

# Junior TWO

**Regular RCMC club racer**

**John Cundell checks out**

**the Losi Junior Two**



**T**he Losi Junior Two comes from one of America's and one of the World's leading manufacturers of R/C cars. It is designed as an entry level two wheel drive model at a price to encourage newcomers into our hobby, but still to give adequate performance straight out of the box which will not disappoint the buyer. There is then the added bonus that many of the hi-performance Team Losi parts as found in the winning JRX-PRO kit can be added at a later date to improve performance. The Junior Two has been raced successfully in the States

against the best stock class racers in Southern California and has won a number of events. As the pedigree is obviously there for a winning car, let's take a look in the box and see what one gets in an entry-level kit!

### In the Bags!

In common with almost all R/C car kits today, there are a number of component bags, each one containing the bits and pieces to assemble a certain part of the car. There are, of course, wheels and tyres, the former nicely moulded and lightweight, the latter very similar to the well respected Losi tyres so valued on the JRX-PRO car. The other major items in the box are the body/wing in the usual Lexan, a functional, unpretentious but certainly not ugly shape; and the part that the whole car depends upon, the chassis. To keep prices down, this is not a layed up graphite unit, but is a moulded chassis which, according to the instruction manual, has been in development for some eighteen months, resulting in a stiff, strong, unit which is surprisingly light.

The instruction manual is

well produced, and as well as the expected step-by-step exploded drawings, there are sections covering safety notes, tools required, tuning tips and a Spare Parts List. One has to consider that this is designed as an entry level

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car, so I would have been concerned if this information had not been included. There were one or two slight identification problems with a few components, but nothing serious enough to cause problems in assembly, and the drawings were very precise and accurate.

No great problems were experienced in the initial assembly of the front and rear bulkheads, front and

rear shock towers, bumper, battery box and front A-arms. Most of these components are held together with socket head screws and flat head screws, with the A-arms swinging on steel pins secured by E-clips. As per most R/C cars these days, the E-clip still reigns supreme. I suppose we all get used to handling these little beasts sooner or later, but I do wish there was some alternative. They can be particularly daunting for the newcomer, but at least Losi do supply you with a number of spares in case of loss or damage during assembly! The battery box is also fitted at this stage - well it isn't really a box, but a pivoted clamp type holder which restrains the stick pack in a fore and aft direction on the chassis moulding.

### Suspended Twisty Bits

That brings us on to Bag 'B' which contains all the front suspension and steering parts. Once again there is extensive use of E-clips, but with care and patience the whole thing goes together with little trouble, and the drawings are clearly marked to ensure that left and right

handed parts are not confused during assembly. The camber angle of the A-arm and wheels is controlled by an adjustable rod and substantial plastic links in the usual manner. Similar links are also used to control the rear camber rods, and the front tie rods. To enable the builder to initially set up the car to a neutral setting, a useful set-up tool is provided

A steering servo is fixed to the chassis with double-sided tape, provided in the kit, and above this a moulded front stiffener strengthens up the whole front end. Even though we were using a normal sized servo, there is not a lot of room here, so make sure

**Front suspension gives long movement. No front bumper in the kit as is the current trend.**



to ensure that all the requisite rod lengths are as recommended.

**Losi's Junior bodyshell is to a reasonable standard but lacks sharpness in detail. Five spoke wheels are tough, light and look good too!**

everything is properly lined up before sticking the servo into position. It is probably a good idea at this stage to carry out the initial checking with the radio equipment set up.

### Geared Up

The gearbox is a very nice

piece of engineering. The plastic box is in two halves, and is moulded with more than adequate stiffeners. This is the only area in the car where ball races are supplied, and with the precision moulded gears, a very smooth box can be assembled. However it is

important to take note of the instructions, in particular those concerning the assembly of the differential. There are many small ball bearings to be mounted in the main differential gear and the thrust assembly has a number of special cone washers which must be located in the

correct sequence to ensure correct operation of the differential unit. A special grease is supplied for the differential which has been formulated by Losi specifically for this use.

Once the gearbox is assembled and checked for free operation, the aluminium

motor plate helps pull the whole box assembly together making a strong, rigid unit.

The next stage is to make up the universal pivot joints by inserting a spirol pin into the metal joints using a pair of pliers. This is not a particularly easy task for the most experienced modeller, and for an entry level car is probably asking a bit much. The next stage, that is inserting the completed pivot joint into the drive shaft is also quite difficult, but here Losi have supplied a special

using E-clips! One then also gets further practice in assembling more universal pivot points, this time on the outer male drive shafts. All that remains is to make up two more adjustable camber rods, insert the shafts through the hub carriers, and the whole rear suspension unit is complete.

### In Shock!

Bag 'E' contains the shocks. Team Losi shocks are well respected for their

performance and simplicity, and these are no exception. The most difficult area of any shocker, or damper, as we call them on this side of the pond, is where the piston rod passes through the seal and the provision of volume compensation to stop hydraulic jamming, or conversely, lack of oil causing ineffective damping. Losi have designed a cartridge

compensator unit which is pre-assembled, so all that is necessary is to feed the piston rod through the compensator, after lubricating same with the damper oil supplied, fixing the piston - making sure the tapered holes in same point in the direction as specified in the instructions -

**Plastic chassis is strengthened up by means of a top brace. Neat battery clamp can be seen in the background.**

with, wait for it, E-clips, (you should be getting pretty adept at handling these by now), filling the container and screwing home the compensator. All four dampers worked beautifully. They can then be connected to their respective mounts on the top of the front and rear bulkheads and attached at their bottoms to the A and H-arms.

### Rotating Bits

The inside of the tyres are inspected for flash and cleaned up if necessary, and pulled over the wheels. Front wheels run on two plastic bushings pushed into both sides of the wheel hub, and are secured with a nylon nut. The rear wheels are located with 1/16 by 7/16in pins and also secured with nylon nuts.

### Other Bits

Bag 'G' contains all the odds and ends which

facilitate fitting of body, wing, gear cover, antenna and motor mounting. The Lexan gear cover is secured to the motor plate with a tiny button head screw on one side,

which is easy to fit, but on the other side a nylon nut is utilised and it is very awkward to fit. This is going to be somewhat of a pain every time a pinion change is made, and may well tempt some to leave this part off, not only bad practice in terms of creating inefficient

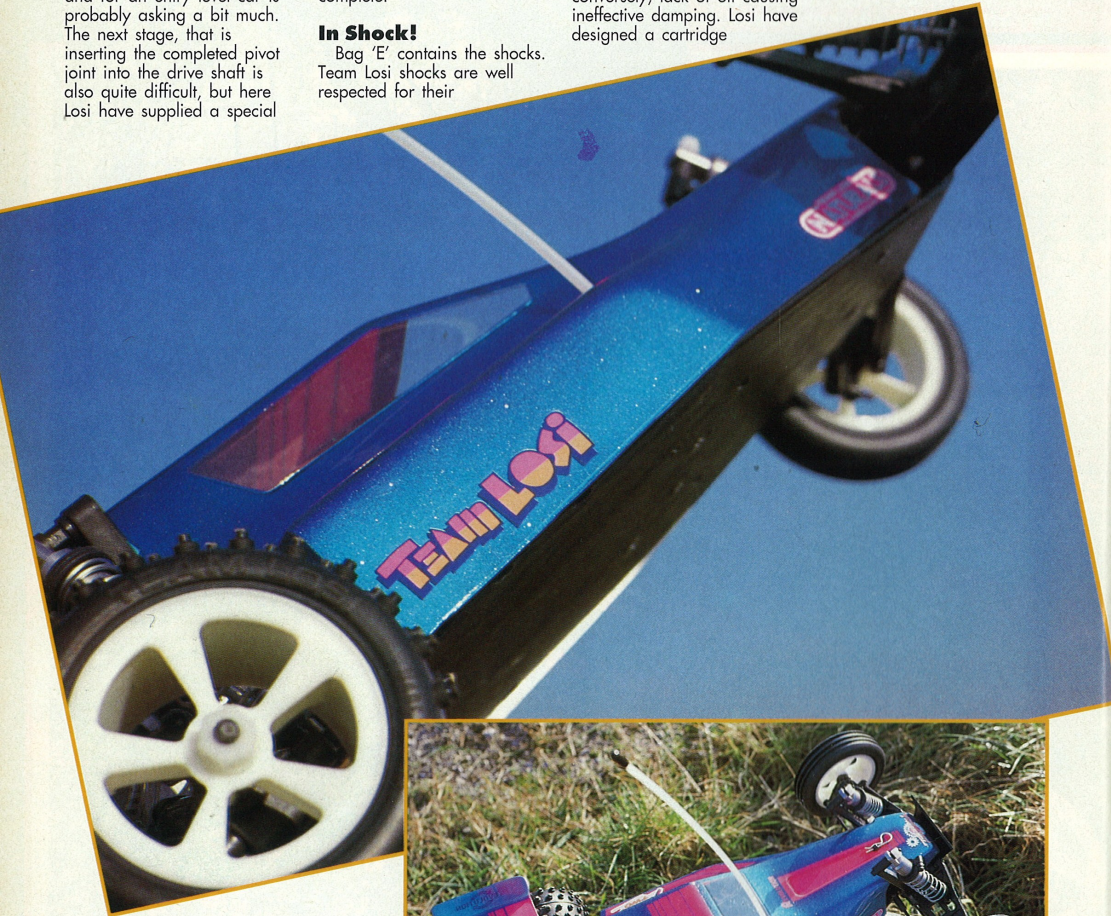
performance due to dirt getting into the gears, but also dangerous to marshals.

The Lexan body is well marked for trimming and a nice touch is the supply of window masks to aid in painting. The wing is fixed to a substantial piano wire frame with Losi's clever wing buttons.

### R/C Installation

There are no specific instructions concerning R/C installation and this is left to the individual. There is enough room in the moulded box areas at each side of the

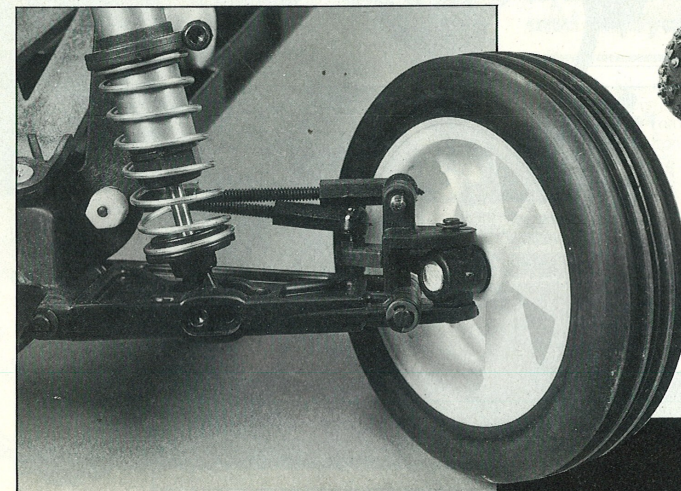
**Front suspension features alloy stub axles for minimum unsprung weight. Soft ribbed spikes and pinspikes are supplied as the kit tyres.**



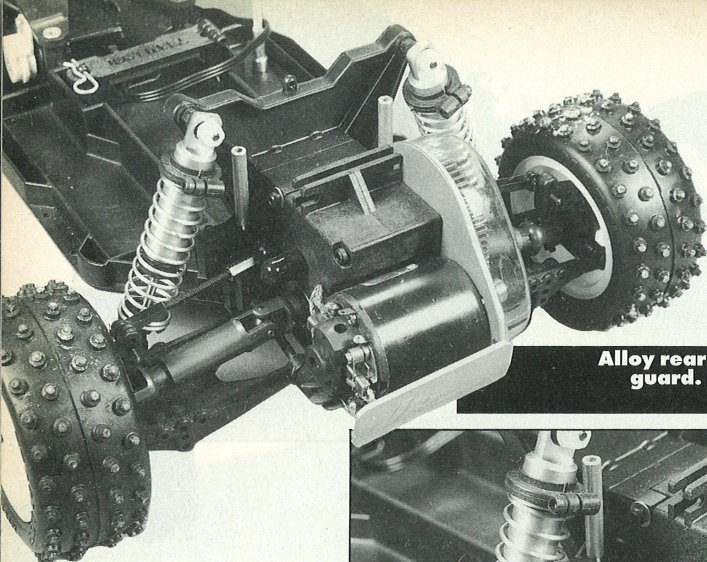
wrench in the kit to ease this somewhat awkward operation.

### At the Back

The rear suspension consists of a hub carrier swinging on a pin suspended across the end of a H-arm, the latter being itself pivoted off two moulded brackets on the rear bulkhead and a substantial support arm. Again there is plenty of scope to practice

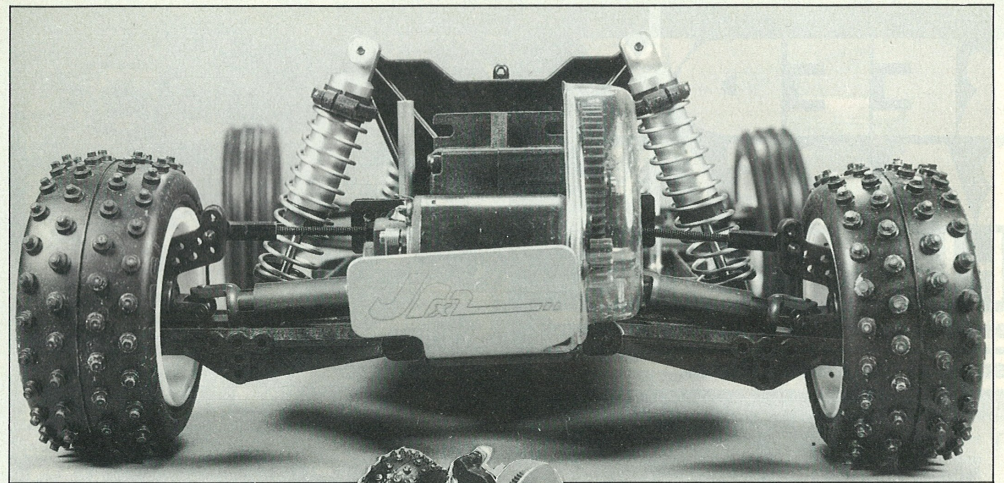
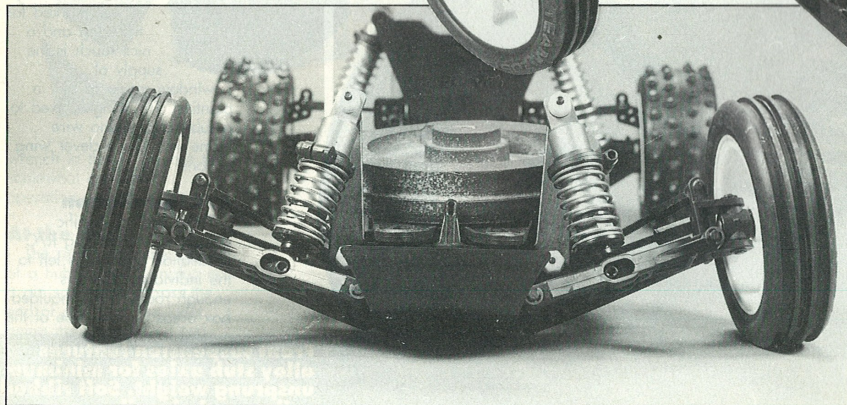
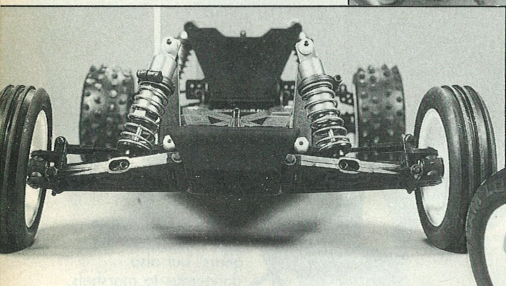
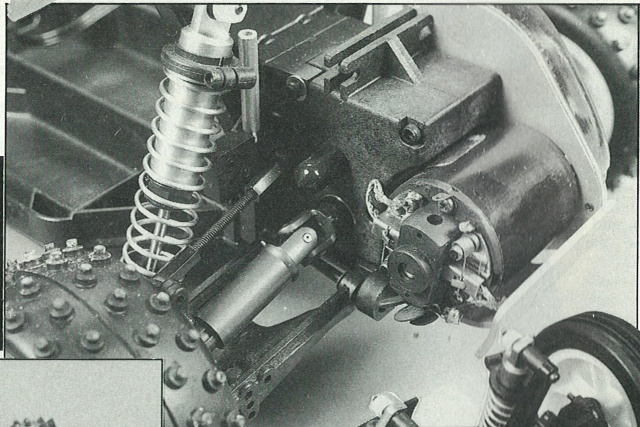


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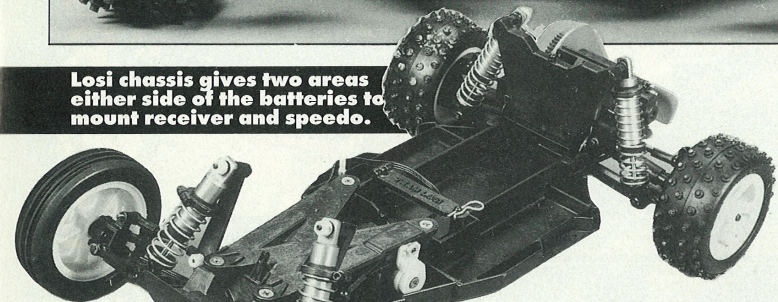


Alloy rear motor pod also doubles as rear guard. Clear lexan cover is supplied to protect gears.

Plastic drive shafts cut down the weight. Wheels are secured using Nylon nuts. Below; two positions are given for the front shocks on the suspension arm.



Losi chassis gives two areas either side of the batteries to mount receiver and speedo.



**'the assembly of the Losi Junior Two was very straightforward and enjoyable.'**

batteries to take most small modern receivers and the speed controller can be fitted vertically on the front face of the rear bulkhead.

### Final Bits

The motor pinion supplied has 14 teeth and meshes with the 86 tooth wheel; pitch is 32. A chart in the instructions gives advice on the selection of pinions to suit various Losi motors, ranging from 15 to 23 teeth, so the provision of a 14T pinion seems a bit conservative as a starter. More on this when we get some practical experience on the track.

Adjusting the differential is easy and simply entails

tightening or loosening the differential adjustment screw with the key provided. The instruction book gives some useful advice and information on setting up and tuning the diff for the best performance under varying conditions.

It is possible to adjust camber, front and rear, ride height, and of course toe-in/out, and again the instruction manual gives useful information on setting up and tuning, plus advice on damping.

### In Conclusion

Apart from the one or two minor points mentioned, the assembly of the Losi Junior Two was very straightforward and enjoyable. Most areas will be easy to work on as regards maintenance, and the whole car gives one a feeling of well thought out design and engineering, as would be expected of course from a company with the pedigree of previous World Championship winning cars.

The only reservations we have are that the car is not fully ballraced and yet costs around £130 mark, not too cheap when you consider what else is available at the moment.

The proof of the pudding will of course only be determined on the track, and we will be back with a full report in due course.

The Losi Junior Two is imported and distributed by Central Models, and the price is £129.95

Losi Two requires just a set of ballraces to bring it up to a very high spec chassis.