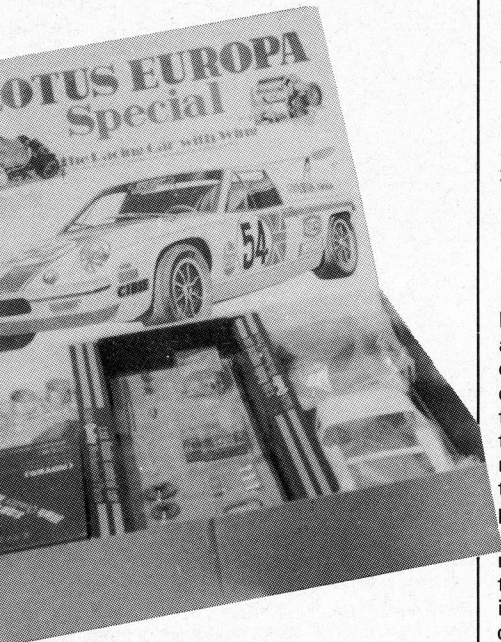


# R/C REVIEW

*The box before unpacking. Big and colourful with most components individually packaged.*



## Roger Howden builds Nichimo's Lotus Europa

**J**APANESE-PRODUCED plastic kits are always beautifully packaged, and for this reason one tends to believe that the product is always equally good. Nichimo are well known for their plastic kits and, although not so widely known, they also produce a number of models suitable for radio control. Their range of 1/12th and 1/10th cars adds to the ever growing range of cars in this category.

I like to divide electric cars into three distinct types, each of which caters for quite a different part of the model market.

1. Those simple but very robust kits, such as Mardave and Lectricar, which are by no means scale models but which are very fast indeed and can take the rough and tumble of competitive racing. The body, whilst meeting the requirements of the racing rules, can almost be considered an afterthought.
2. The well engineered and far more true-to-scale models produced with competition in mind but for those who like the added attractions of scale detail. Tamiya are masters in this category.
3. The simple toy radio controlled car beloved of mail order houses and department stores but not often seen on the shelves of your local model shop.

With this in mind I studied the Nichimo kit for a long time before beginning assembly in order to try and put it into one of my three categories. Try as I might I cannot put the Lotus Europa into any of them and so I must add a fourth to include those kits which are simply constructed, not suitable for serious racing, well above the toy standard and stem directly from a plastic kit. But more of that later.

For the already enthusiastic R/C car modeller I should say from the outset that this kit is not suitable, and I presume not intended for, serious racing. Whilst the chassis, steering and drive arrangements are nicely engineered the design does not cater for those little 'go faster' extras like ball race bearings and the larger RS 540 motor and most of the components are too lightly constructed to take hard knocks. But, there is a total of eight kits in the range so perhaps there is something of interest for everyone.

I tried to approach the problems of construction through the eyes of someone who has not tackled an R/C model before but who is familiar with plastic kit construction. I believe the kit will appeal most to modellers in this category.

It was something of a disappointment to find that the well laid out and illustrated Instruction Manual, the Spare Parts List and other related bits of paper in the kit were only in Japanese. A typewritten sheet of English instructions is, of course, included, but they include the usual smattering of peculiar phrases and in my opinion could well be improved.

### Rear Axle, Gearbox & Motor Assembly

Here we begin to build the model and the first decision to be made is whether to construct the high or middle/low gear ratio

drive assembly. The former is suitable where there is lots of room for high speed straight runs and the latter where a twisting circuit is to be negotiated. I opted for the low gear ratio to start, but this can always be changed later.

Coming to step 1 in the assembly instructions we are immediately faced with another small problem. Which side of the motor mount to offer up the main 52 teeth drive gear. The mount is assymmetric, cleverly designed to allow assembly of the high or low gear but we are not told whether to follow the illustrated manual or the picture on the box lid, both of which are different. After a few minutes reflection it becomes obvious that the instruction manual shows assembly of the high gear version. So, for those of you who decide to use the lower gears, follow the picture on the box lid!

It was when invited to fix the rear wheel to the axle that I discovered a neat little plastic spanner in a box of bits. Perfectly adequate for building the kit but I don't suppose it would last long in service.

The whole rear end, when assembled, is mounted on three studs and coil springs and this provides a simple rear suspension system in fore and aft and transverse directions.

### R/C Installation

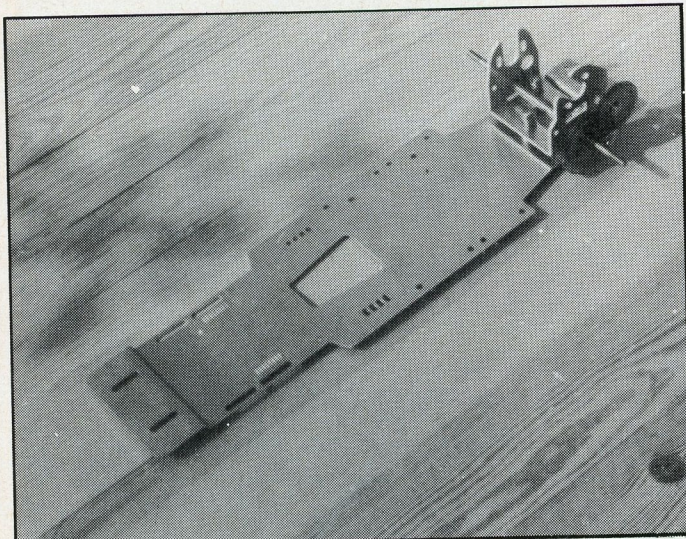
In common with most other kits of this type a knowledge of electrics or radio control is not at all necessary. Supplied with the kit are TWO neatly made and assembled rheostat type speed controllers. It is, of course, only necessary to use one of these and this allows forward, stop and reverse movement. It is connected via four coloured wires to the battery and motor. This is adequately explained in the instructions. What is not explained at all, however, is why the second speed controller is included; judging by the wirings, I am quite sure it is to be used with Nickel-Cadmium cells should these be used to drive the car but it really should be explained somewhere in the instructions.

In the kit comes a battery box to take four HP11 size batteries but a much better performance can be obtained by fitting a 6 volt pack of Nickel-Cadmium cells. These can either be charged for 12-14 hours by means of a mains charger or, as is more common, can be 'quick charged' via a suitable lead from a car battery.

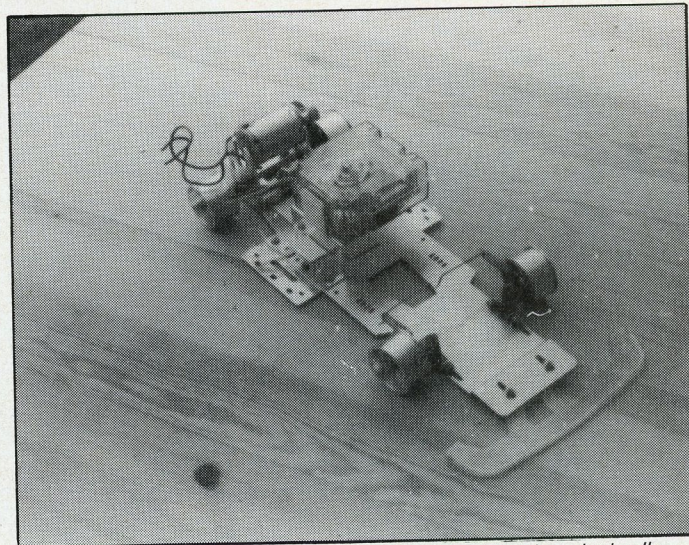
The speed controller is easily attached to the preformed bracket on the chassis by means of the double-sided tape provided, and the radio receiver, servos and power pack are also attached in the same way.

### Front Axle Assembly

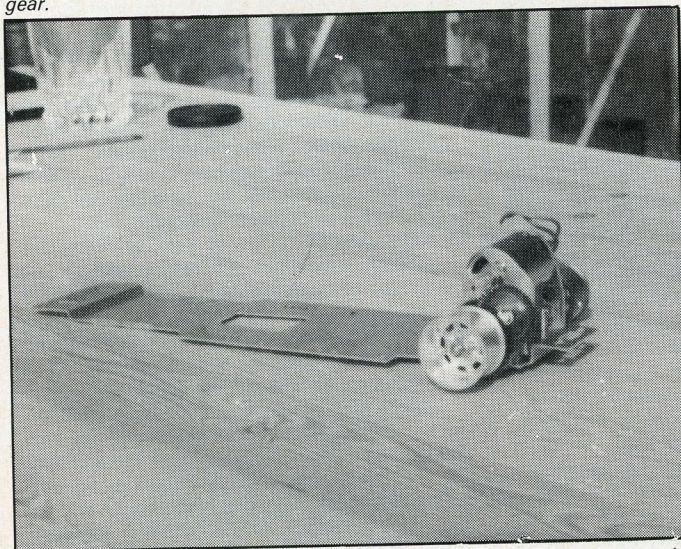
No suspension is provided on the front axle, which consists of a solid upper and lower wishbone moulding on each side using a nut and bolt kingpin. The axle on each side, which is also a nut and bolt, carrying the brass bushed front wheel, has an integrally moulded steering arm both of which are joined by a pre-bent wire track rod. The steering rod from the servo, also



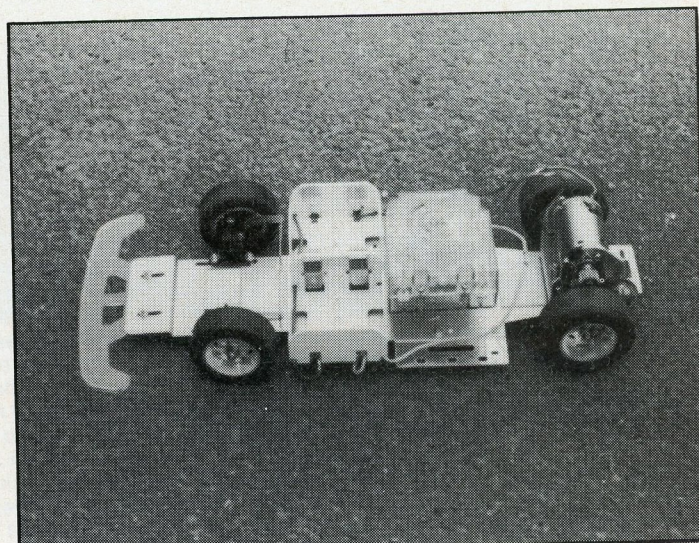
Rear axle assembly and gearbox before motor is fitted. All chassis holes are pre-drilled. Note alternative slots on motor mount for high or low gear.



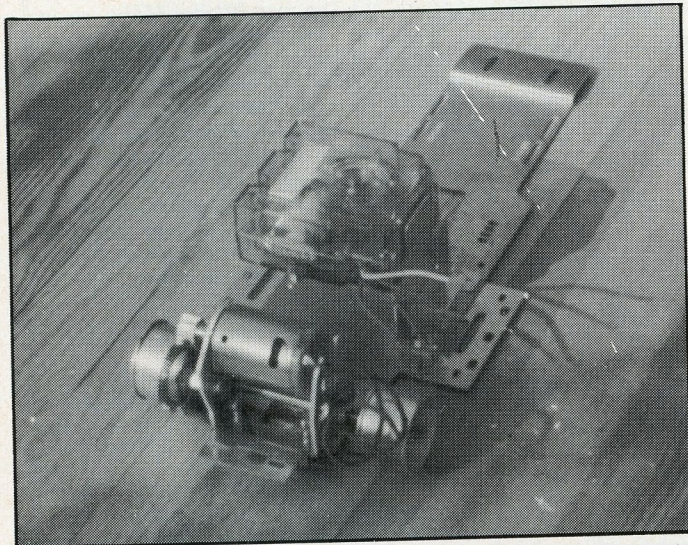
Front axle is assembled as two units, left and right hand, and wheelbase can be adjusted by means of slotted holes in chassis.



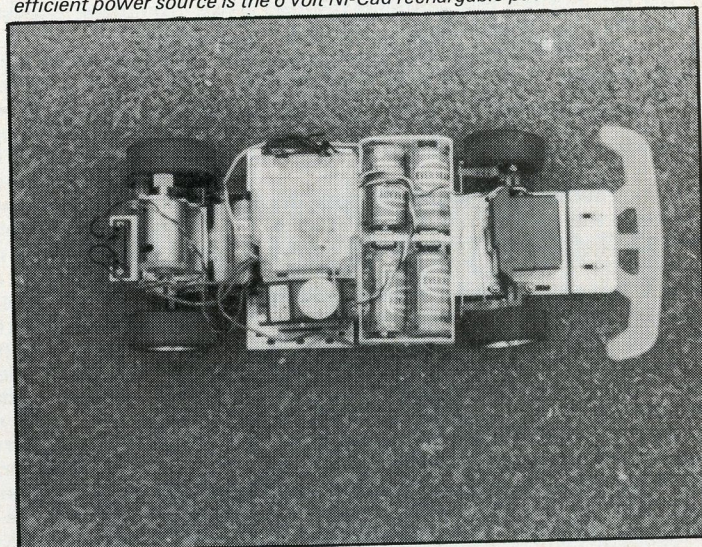
Chassis with rear end drive with complete and ready for front axle assembly and radio control.



Included in the kit are components to make up a battery box for U-2 size dry batteries, shown here assembled and fitted. A costlier but more efficient power source is the 6 volt Ni-Cad rechargeable pack.

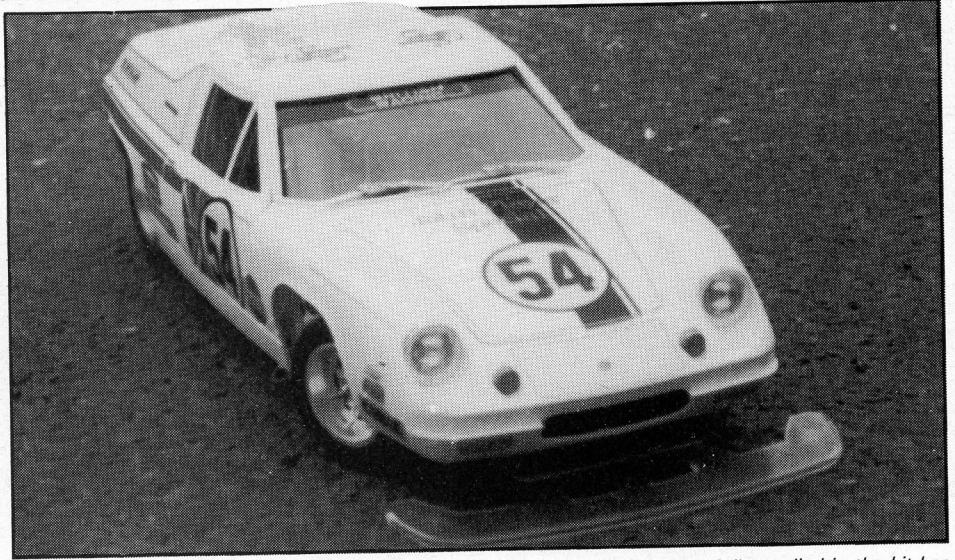


Bracket for speed controller and servo now fitted, together with body mounting plates.



An aerial view of the car ready for the road before fitting the body. Even the large ACOMS servos fit neatly into the space available.

# R/C REVIEW



*A wide plastic bumper will save the body from frontal damage but the aerofoil supplied in the kit has been deliberately omitted.*

pre-bent, is taken off the right hand steering arm.

When it came to installing the steering servo I was most surprised to read the note in the building instructions which says "when projection of servo touch to wheels, cut off them". I cannot imagine many modellers wishing to cut off bits of their expensive servos and perhaps prevent its use in other models. This would be foolish but I do not believe it is necessary anyway. To prove the point I fitted ACOMS radio equipment to the review model which probably uses one of the largest of the current modern servos and it fitted with no problems.

All that remains now is to slip the sponge rubber tyres over the hubs and the mechanical part of the construction is just about over. If you are intending to use the car at high speed or anything over walking pace it is essential to glue the tyres to the hubs. Any contact adhesive such as Evo Stick smeared on the inside of the tyre will do the job, but put the tyre onto the hub before the glue dries. Try also not to get the glue onto the outside wall otherwise it will look unsightly and be very difficult to remove.

## Battery Box Assembly

If you decide to use HP11 size dry batteries, the battery box should now be assembled and wired up according to the instructions. One piece of yellow and one piece of green coloured electrical wire is supplied and the green wire must be cut into two: one 13cm long and one 17cm long. The three wires are now crimped with pliers into position according to the building instructions. The English version is not too clear here but reference to the drawings in the Japanese manual will show where the three different lengths of wire fit.

Connecting up the speed controller is then a simple task of joining the wires colour to colour.

It is possible to join the wires as recommended in the instructions by twisting the two ends together but for a permanent joint I am sure most builders would wish to make a properly soldered joint suitably insulated with PVC tape or heat shrink tubing.

## Body Assembly

Coming to the body shell it became even more apparent that this is not a kit to take the bumps and spills of serious R/C racing. On the other hand, those who have already built plastic kits will delight in the authenticity and detail of the multitude of bits and pieces which have to be stuck together. This is not an area in which I **delight so** it was with a distinct lack of enthusiasm that I tackled this stage. The fact that the minute tube of glue provided with the kit ejected nothing but fresh air did nothing to restore morale, but a quick raid of the model box produced a bottle of Britfix Liquid Poly and the complete bodyshell was assembled with this.

The majority of the body mouldings are very good, the one exception being the rear window frame (Part No. A-13) which was a poor moulding and an indifferent fit into the main bodyshell. This, I am sure, would be no drawback to the enthusiastic plastic modeller and clearly with a little filling and sanding it could be faired in nicely. This is where the individual must decide whether he is to build a radio controlled 'concours' model or one which he is out to enjoy for its manoeuvrability and realism under way.

At this stage I found it easier to follow the clearly drawn diagrams of the main instruction manual, despite the Japanese captions. In fact, it should be said that throughout the construction it is essential to read the English translation in parallel with the main manual, since a number of important points have not been translated but can be picked up from the diagrams.

I did come across two points which did not appear to be covered in either the

English or Japanese versions and these were.

1. For no apparent reason there are two sets of windows supplied in the kit, one tinted blue and the other clear. There are also a number of plastic parts which cannot be used during the construction of this R/C version.
2. The necessity to cut away part of the front underside of the bodyshell in order to clear the bolts fixing the front bumper or 'Safety guard'.

This leads me to believe that the whole of the bodyshell package was designed for a non-working version of the same model.

Decals are supplied in profusion and the car can be finished in the same livery as on the box lid. It is a tedious and painstaking job to apply the gold lining around the bodyshell (it was for me anyway!) and you may feel that your model does not warrant this effort. Again, this is entirely a personal choice and will depend on whether you want to use the car or just admire it. The bodyshell on the review model was not painted, except for the lights and indicators, but so little of it shows under all the advertising decals that this is hardly noticeable. Incidentally, fitting the aerofoil seems to be optional since the body mounting holes have to be opened up before fixing. If you intend to drive the car in earnest I would not advise fitting it because it will almost certainly be demolished if the car turns over — an odds on chance for the beginner or even the over excited expert.

## Summary

In all a nicely produced kit which should be popular with modellers who are used to building plastics. I do not believe it was ever intended for serious racing but this does not matter. For those who want to get the feel of building and handling an R/C car, this model offers an excellent introduction.

I do wish the English instructions had

either been printed alongside the diagrams in the building manual or at least been fully translated.

**Importers:** Eisenmann (Hobbies & Models) Ltd., and available through model shops.

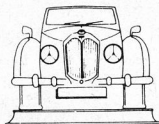
**Manufacturers:** NICHIMO Japan.

**Cost:** Although there is no recommended price, the kit less batteries and radio control equipment should be available at around £27.00. A good range of spare parts is also available.

**Service:** An added bonus is that Eisenmann now offer their customers a specialist repair service for both the Einco range of radio control, marketed through Eisenmann Games and Toys Limited, and for the sophisticated advanced radio control models which are an important feature of the Eisenmann Hobbies and Models range. These include competition standard vehicles from major Japanese manufacturers like Nichimo, Yokomo and Tsukuda.

The company has appointed John Eaton, a qualified electronics engineer to run the repair workshop with an assistant. The workshop is equipped with the most up-to-date servicing equipment and carries a wide range of spare parts for both Eisenmann ranges.

Says Managing Director, Peter Norman, "The Eisenmann repair service was initiated in January 1980 and is proving immensely popular with our customers. Radio control is a very important feature of our two ranges and we are glad to be able to provide this comprehensive back-up service."



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