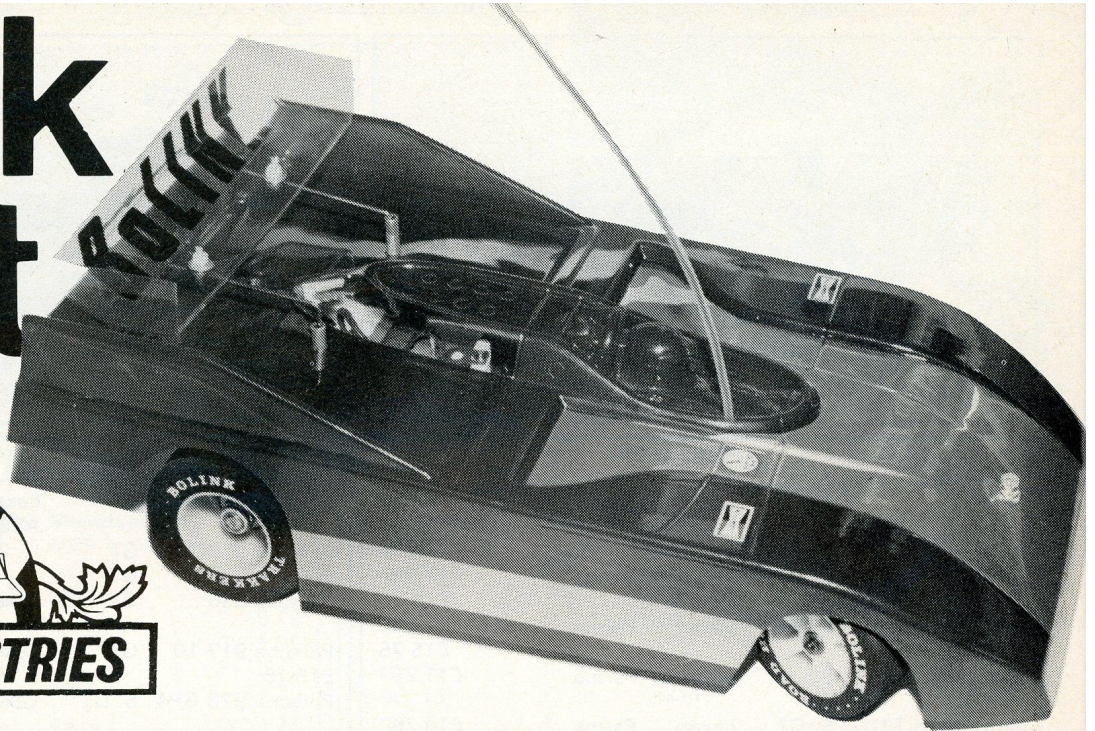


# Track Test

BY  
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# CHALLENGER

THE CHALLENGER — the car with the European connection. The connection is, it is made and designed in Europe — Sweden to be exact, although *Bolink* have added a few of their own modifications. As with many of the top production kits available the "Challenger" employs the simple uncluttered approach to car design and layout. Basically the assembled car comprises two separate units, the chassis and the shaker plate, the shaker plate is easily removeable to facilitate charging and make access to the radio gear easy. The motor mounts and front steering arms and blocks are all made from moulded nylon whilst the chassis is manufactured from .080 thick fibreglass cut and drilled by a computer controlled mill no less! All these

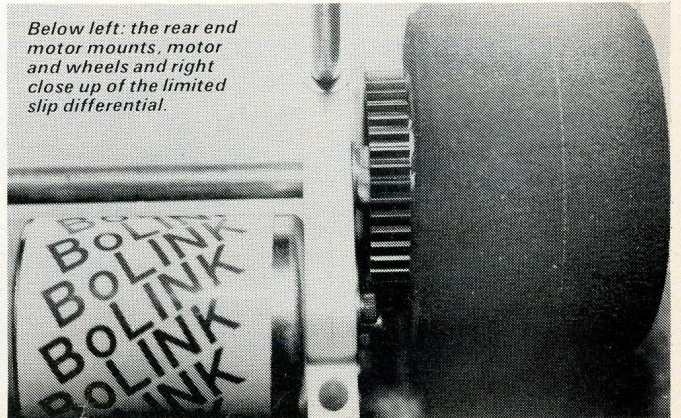
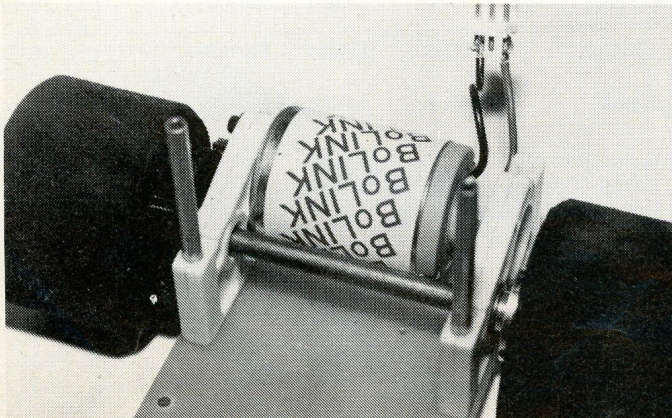
parts are expertly moulded and pre-drilled for the self tapping *Philips* screws used to make assembly a quick and easy affair.

## Assembly

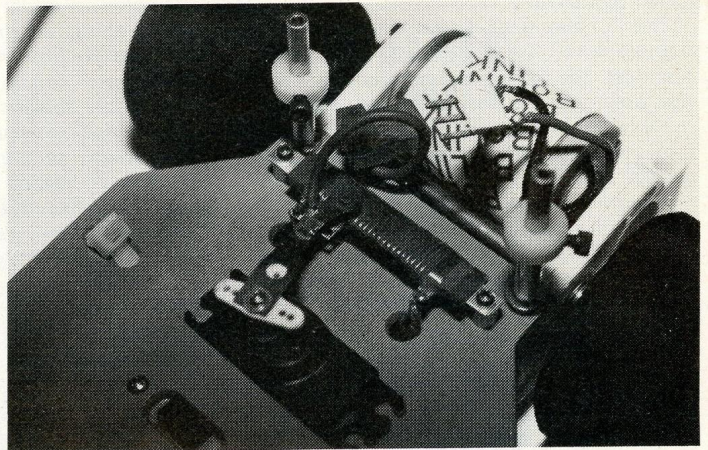
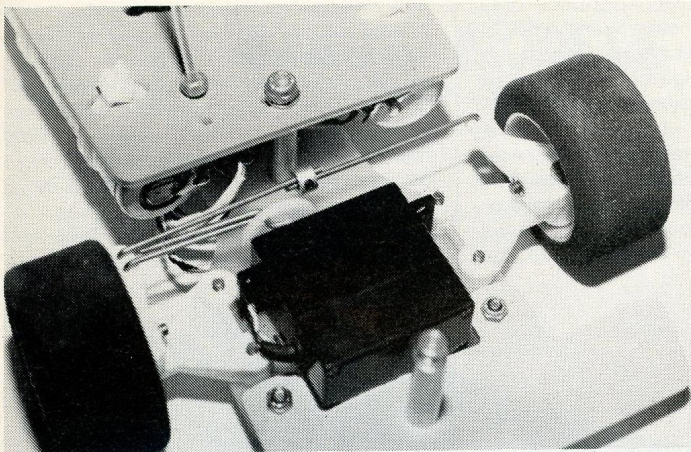
The instructions provided in the kit box were boldly emblazoned with the words "We're sorry, these 'Challenger' instructions are really bad! But . . . we figured it was better than no instructions at all!" After that particular morale booster I was ready for anything, good or bad. Nevertheless, new and better instructions are available by posting off the form supplied, however, I doubt anyone will wait for new instructions to arrive from the USA before they start building; I certainly didn't. The "inadequate" instructions started off with

an exploded diagram of the *Schumacher* limited slip differential followed by another exploded view of the rolling chassis assembly. The flexible G.R.P. chassis has all the holes for the screws pre-drilled and countersunk to make for quick easy assembly. The nylon motor mounts are reversible to allow for mid-engine conversion, and subsequent weight concentration towards the middle of the car. Unfortunately the shaker plate provided would need extensive modifications to make this possible, so the orthodox rear engine layout was perforce chosen. The differential and axle then fit through the two oilite bearings which are set into the motor mounts.

The front end assembly is slightly more



Below left: the rear end motor mounts, motor and wheels and right close up of the limited slip differential.



complicated but presented no problem apart from the fact that I had lost some of the small retaining 'E' clips (*Bolink* please note: can you include a few spares!). The nylon A-arms are screwed to the chassis with hardened steel king pins passed through the top end of the A for the steering blocks to pivot on. Once the king pins had been secured using 'E' clips, the stub axles were passed through the steering blocks and also secured with 'E' clips. Plenty of freedom of movement, or more accurately, 'slop', was allowed for to give a modicum of suspension. The castor can be re-arranged to suit by adding washers under the A-arms to tilt back the king pins. The "Challenger" wheels look as if they can be interchanged with *Associated* wheels which means that *Associated* rear end ball-races can be used instead of the brass bush bearings supplied by *Bolink*. The "hot" modified class motor (their description) was installed, making sure that the mesh between the pinion gear and differential was smooth running and not too tight.

The orange *Kydex* shaker plate, like the chassis, had all the appropriate holes pre-drilled and countersunk with slots cut out for servo and radio switch placement. The two, three cell battery sticks are slung laterally along the outside of the shaker plate held on with tie-wraps, to make sure they would stay put small pieces of servo tape were also applied. When sticking anything to any form of plastic with servo tape (receivers in particular) the surface should

*Above left: the piano wire steering linkage displayed here had two main disadvantages, one being that a 'shunt' or collision tended to bend the rods or misalign them and also without a proper servo saver tight cornering was virtually impossible at speed. Above right: the servo and wiper arm had to be carefully adjusted before full contact between the wiper arm and the resistor could be obtained.*

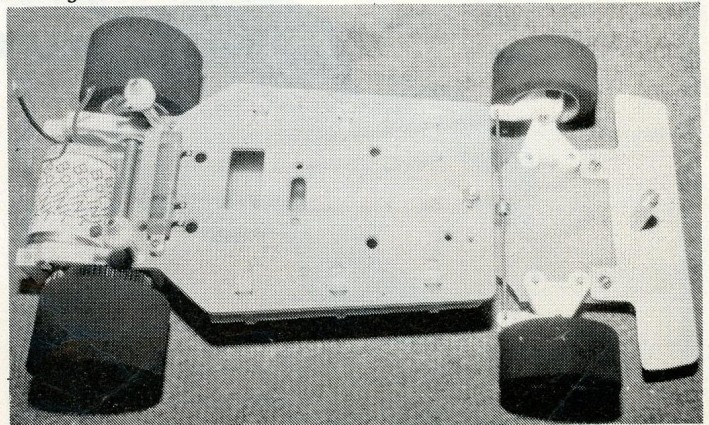
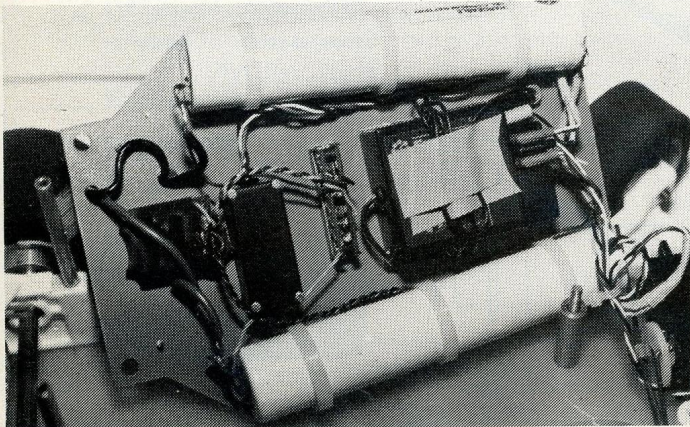
be cleaned with meths (or any good degreasing agent) otherwise the servo tape will lose its adhesion with disastrous results. The servo slot had to be slightly enlarged to accommodate the *Powermax* "Sky-ranger" mini-servo I had chosen to use, the resistor speed controller sits directly behind the servo, contact is made via a wiper arm moved directly by the servo. The receiver is placed at the front of the shaker plate; the steering servo fits in the space between the A-arms facing backwards. Although no servo-saver is supplied with the kit, *Bolink* will provide one free if you fill in the form supplied stating the type of servo being used. For the minute a simple system of rods and adjustable steel collars sufficed. Between the written instructions and the diagrams, the wiring up of the shaker plate was accomplished quite quickly. Instead of using dropping diodes as *Bolink* suggested, I used the six volt regulator designed by Terry Platt (published in *Model Cars* Spring issue), connected between the radio switch and batteries, so that the receiver could be powered directly off

*Below left: shows the undersides of the shaker plate, the wiring was kept as short as possible so that no surplus wire was left. Below right: the Challenger, complete bar radio gear.*

the drive batteries. The shaker plate when fitted to the chassis acts as an adjustment to the amount of flex from the chassis by tightening up or down the front locknut, for this to be effective the rear of the shaker plate must be clamped down firmly on the rear wing tubes otherwise the shaker plate will be lifted up at the back when the front locknut is tightened.

### Running

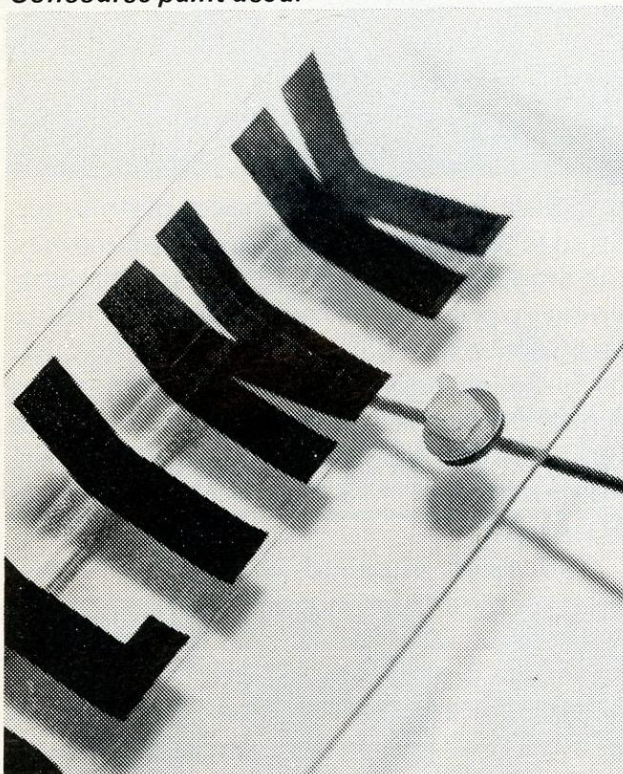
The tyres supplied with the kit were much too hard for indoor use on a wooden gym floor, and were also glued to the wheels. Fortunately, the *Associated* wheels I already had fitted perfectly, so once a new coat of silicone had been applied and then the painted up and trimmed bodyshell fitted, we could see what sort of performance it would turn in. Slight adjustment to the linkages had to be made, this was to be expected though as it takes time and continuous running to get a car 'sorted'. To give a better performance on the slippery wooden floor at the local club, the lock nut on the differential was loosened off to give maximum differential action. After a few charges, using the quick charge cord supplied in the kit, I was beginning to get the feel of the "Challenger" and enjoy the racing, although, as with all car kits, they do go, but it takes time and experimentation to get that little edge over the rest of the pack. Nevertheless the "Challenger" ran smoothly displaying no bad traits, a promise of good things to come.



## Conclusions

The "Challenger", due to its design and manufacture, well deserves its place amongst the other top production cars available, all the kit parts are expertly manufactured (no trimming of the nylon parts was needed) and fit together, a fact which should be taken for granted, although it doesn't always work out that way, unfortunately. The weight of the

*The adjustable aerofoil was assembled, using a tie-wrap looped around the wire and tightened. Left: the completed Challenger Bo-Link Mr. Concourse paint used.*



assembled car is just over two pounds three ounces, about four ounces above the BRCA minimum weight limit. As it stands, the "Challenger" can be lightened fairly easily to meet this specification, drilling out the bumper and shaker plate for instance, indeed many of the top drivers are now resorting to taking their receivers and speed controllers out of their cases to lower the weight. Mini-servos are an obvious method of lightening. Coupled with the

ability to lighten the car is the possibility of adding various "go-faster" goodies such as ball-races and the Servo Saver . . . when it arrives, to name but two examples. No doubt *Bolink* will provide their own modifications in due course. Those instructions seemed perfectly adequate to me or was that what they wanted me to think? I wonder . . .

Available from **Micro-Mold**. Price not available at time of going to press.

