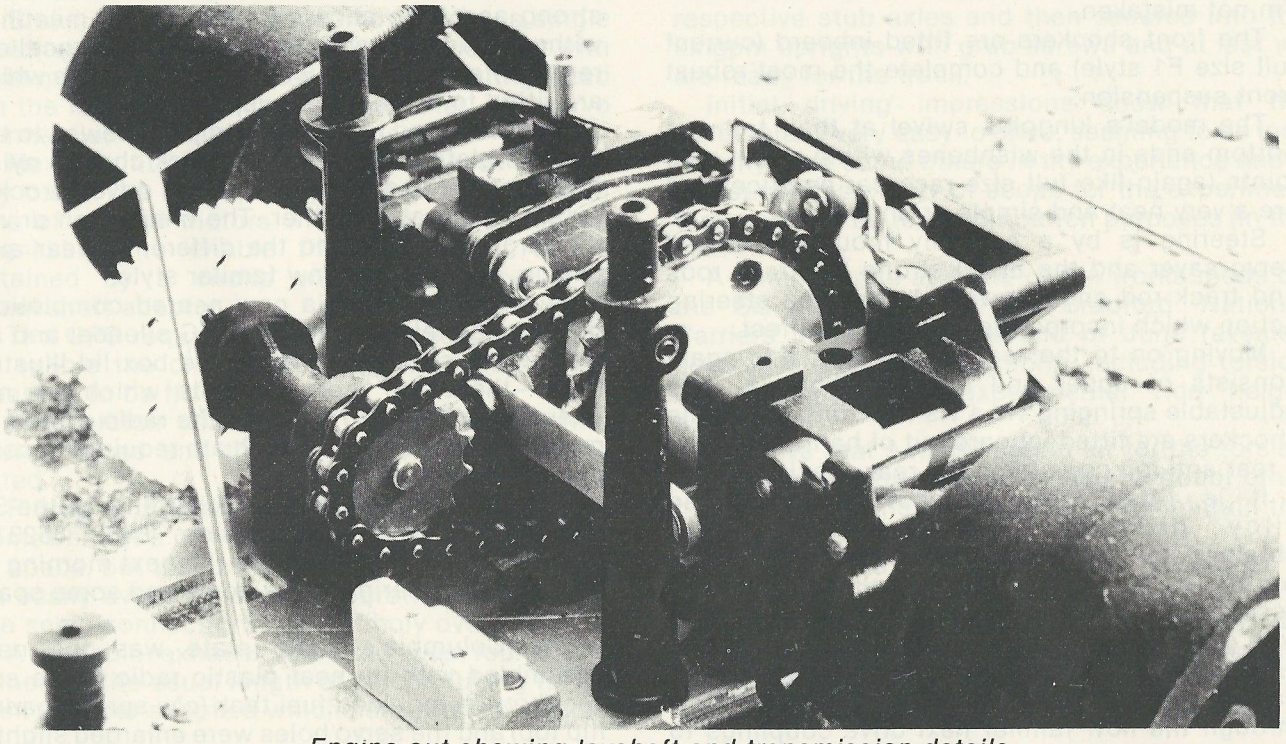
The SG Columbia I.S.4

A Radio Race Car Review by G. J. Milburn *(Photos by J. L. Milburn)*



Engine out showing layshaft and transmission details

Anyone who attended any 1/8th scale i.c. race meetings in the last few months, can't have failed to have noticed a new all independent suspension car, the SG Columbia IS4, which has made a very successful debut and proved competitive with the 'other' suspension car, straight from the box.

The SG Columbia, which is the subject of this review, is designed for fitting with a transverse mounted motor, with the usual geared clutch bell, driving the rear axle via a chain and a layshaft, in what has become the accepted layout, for this type of car, over the last twelve months.

The SG is a thoroughly conventional modern design similar, in many respects, to the layout of several other current designs, but incorporating many interesting features of its' own.

The Columbia for this review came neatly packaged in a large box, which featured several photographs of the finished model on the lid. The components were individually packaged in sealed bags, each containing one particular unit assembly.

The kit's instructions consisted of a large 'exploded view' style drawing and eight smaller drawings showing the various unit assemblies. There are no written instructions as such and in view of this, a visual check on the box lid photographs proved of immense assistance on occasions during the construction. The lack of precise instructions did not prove unduly problematic, but inclusion of them would have made life easier, especially as the front suspension parts, in particular, were not of the type shown in the diagrams.

Having said this, my Columbia went together like a dream; all the parts fitting precisely and requiring virtually no trimming during assembly.

The Columbia's chassis consists of a full length glass fibre plate, with an alloy plate doubling up at the rear end to strengthen it.

The front suspension is by upper and lower wishbones, with hairclip type springs working on each lower wishbone. The suspension spring tension rate (front and back) is adjustable by turning screw adjusters fitted at each side of the suspension bulkheads.

A front anti-roll bar is fitted, which also acts as a ride height adjuster by tightening/loosening a screw, which Is cunningly concealed behind the front body posts.

The front upper wishbones are located by collets which provide instant caster adjustment for the front wheels when required—a useful feature when setting the car up for the track.

The IS4 is fitted front and back, with relatively huge shock absorbers. These are moulded in a red plastic material with metal sleeve inserts, in which are fitted nicely made piston units. The shockers are easily filled with

oil, due to their size and they can be bled of air through a small screw hole in the top of each unit.

The shock absorbers are sealed with rubber O rings and appear to be totally leak proof and are definitely not of the 'fitted for looks' variety, as these operate very efficiently and will, with doubt, find their way onto several off road buggies, etc, if I'm not mistaken.

The front shockers are fitted inboard (current full size F1 style) and complete the most robust front suspension.

The model's kingpins swivel at their top and bottom ends in the wishbones within metal rose joints (again like full size race car practice) and are a very neat and simple arrangement.

Steering is by a centrally mounted bushed servo saver and the usual strong SG track rods and track rod ends provide a slop free steering action which incorporates Ackerman effect.

Moving on to the rear suspension, this again consists of upper and lower wishbones, with adjustable springing vis a vis the front. Again the shockers are fitted inboard out of harms way and a rear anti-roll completes the rear specification.

It is fitted with a beautifully machined alloy differential, its action being obtained by four bevel gears fitted within its central housing. The unit is already partially assembled when received and only requires filling with grease prior to final assembly. The diff unit runs in ball races fitted within the rear suspension carriers and drive is then transmitted through the now familar hexi drive couplings to the rear outer hub carriers, which are also fitted with two or more substantial ball races.

The outer axles are fitted within the outer hub carriers and the rear wheels are secured to the axles by circlips (ugh, I always lose them!).

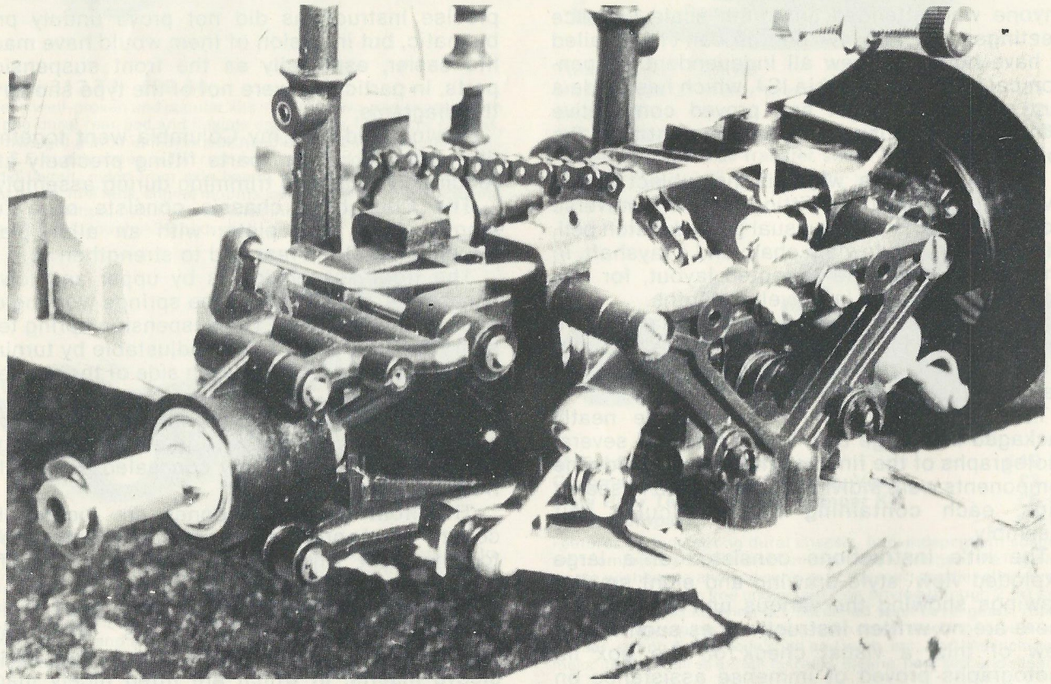
Special mention must be given to the rubber boots which slide over the hexi drive couplings to protect them from dirt, etc. These boots are very strong and have survived several race meetings without damage and they will make excellent replacements for their weaker counterparts which are fitted to some other suspension cars.

The ball raced layshaft is simply screwed to the chassis plate and features a quick change nylon drive gear at one end and a metal drive sprocket for the chain at the other. The chain then drives the large gear fitted to the differential/rear axle casing, again in the now familar style.

As my SG Columbia now neared completion, my eye was taken by the nice SG silencer and air cleaner which are shown on the box lid illustrations—these are the only parts which are not included in the kit (other than the radio system, a motor and a bodyshell) which are required to complete the construction

A quick telephone call to Jack Wiiliams, the SG UK distributor in Humberside (0482 882311) resulted in the prompt arrival the next morning of the postman bearing these items and some spare wheels.

The Columbia's radio plate was the next assembled with its neat plastic radio posts and see through moulded fuel tank (c/w spring loaded flip top) and the servo holes were enlarged slightly to take my much used Futaba 17m servos.



View from behind—note the suspension units, rear anti-roll bar and chunky shockers.

Fitting the chromed roll bar, rear nerf bar/ bumper, front bumper and various body/wing posts was next and took little time.

It was nice to see included in the kit several servo output arms and all the necessary linkages, ball joints and override springs, etc, which are required.

Braking on the SG is accomplished by a single floating fibre disc on the rear diff axle casing with twin metal pads supported from a mounting fitted on the rear offside suspension carrier. The servo connection proving simplicity itself.

Next for fitting was the motor, an OPS 21 in my case. The kit is ideally suited for fitting with one of several motors which have an extended crankshaft, to enable the clutch bell to be retained by a circlip without the use of a crankshaft adaptor.

The OPS requires a crankshaft adaptor fitting to enable the clutch bell, with its needle roller bearing, to be fitted.

SG's clutch consists of two unsprung white clutch shoes and these are soon trimmed and fitted.

Fitting a suitable carburettor proved to be somewhat of a difficult task, mainly due to a lack of space, but this problem was negated by fitting an easily available slide carburettor, after which the servo connections were simply overcome.

A suitable exhaust manifold was found and joined by the usual length of silicon tubing to the mini silencer supplied which screwed to the radio plate.

The cars' lexan rear wing was now cut out and fitted to its supports, leaving only the tyres to be mounted and glued to the wheels and an aerial from my spares box to be fitted for completion.

Two ball bearings were pressed into each of the front wheels, which were then fitted to their respective stub axles and then secured into the kingpin uprights with grub screws and at last we are ready for the track.

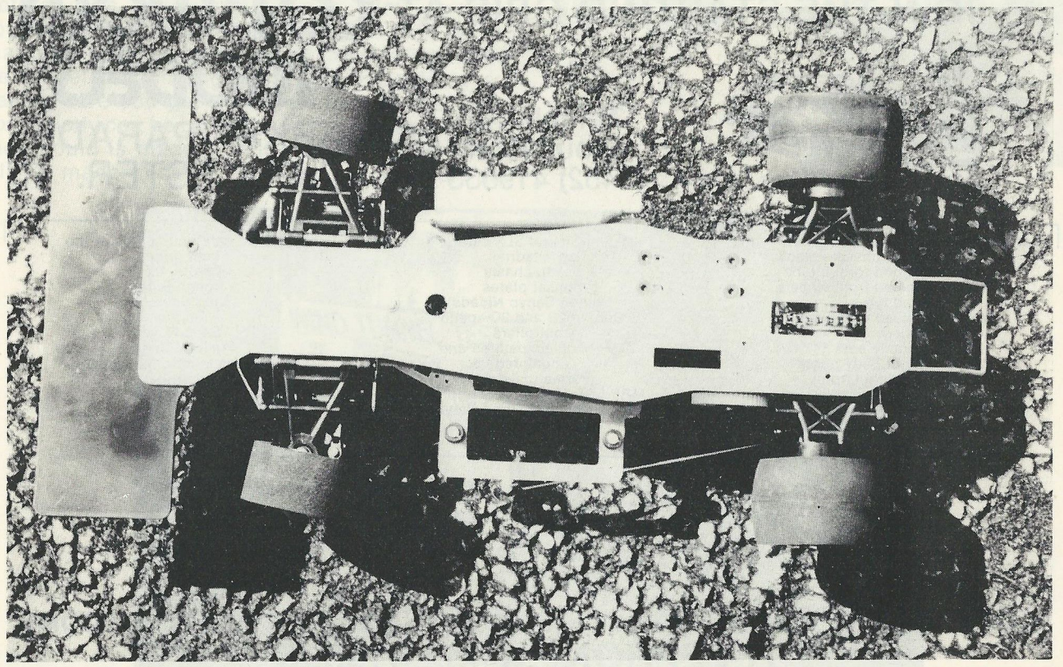
Initial driving impressions show that the Columbia is very easy to drive, seeming to be less twitchy than some others in my experience and it obviously has plenty of scope for the experimentors amongst us for modification purposes (in the near future).

A quick glance at some of the works mods on the SG Team cars at the Bradford 'National Carriers' meeting at the end of June revealed several interesting alterations, including torsion bar springing and experimental ride height adjusters.

I believe that a modification kit for the torsion bars is already on the market and no doubt other items will become available later to maintain the cars competitiveness.

The Columbia IS4 is a welcome newcomer to the ranks of 1/8th scale suspension cars, bringing some variety and (friendly?) rivalry onto the grids.

The Columbia is very competitively priced and its performances to date would indicate that its success is assured.



Underside showing full length fibreglass chassis