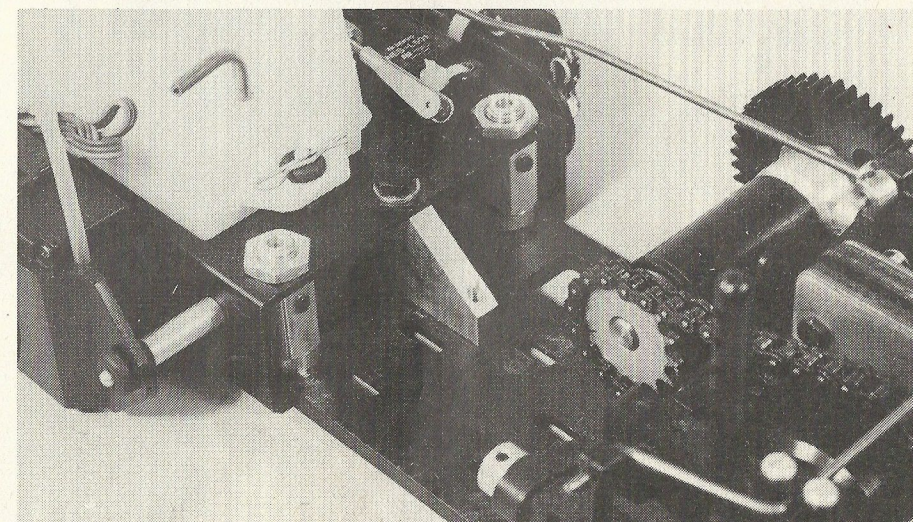
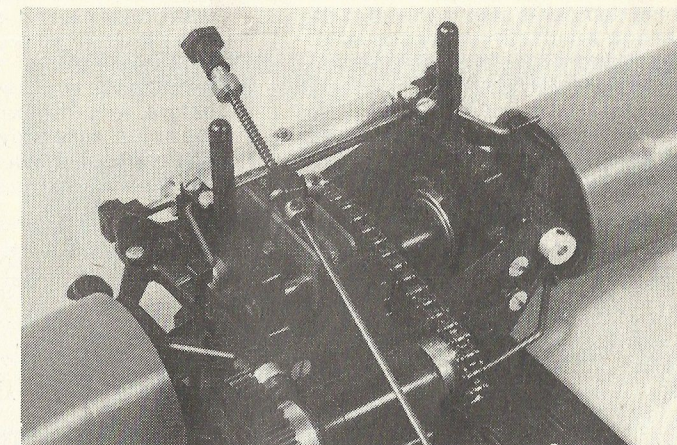
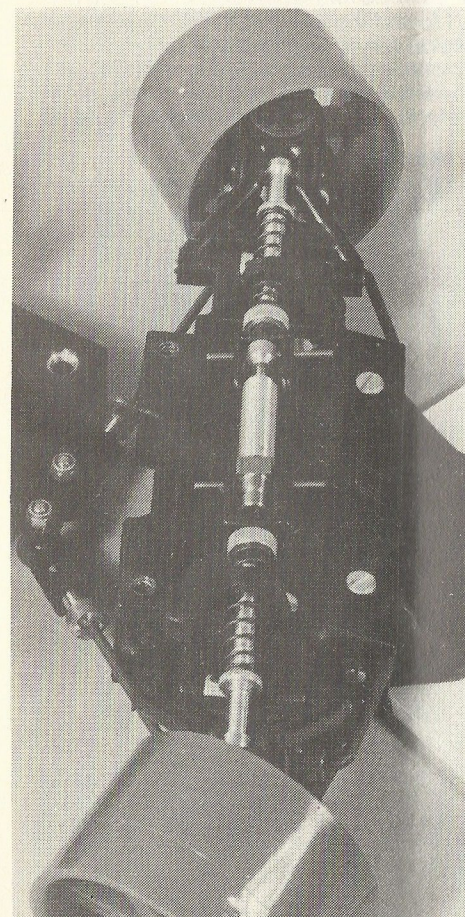
Left: close-up of the coil-springing system the outboard springs provide the ride height, the inboard springs the suspension return. Above: close-up of the front mono-shock. Easy to remove and maintain with very direct and linear action.

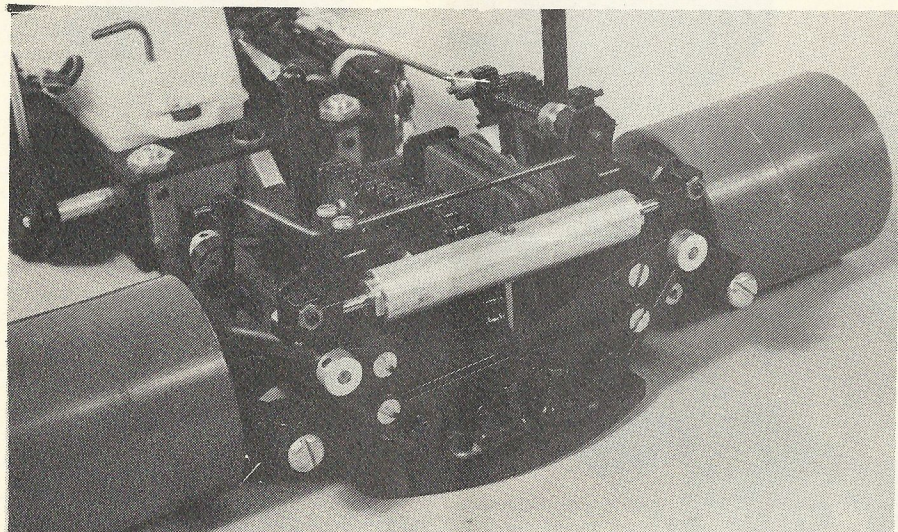
Below: the completed 'Nova' ready for the track and sporting the latest Picco 'Series-X' motor complete with *PB* slide carburettor and Picco tuned pipe. *PB Racing* are the UK importers for Picco engines and will be using these motors for the 1984 racing season.



'Nova' chassis looks and feels very strong and would need some horrendous punishment (5-15% hdcp final?) to distort. Tweek or chassis distortion is not something that can be built into the 'Nova' during initial assembly because the chassis holes and cutouts are all produced square, in one go. The rear motor pod steps into the centre section and is clamped very firmly in place along with a triangular strengthening wedge. The motor mount pod is now a one-piece affair.

Left: steering trackrods exposed for easy adjustment by removing the complete front-end system. Four screws retain the moulding into the chassis tube. Right: the completed rear end features a twin-disc style brake to give smoother and more positive braking action. Below right: the rear motor pod also steps into the main chassis tube to be retained by two support pillars and an alloy strengthening wedge. The motor pad is drilled to accept the usual style engine mountings plus the latest Picco base-mounting motor.





Above: the 'Nova' rear-end showing dual-action damper. By removing the central locking pin the shock is changed to mono-shock operation. Single shock action is accomplished by re-installing the pin.

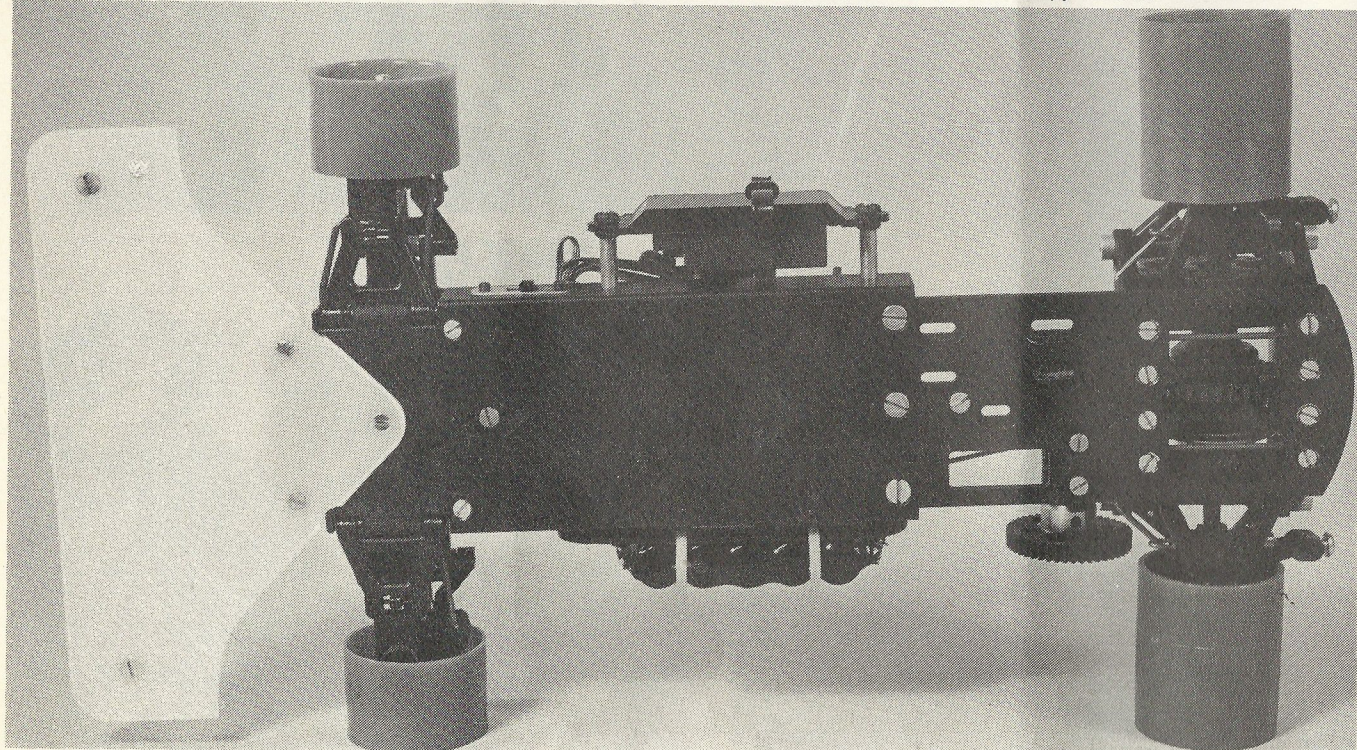
The front end features a completely new, two-part bulkhead moulding. This also plugs into the chassis tube and can almost be described as a modular front end. The front suspension system is also changed, exit the torsion bars and enter coil spring ride height adjusters coupled to a single constant volume damper. A single damper is also featured at the rear end which cunningly converts from mono-shock to single shock action by simply removing the locking rod. The double action damper gives you two choices of configuration to suit your driving characteristics on different circuits.

Construction

I must confess to a certain amount of trepidation as I thrust my hand into the box full of plastic bags. I need not have worried as the very good instruction sheet smoothed out most problems. A lot of hard work has obviously gone into producing these instructions and it is gratifying to see this aspect of kit production becoming improved.

For those who have built PB cars before, very little will seem different in the actual assembly. As mentioned earlier producing a square 'untweaked' chassis is not a problem

The chassis underside of the 'Nova' has been produced to give a totally flat surface to eliminate any bottoming out on bumpy surfaces.



as everything bolts together true. As construction progressed various points came to light giving different impressions.

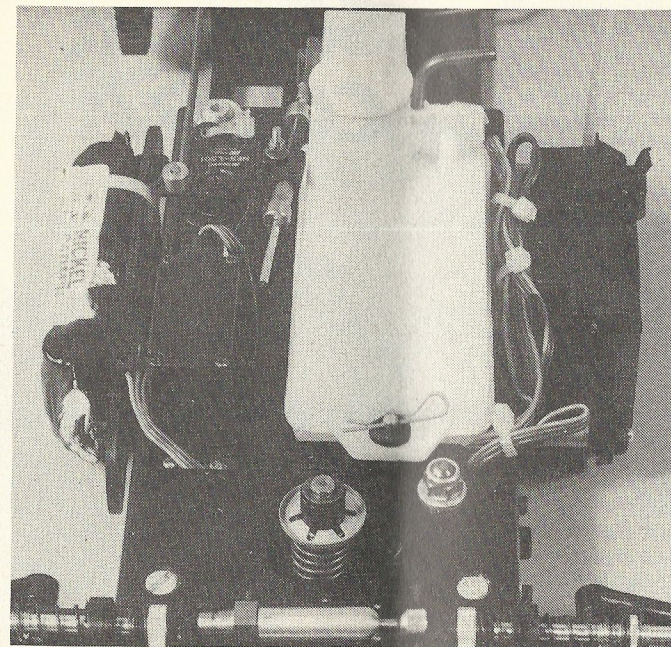
The servo saver is exactly the same unit as used by the 'Alpha' and 'Alpha GP' models. This unit is a proven worker but to my mind is difficult to get to once installed into the car. Adjusting the servo linkage requires the removal of the steering servo and front suspension mounting. However if you make sure it is right in the first place no problems should be encountered.

The front bumper steps into a wedge shaped groove in the chassis bottom, producing a totally smooth bottom.

Radio installation is in my view an excellently produced system. Both receiver and receiver Ni-Cad are flexibly mounted onto the main chassis and are easy to get to for removal and maintenance.

Moving onto the rear-end, this is basically the same unit as featured on the 'Alpha GP' car, although now includes the quick-wheel change system and twin disc brake as standard. The convertible shock absorber is mounted onto two angle brackets fixed to the upper wishbones with self-tapping screws. I must confess to feeling dubious about the reliability of this system in the event of a rear-end shunt.

I found the basic construction of the 'Nova' very straightforward and involving. PB also supply a setting-up sheet full of methods to get the best from the car in a variety of situations.

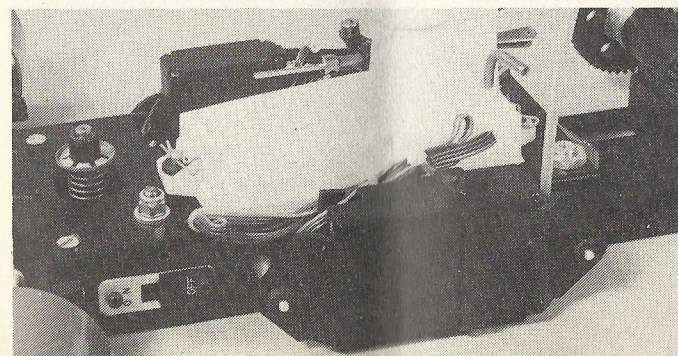


Taking the view that the designer/racer knows best I followed these points to the letter ready for the first outing.

Conclusion

Producing accurate 'Track Tests' of R/C cars and sophisticated 1/8th scale suspension cars in particular, is an almost impossible task. Quite simply it is impossible to quantify the performance of an R/C model car in accurate, technical terms. However if proof of the pudding is needed then results gained and opinions expressed by actual drivers should point the way. In this respect the PB 'Nova' is already coming out tops. Wins in National BRCA competition include Saloon and Sports/GT at Southampton and Saloon at Tibshelf, not bad for a first outing against established opposition. At lesser levels the 'Nova' has also been warmly received. The cars handling characteristics and tuning adjustments are sufficiently different to cause initial consternation, although experience has reversed the effect. The only bad comments we have heard have come from those who don't actually race 'Nova's'. How strange!

Price £179.50. Manufacturer PB Racing Products, Downley Road, Havant, Hampshire PO9 2NS, England.



Above: the central chassis tube provides the mounting point for all the ancillary equipment. Servo's receiver, Ni-Cad pack and fuel tank. Below: Ever Ready 6V Ni-Cad pack is intended for use with the 'Nova' retention system although other battery packs will fit. If 6v is too much remove one of the cells. Note throttle servo fixed in with tie-wraps. Bottom: receiver fits snugly into a specially moulded carrier which also includes the aerial tube for easy maintenance and crystal changing. Note cut-out for radio switch.