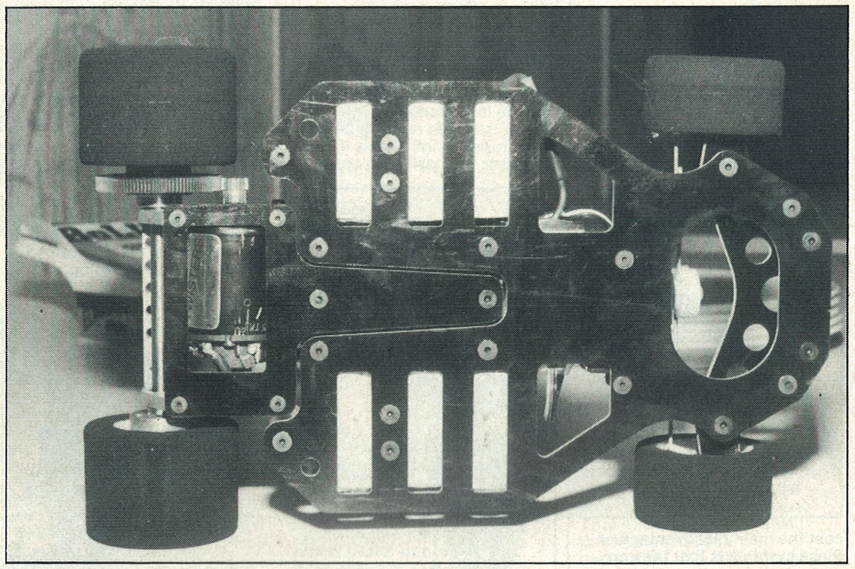
ELIMINATOR 12



David Gale takes a look at Bolink's latest 1:12th offering

Bolink is a name that many people will remember from the very early days of 1/12th scale racing, with the dominating moulded chassis car revolutionising early design concepts at a time when the only thought put into most designs being that it must have a wheel at each corner. Since then *Bolink* have kept a relatively low profile, with a succession of cars bearing more than a passing resemblance to that other American marque, namely *Associated*. The "Eliminator 12" is however a different kettle of fish, and is a car that is the equal of, if not one step ahead of the opposition.

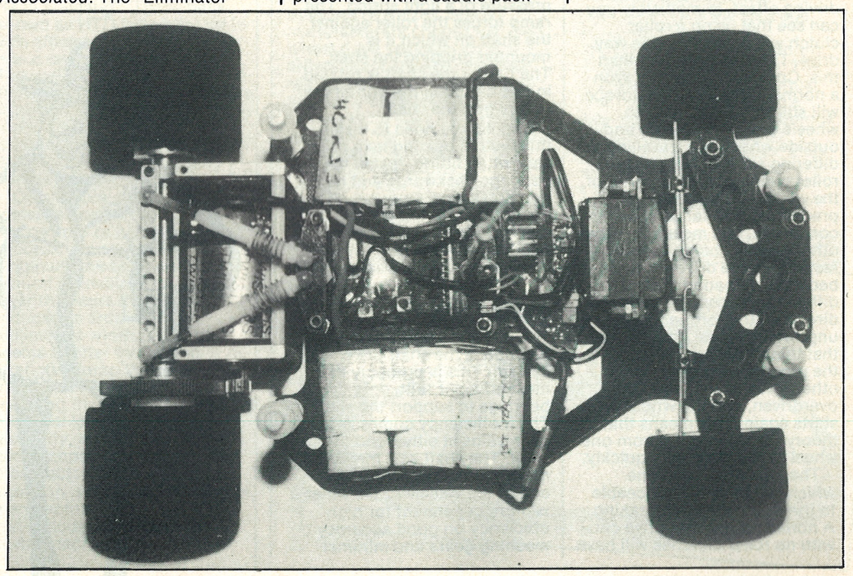
Almost all the parts are made by *Bolink* themselves, and go to form one of four versions, depending on whether ball races or carbon fibre parts are required. The review kit included the carbon fibre chassis, steel diff axle, and no ball races.

Construction

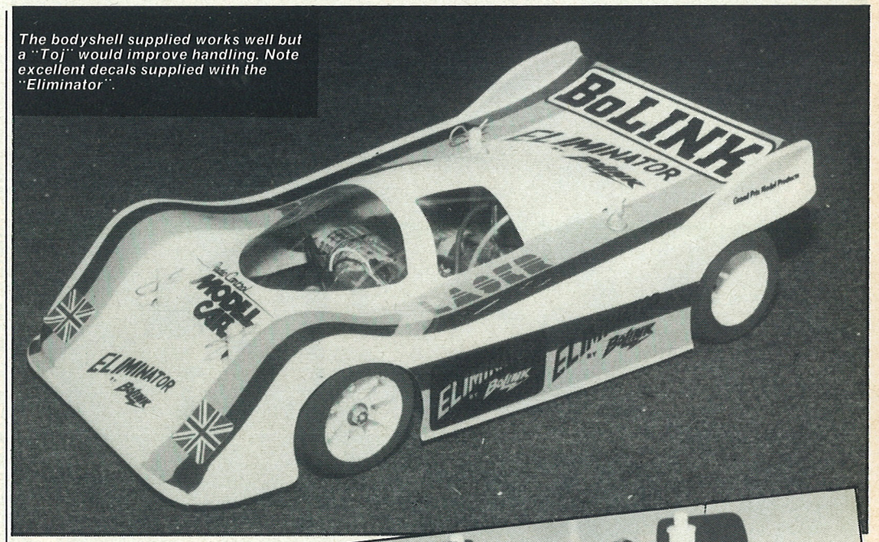
On opening the box I was presented with a saddle pack chassis, various plastic bags, and what appeared to look like a beam for the front end. Immediately my thoughts returned to the sprung beam fitted to the *Schumacher* "B" car, and the poor reputation it had acquired from various members of team *Schumacher*. However, being a total imbecile I had failed to realise that the car in fact used axle blocks on sprung king pins like the "RC12L", with the beam provided to allow castor angle adjustment only, rather than form a sprung suspension member. The beam is mounted to the chassis using turned alloy mountings, and rubber grommets to allow some give under normal impact. The main chassis is about 4mm thick, which goes to prove that the Americans also suffer from fast cars, and not-so-fast corners. Saddle pack batteries are used, and these are mounted to the chassis using an ingenious insert between the cells, allowing the pack to be screwed firmly to the chassis. Unfortunately only one pair of inserts are supplied with the kit, as *Bolink* have made no provision for other common forms of securing the batteries such as tape, elastic bands or chewing gum!

Moving on to the rear pod, we find lightweight alloy side members, rigidly cross braces and bolted to the "T" piece using hardened steel screws. This provides a very rigid box structure, which is unlikely to deform causing a tweek. Next we come to the most important part of any car, namely the method of controlling rear pod flexibility. It is here that the "Eliminator" scores heavily, using three methods of control. Firstly the rear pivot is encased by a large rubber grommet, allowing the amount of flex to be altered simply by tightening or loosening a large nut, compressing the grommet. Secondly two large "O" rings are used to make certain the pod returns to the "neutral" position after flexing, and thirdly a pair of damper/spring units are fitted to control forward/backward movement of the pod when encountering bumps. Once completed the whole rear end has a very smooth feel to it, with none of the notchiness normally encounterd with the more common circular damper and "goop". It is at this point, one begins to realise that a considerable amount of thought has been put into designing the car, although it does mean that the spacing of the battery saddle packs is much wider than normal, which should tend to make the car more stable, by inducing understeer.

Next we move onto the diff, which is based on the *Associated* design, although quite why *Bolink* should opt for a solid steel axle for a car with graphite chassis beats me. Believe me this diff axle is prehistoric and weighs in at around 3oz, about 2 1/2oz too much in my opinion! To add insult to injury *Bolink* then supply some lightweight nylon hub carriers, which means it is almost impossible to glue the thrust washers on. Standard lightweight wheels are supplied, with "green" dot rears and "blue" dot fronts which are slightly firmer according to *Bolink*. This completes the assembly of the "Eliminator", a task which takes about one hour, and should provide no real grief providing the excellent step by step instructions are followed.



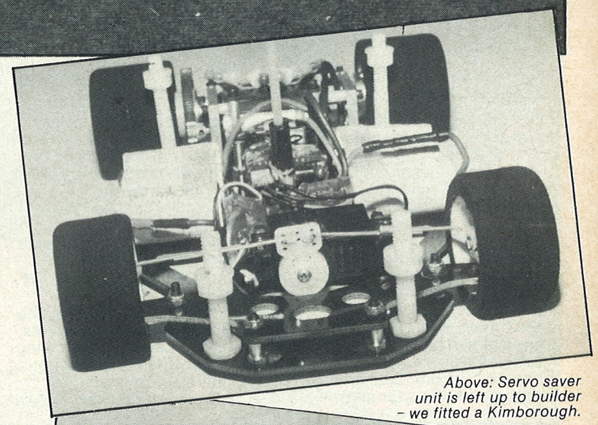
Opposite page: Underside view shows location of cells in respect to wheels – note wide stance; left: Receiver fits between cells which makes the general look of the car very neat.



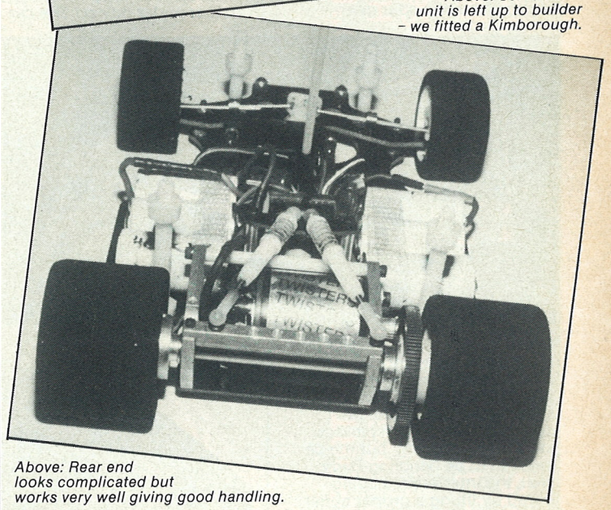
The bodyshell supplied works well but a "Toj" would improve handling. Note excellent decals supplied with the "Eliminator".

Installation of radio gear

This proved to be no real problem, the receiver fitting snugly between the saddle packs, and the speed controller just ahead. This did mean that the servo needed to be moved forward about 1/4in, for some reason the standard postion being way back on the chassis. Servo posts and linkages are standard, although the choice of servo-saver is up to the user. Before fitting the linkages the holes in the servo saver and steering blocks were opened up to give some added play. The linkages were then installed so that with the steering at neutral each wheel was free to move about the "straight ahead" position. The reason behind this is because of the large amount of "trail" (the distance from the king pin to the stub axle) the car's natural tendency is to centre the wheels in a straight line aiding stability, so there is no need to rely on the servo and linkages. This technique should not be used on cars with less trail, such as the "C" car as the steering will not necessarily return to the "dead" ahead position, meaning only flop or play must be eliminated. With the radio gear installed, all that was left was to paint the body, cut it out and mount on the body posts.



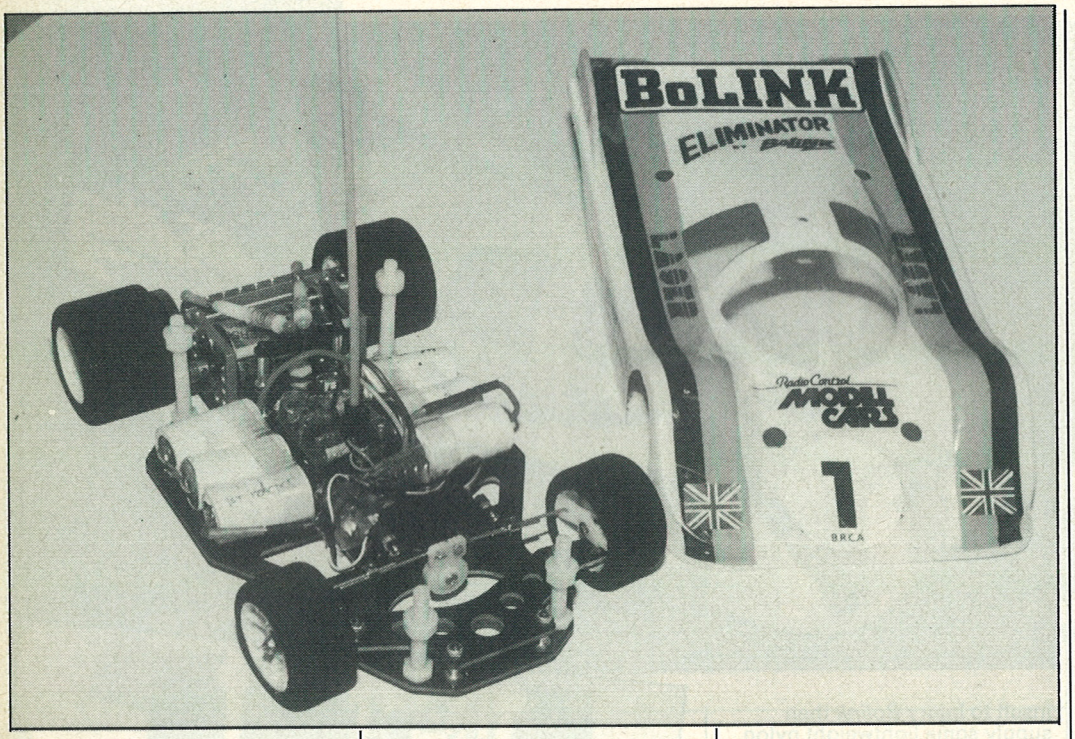
Above: Servo saver unit is left up to builder – we fitted a Kimborough.



Above: Rear end looks complicated but works very well giving good handling.

Running the car

Now for the good bit, however before placing the car on the track, reference was made to my standard car, an "RC12". Castor was set to four degrees by tightening the locknuts on the front beam. The rear pod was then stiffened by tightening the nut compressing the grommet until the rear end was fairly stiff. This was done to try to compensate for any understeer that might be caused by the wider spacing of the saddle packs. With motor and batteries fitted the tweek was removed by twisting the barrels of the shock absorbers, until both rear wheels touch the ground at the same time



when the car is lowered using a screwdriver on the centre line of the chassis.

The venue chosen for the first run was a Luton club night, without doubt the most competitive 1/12th club in the country, and with much honour at stake the car was gingerly placed on the track for the first heat. Right from the off it became clear that something wasn't quite right, suffering from massive bouts of interference. This wasn't helped by the ominous noises coming from the spur gear, which by now was doing its best to imitate a rusty lawn mower, and about six minutes into the race finally died in a spectacular symphony of sound. Not a very auspicious start to the evening, but the car seemed to be handling fairly well, the interference being cured by fitting a proper aerial tube. For the next heat a faster motor, 25 triple was fitted to see how the car would handle the power. This time at the start the car shot into the lead, although I soon dropped back while adjusting to the car's handling. After about three minutes I was getting pretty confident, the car was handling superbly, and able to take the hairpin at the end of the straight 'flat out", allowing myself to catch, pass, and then eventually lap the leader. This left me with 59 laps and FTD so far. For the third run, I accidentally "cooked" the batteries in a big way, reducing the amount of power available to the motor, so to keep up I was forced to drive as hard as possible.

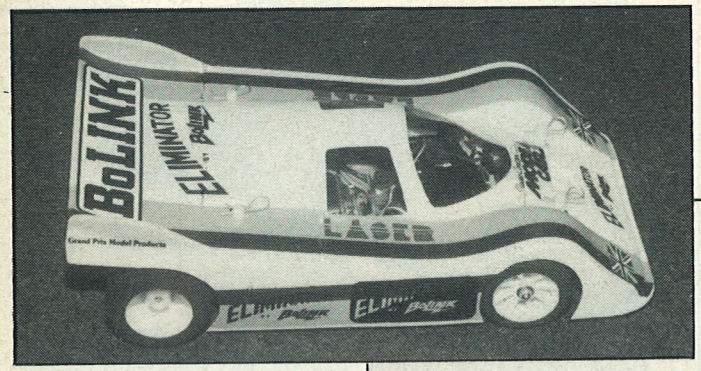
Under such hard driving the car would take large amounts of abuse, at all times following the controls without attempting to understeer or snap into oversteer under power. The car was particularly good around the sweeper onto the straight, generating traction that was putting every ounce of power to the ground, while at the same time allowing the radius to be tightened up if required. The only vice I found at this stage was that at high speed, vicious application of steering lock would tend to make the rear end go fairly light and wander. To be fair to the car this is not really a major failing, as anyone who applies the steering anything less than gently at high speed deserves to reduce his car to a kit of parts. This would probably be cured by using a "Toj" body shell which would be more stable at speed, or loosening off the pressure on the rubber grommet at the rear.

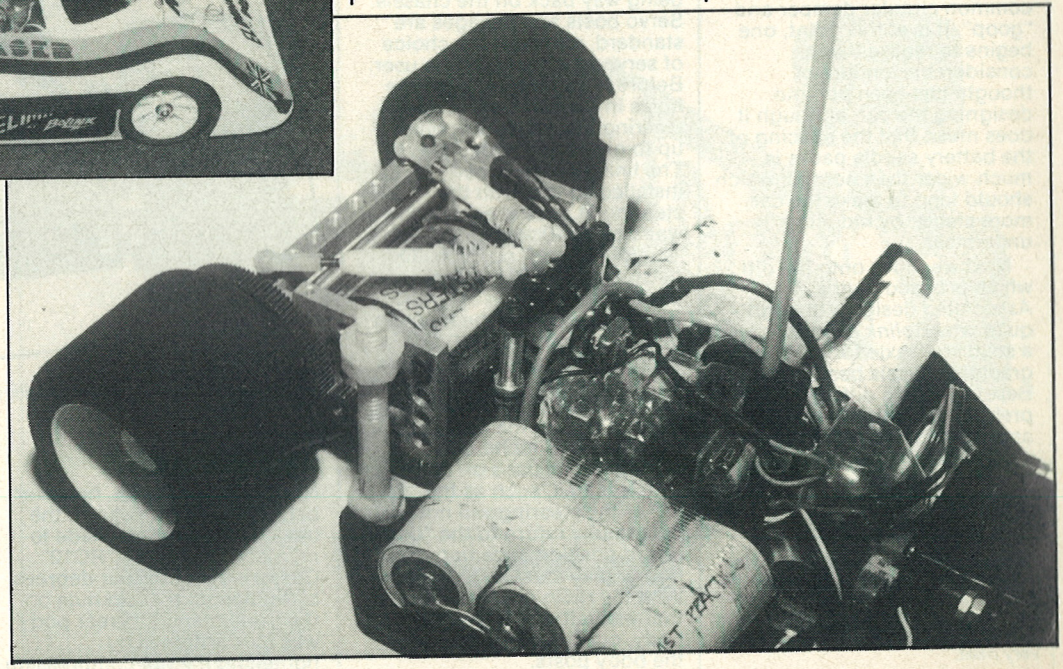
For the final I changed the kit tyres, which had started to go "soggy", and fitted Grand Prix "Cs" instead. If anything, this improved the handling still further, allowing a win from pole position by two laps. This was much to everyone's disgust, as immediately after the final it was noticed that the oilite bushings were still fitted, having forgotten to change them when initially building the car – who knows what improvement ball races and some subtle weight reduction might do.

Bolink have done very well to produce a car that is likely to be competitive at most venues, and capable of allowing any driver to realise his/her's full potention. The car scores very well on some points, but does suffer from some limitations which should be considered before purchase. To give the prospective customer a full idea of the car's potential, I have produced a tale of likes/dislikes to try to highlight these factors.

Likes	**Dislikes**
Handling – especially over bumps.	Diff axle
Adjustable castor	Spacing of saddle packs
Adjustable rear ends	Lack of ride height adjustment
Battery inserts	Inability to adjust camber of front wheels
Quality of components	Finished weight
Instructions	
Strength of finished car	
Alloy rear pod for strength and motor heat sinking.	

All in all a very good car for both expert and amateur alike, for those wishing to "Eliminate" the opposition the "Eliminator 12" is the car to have.





Below: The double rear damper requires correct setting up, but when complete has proven itself against stiff opposition.