

Track Test

BY
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BOLINK DIGGER 10

PROTOTYPES OF THE 'DIGGER 10' were first seen at the 1982 'Nuremberg Toy Fair'. (see report in *Model Cars* April/May issue). Since then Bob Rule of *Bolink Industries* has gone ahead and produced the final racing version.

The obvious comment to make is that the 'Digger' is basically a scaled up 1/12th scale car with funny wheels on. To a certain extent this is true, 'the Digger 10 uses' many of the parts from the *Bolink* 'Challenger', the only real differences

being the length of the chassis and rear axle to make it up to 1/10th scale. Purists may complain but the fact is that *Bolink* may well have produced a buggy ready to take on the established opposition around the race tracks and beat them.

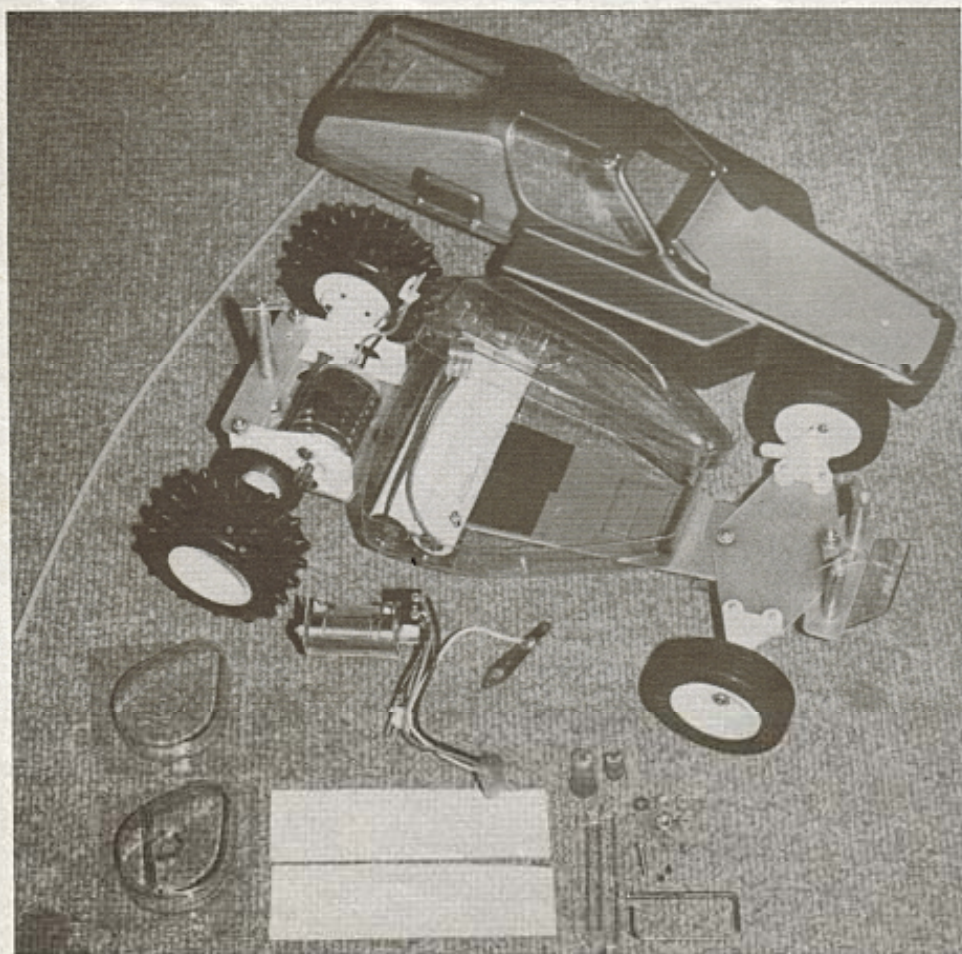
Construction

What can you say about a kit that arrives fully assembled? Well almost; the radio has to be installed, steering linkages sorted out and some waterproofing of the pinion and gear made. Even though the review kit was fully assembled, *Bolink* supply others completely unassembled or minus batteries, motor, etc., which some modellers may already have. Bearing this in mind, it is worthwhile detailing some of the Digger's constructional aspects.

As already mentioned, the 'Digger 10' is basically an elongated *Bolink* 'Challenger' utilising many of the components from that kit. The suspension, however, will for many be a step in the right direction towards simplicity and reliability.

The front suspension takes as its basis a diamond shaped GRP plate mounted independently from the chassis by two bolts. The rear mounting of the suspension plate is on to a flat rubber grommet, whilst the front fixing is mounted on a much longer bolt, complete with spring, this allows the plate to pivot upwards at the rear and be returned via the front spring. The 'Challenger' front axle suspension arms fit underneath the plate to give increased ground clearance, simple, robust and hopefully efficient.

The rear suspension is simpler yet! The



Left: Digger 10 'kit' as supplied by manufacturer. Note specification may not be exactly the same as that supplied by UK distributor Schumacher.



motor mounting blocks are held clear of the chassis with flat rubber grommets. The mounting bolts can be adjusted so as to increase or decrease the amount of 'tilt' either side of the chassis. With a system such as this the car is bound to hop about a bit, particularly at the front, even so, once the wheels are back on the ground there is more chance of them staying there than other buggies whose suspension seems to

act like a tennis ball, bouncing a few times until finally coming to rest.

The rear end also contains the *Bolink* differential again an elongated version of its 1/12th scale counterpart, the steel axle looks strong enough to withstand the punishment encountered on the track but only time will tell. The motor supplied in the kit is fully waterproofed and is mounted normally as one would expect on a

1/12th scale car, which whilst removing the burden of motor/gear boxes also allows some cooling of the motor. The radio crate is simply a polycarbonate box mounted on to the chassis with servo tape, this method allows the chassis to flex without inhibition. The tyres are already mounted on to the wheels and are of the semi-pneumatic variety (added suspension) knobblies at the rear and ribbed for the fronts.

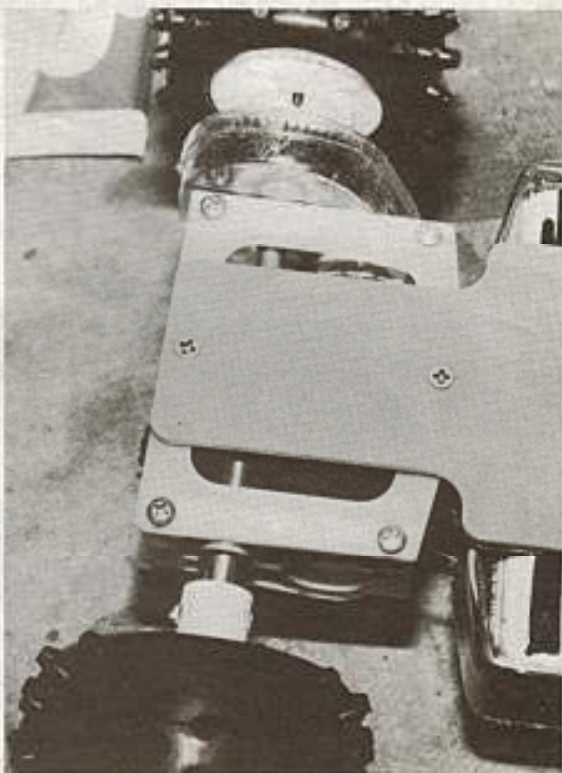
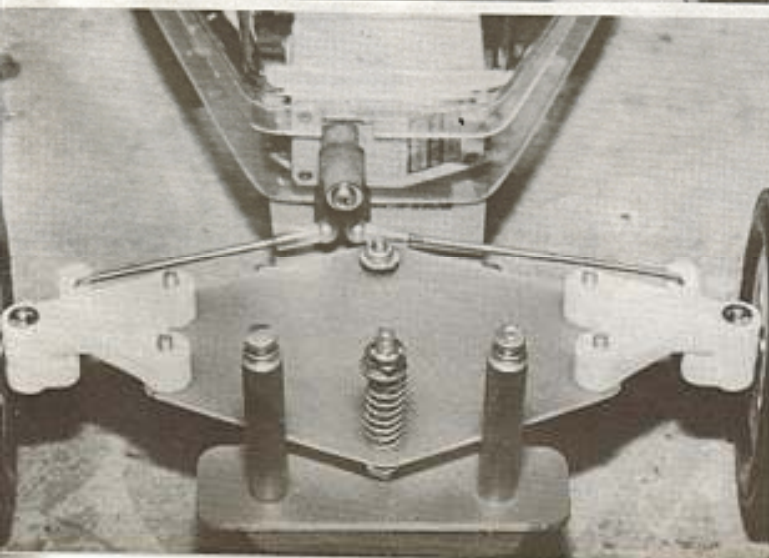
The *actual* building encountered with the review kit was minimal to say the least, but eminently necessary. The motor pinion and differential again an elongated version of water, mud and general filth, with the moulded polycarbonate gear casings supplied in the kit. The two halves, once drilled out, are held together using clear tape to provide a watertight gearbox casing, some use of silicon rubber will be needed to give full protection against water entering. The radio crate also needed some holes cut out of it to take the motor wires switch and steering servo output. Silicon rubber will be needed again to re-waterproof the crate afterwards.

Radio Installation

When installing the radio to the polycarbonate box, it is worthwhile



Left: businesslike front and view of the Digger 10, very simple yet robust front end uses many parts from Bolink's 'Challenger' 1/12th scale circuit racer. Note the underslung steering blocks to increase ground clearance. Below left: topside view of the front end. Glass epoxy swing axle unit is swung and pivoted on two bolts, spring at the end can be adjusted. Below: motor pod at the rear is flexibly mounted using rubber grommets. Note the vacuum formed polycarbonate differential and gear cover.



cleaning all the surfaces to be held together with methylated spirits or similar cleaners, being careful not to use one that will destroy the polycarbonate. The steering servo mounts on to a moulded platform inside the front of the crate, the servo output fitting through the front to the *Bolink* Servo Saver. The steering linkages supplied are extremely easy to adjust but unfortunately are fairly easy to bang out of line. With this in mind, the rods were replaced with straight linkages threaded at one end (you've guessed it — bicycle spokes!) for ball joints.

The speed controller needs hardly any work done on it at all. The resistor, complete with reverse micro-switch and bracket is servo-taped to the servo which in turn is taped to the chassis. The rest of the R/C crate's contents, Ni-Cads, switch and battery eliminator, were fixed in at double quick time in order to get it out of the workshop and running.

On the rough

As usual with newly built kits, impatience gets the better of me, resulting in a quick charge up before rushing out on to the nearby race track. Well, to be honest, the road outside my house (living in a cul-de-sac does have its advantages). The first run with the 'Digger' showed that the differential needed adjusting to suit the concrete surface, once tightened, the car proved itself to be exceptionally quick both on the straight and round the corners, showing no signs of rolling due to the 9 1/2 in. track. Driving outside the house is all very well, but as the 'Digger' is undoubtedly a 'racing' machine it seemed only right to try

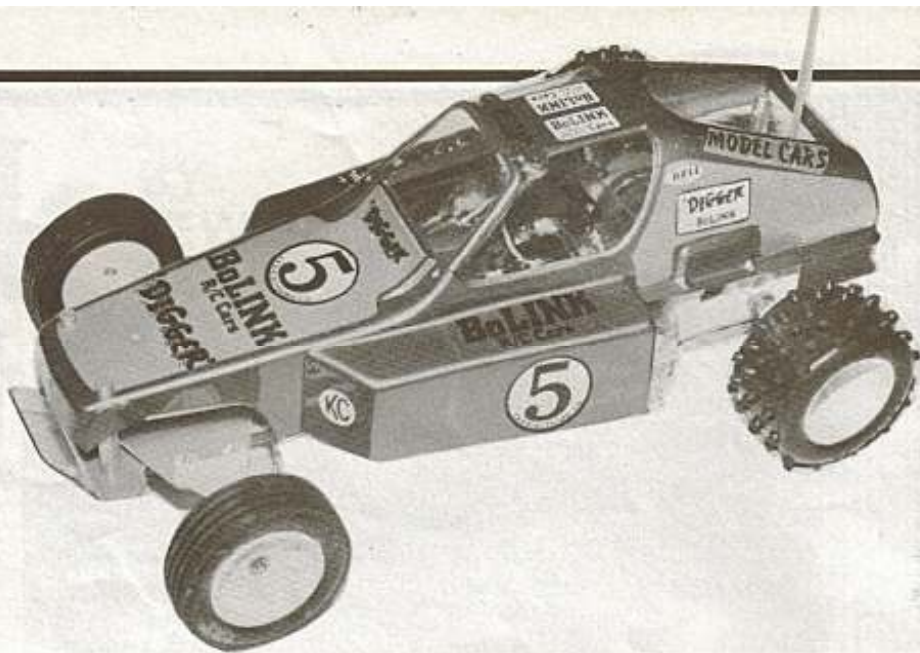
it out in competition. The Worlds End Off-Road meeting provided the ideal opportunity to test the 'Digger' properly, the track surface was of grass — close cropped and fairly smooth. Around the circuit the 'Digger' was extremely fast even with its elementary suspension system. The differential worked well, taking the car around the corners as sweet as could be hoped. The car in general seemed to be extremely robust, showing no signs of baulking at the water trough or ramp-jump, the only real problem is its low weight. In any sort of clash the 'Digger' invariably comes off worst, the kit instructions suggest adding a little weight to the front suspension, although the only

real answer is to stay out in front! All in all the *Bolink* 'Digger' performed impeccably — only my driving skill held it back somewhat; however for a truer guide to the 'Digger's' potential see the meeting report in *Racing Roundup*.

End Notes

Since running the 'Digger' at Worlds End, I have changed a few things around in an attempt to increase performance. The main 'mod' is replacing the resistor speed controller with the *I & D Electronics* 'Smoothtronic' Mk III R so as to give a quicker throttle response. The second 'mod' has been the shifting of the steering servo on to the front suspension plate, the original servo has been replaced with a *Futaba* mini-servo fitted with a *Schumacher* servo-saver. Finally, *Bolink Industries* have sent across the water some extra 'Digger' goodies, Velcro tabs to keep the radio-crate tightly shut. A new Lexan bodyshell — the 'Funco twin-seater' and finally the off-road number plate, needless to say, these have all been fitted.

The *Bolink* 'Digger' is imported by Cecil Schumacher price £66.00 excluding batteries.



Left: *Digger* modified to use *I & D Smoothtronic* Mark III R electronic controller. Note the revised position of the steering servo. Below: kit version of the *Digger* uses resistor speed controller and crated steering servo.

