

Lightweight GRP chassis and radio plate with spare plate in ABS, plus lightweight steel axle tube and countersunk aluminium screws.

Threaded stub-axles in place of circlips as offered by Hobby Spot.

RC/12E

ASSOCIATED COMP KIT

IT IS NOW SOME TWO YEARS since the Associated R/C 12E electric car was first introduced to Britain and Europe on the wave of a series of US National Championships wins. In spite of this the car never seemed to make its expected impact over here. Perhaps this was because the initial kits were equipped with tyre set-ups more suitable for outdoor racing on good traction surfaces rather than for the slippery indoor tracks then in almost 100 per cent use. Of course drivers could have changed the tyres ... but ...

Added to this the form of speed control differed radically from the essentially British style of printed circuit boards with both forward and reverse, being wiper type rheostat reminiscent of slot racing hand

speed controllers. This is indeed what they are; wound ceramic coils across which a button head wiper arm attached to a servo output disc sweeps.

The Lightweight R/C 12E

However, there was a very different version in the offing. This I first saw in the winter of 1979 in the respective hands of World Champion Phil Booth and Walt Bailey of Jim Davis, Mansfield. I should add that Associated's favourite girl Debbie Preston had been running an example of this works special clad in a bright shocking pink bodyshell for some time. (The car I mean!)

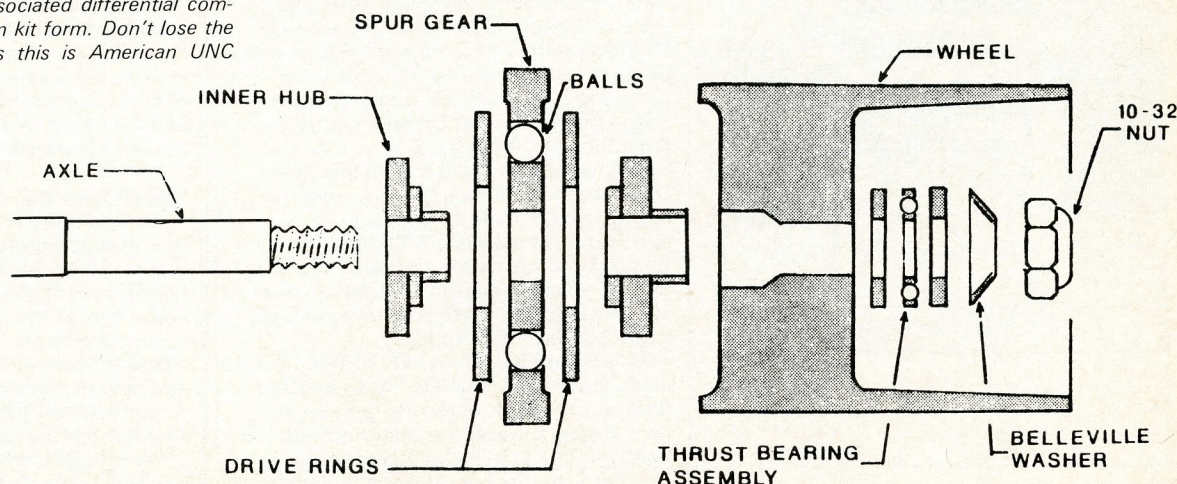
The lightweight kit is now to be had in England and makes up into a formidable opponent for any design on the market. But

let us be entirely objective: it is not for everybody. It comes as a kit of parts to which the builder must add his own accessories and finishing touches. As such it should make a special appeal to be the would-be scratch builder. (That eminently successful Gemini kit contains a number of Associated parts which the special genius of Phil Greeno has made into a fantastic 'out of the box' winner).

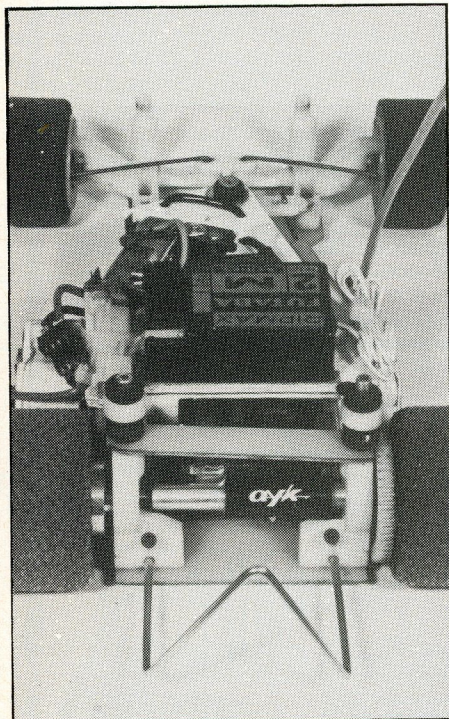
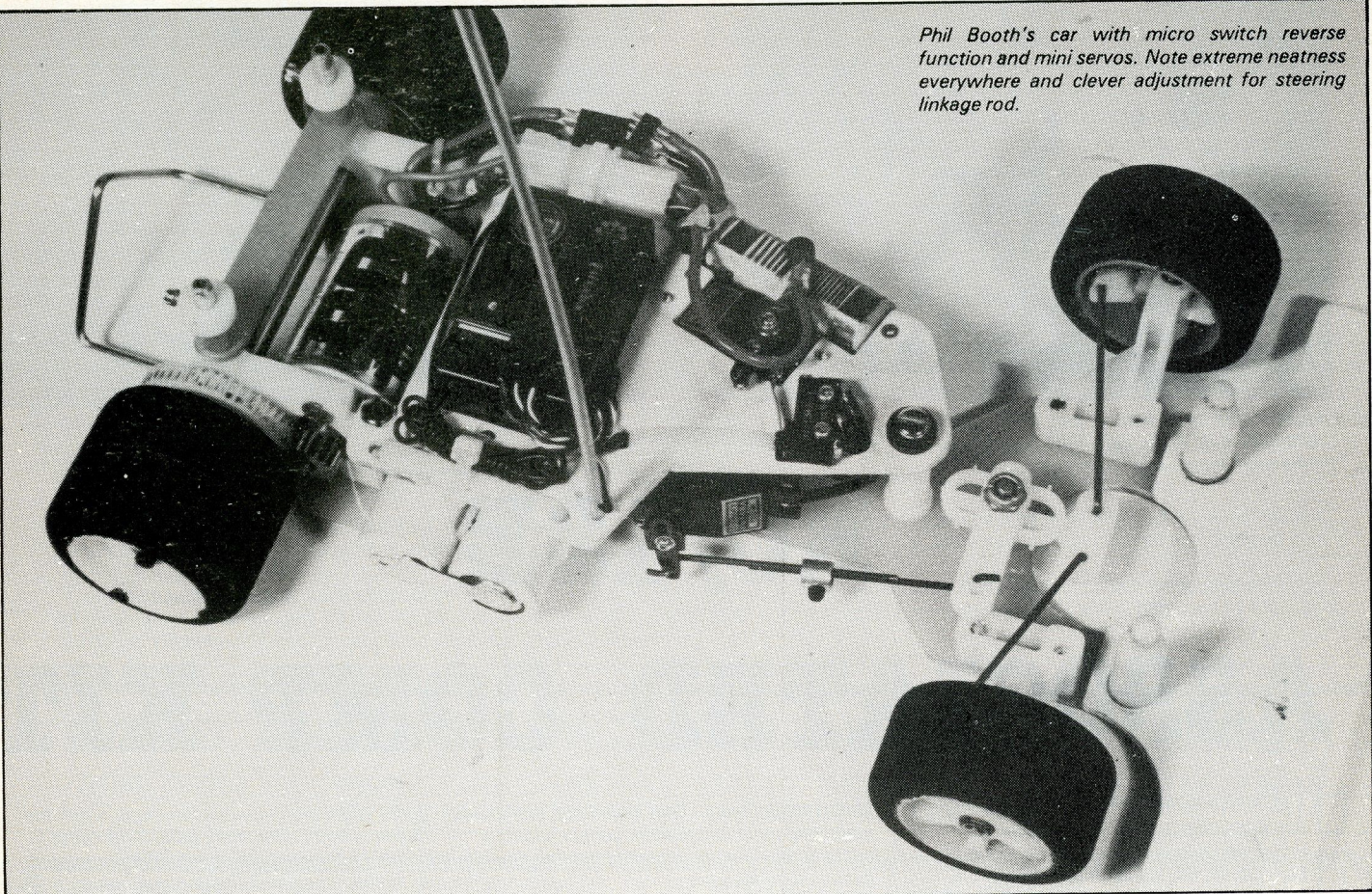
What the Kit Contains

Basic parts comprise: lightweight chassis in GRP, radio plate ditto and brace across plummer blocks. Small front bumper and additional radio plate in ABS. Csk alloy screws, plummer blocks, lightweight steel axle tube, servo saver and

Assembly order of Associated differential components which come in kit form. Don't lose the 10-32 securing nut as this is American UNC thread.



Phil Booth's car with micro switch reverse function and mini servos. Note extreme neatness everywhere and clever adjustment for steering linkage rod.



The neat little AYK differential on Walt's car — at time it was built the only one in the country!

steering blocks, kingpins etc., trued and glued tyres and wheels, nicad tray, miscellaneous cable ties, circlips etc.

You will need as essential components motor, charger leads, speed control, bodyshell, nicads. You can add with advantage Associated (or Schumacher) differential, replacement stub axles with screw retaining wheels in place of circlips (Hobby Spot), rear bumper wires, wing and wing wires. You will need, as usual, receiver and servos.

Perhaps this does not seem a very formidable array. What it does in the first place is to save some 2 ½ ozs of weight. This is made up of the actual GRP board with its lightening holes, ally screws etc. Further saving up to another 1 ½ ozs can be made by fitting mini servos and/or by installing a proportional transistor type speed control such as Demon, Unitrol, Smoothtronic, or LM.

Even without this latter embellishment (Phil Greeno prefers a Demon) weight saving can be made by the usual elimination of separate RX battery by tapping into the motor nicads. There is no danger of losing control by running down batteries as the car stops running (out of power) before this happens.

Now what else can we add to make this a really super job? There is the Associated differential which works using a similar hollow steel tube axle as supplied with the lightweight kit. It is a variation of the popular Schumacher differential (which has a RC 12E version). In my case I had an Associated diff., and found that it was

necessary to run a ¼ in reamer through the alloy rear wheel rims to obtain clearance. If you lack reamers a ¼ in drill will do the job instead.

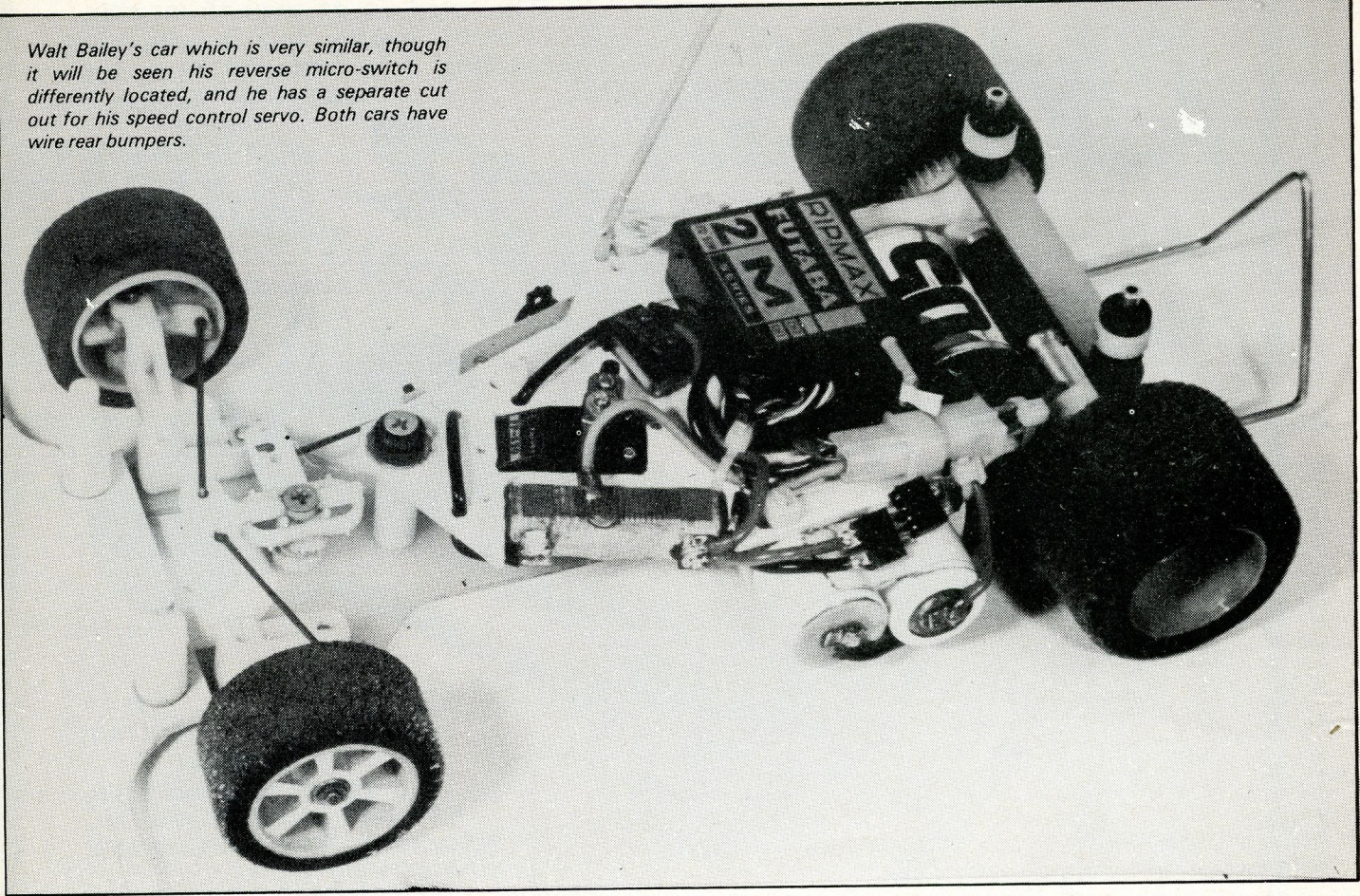
Follow instructions on how tight to fit the diff., holding the axle with other wheel, temporarily fitted in your hands screwing down until it feels just right. No diff., will work miracles but it will be kind to your errors. (What? You don't make mistakes? Never? Well, hardly ever). On slippery surfaces it can be very helpful — with really good traction not so much — so that the expert may feel he can manage with a standard rear axle.

Just another little touch. Hobby Spot have produced some nice stub axles for the car which have been drilled and tapped to take wheel retaining screws in place of circlips. A small virtue but much appreciated if wheelchanging in a tense contest atmosphere.

Speed Controller

To help those who have not as yet tried the ceramic wound type of speed control, a diagram from Associated's splendid instruction manual is included. Two needs are to anchor the resistor firmly on the radio plate by means of small metal clips that can be easily cut from a sheet, drilled and held in place with small nuts and bolts, rather than self-tap screws; the other need is to be sure the lead wire to the swinging arm contact button is thread bound in place. Do not rely on the solder joint to hold it, make sure that the button is in contact with the windings. Note that there is

Walt Bailey's car which is very similar, though it will be seen his reverse micro-switch is differently located, and he has a separate cut out for his speed control servo. Both cars have wire rear bumpers.



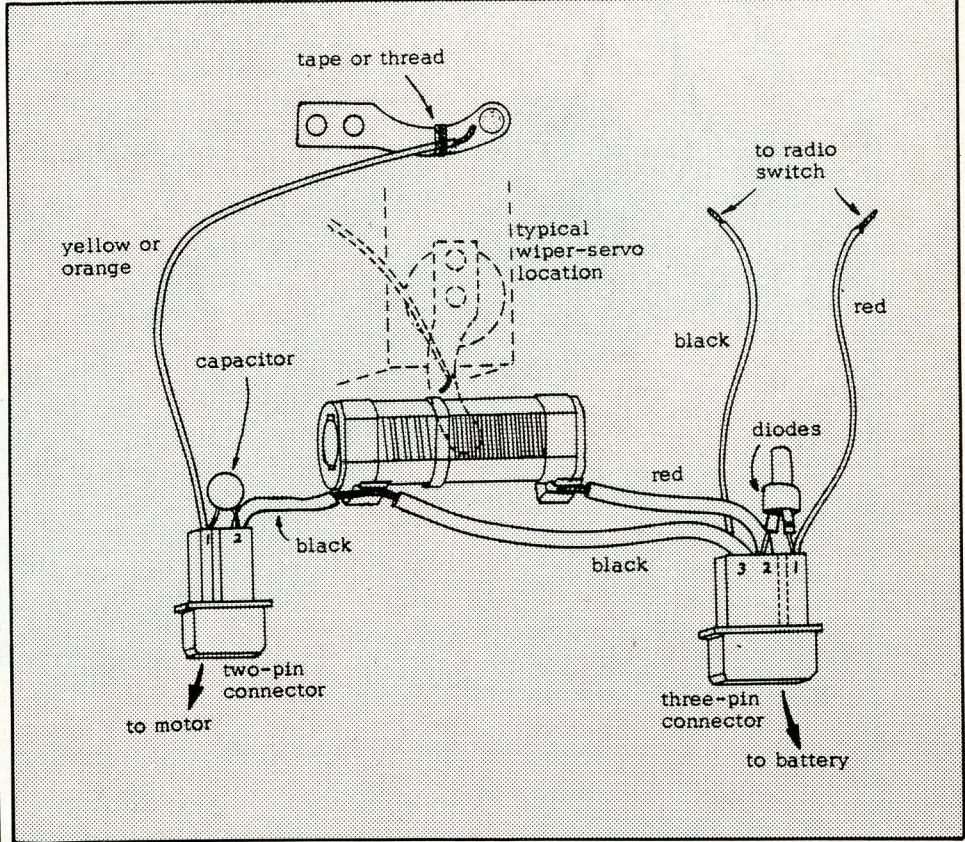
dynamic braking after the neutral point on the windings. Braking is dynamic in the sense that by shorting out the motor it is converted into a kind of dynamo.

Two examples are shown in the illustrations — each with its special points. Note that Phil Booth's car enjoys the best of both worlds with ceramic resistor and reverse. This is done with the little micro switch seen on the radio plate, which reverses the current flow. I do not see it listed on Associated's spares list, but it can be obtained from a good Bo-Link stockist. The other car (Walt Bailey's) enjoys what must be the neatest little 1/12th scale diff., from Japan. It is by Ayk, whose accessories and kits are now being imported by Riko.

Radio Gear

The recently introduced Futaba extra mini size servos help to keep weight down and take up little space. They are, alas, quite expensive so drivers might like to try some other small servos such as those available from World Engines in their Talisman range. Mick Wilshere the proprietor will always be happy to make up a set to suit special needs, so don't be afraid to ask.

All this is intended, of course, for the more expert builder and driver, so that very detailed steps have not been given; but I do hope it has enthused a few people to go ahead with Competition Associated or make them the basis of their scratch built cars.



Wiring layout for wound ceramic type resistor. The wider spread winding to left of thick strap is the dynamic braking section.