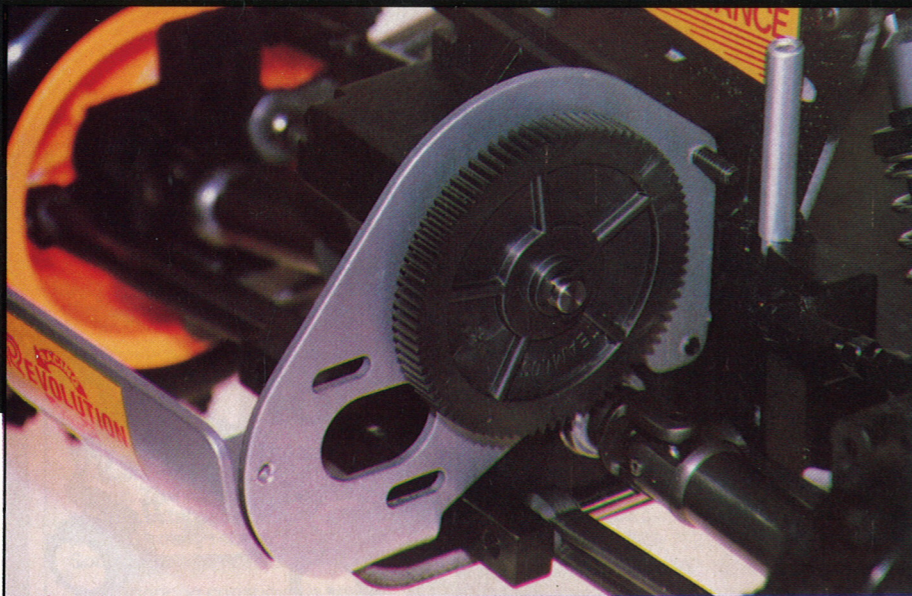
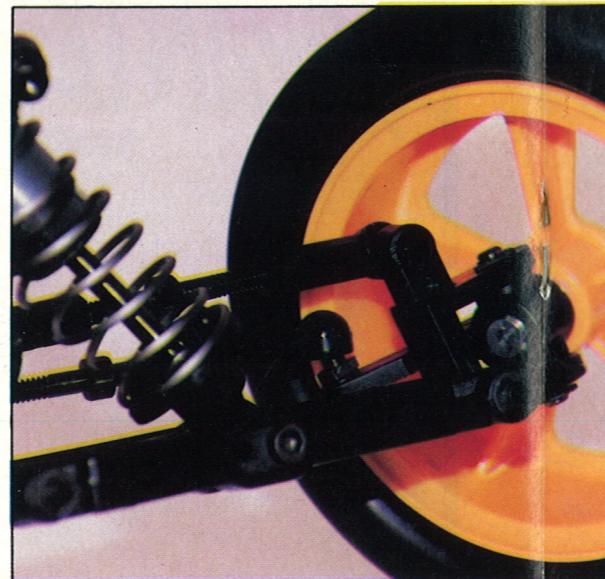
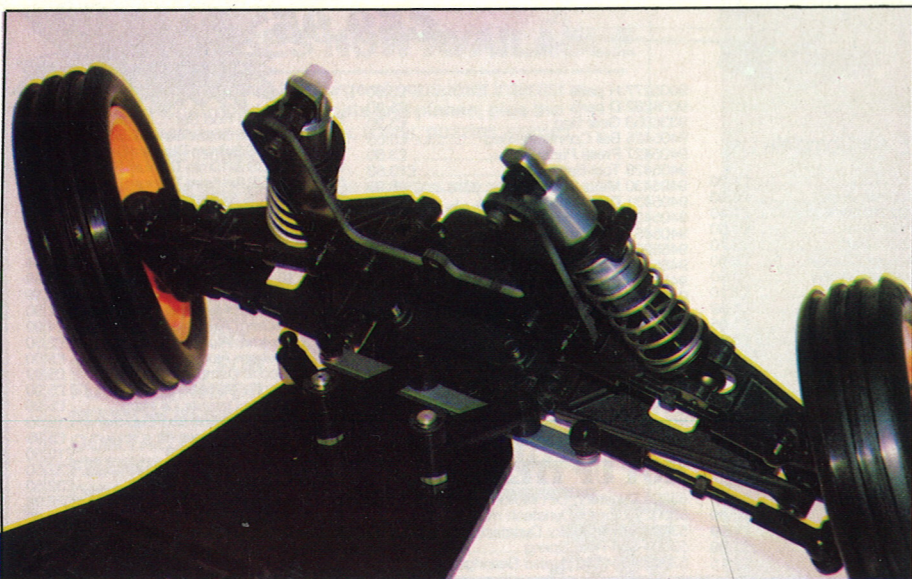




Schumacher type universal drive shafts are employed and are without doubt the best choice.

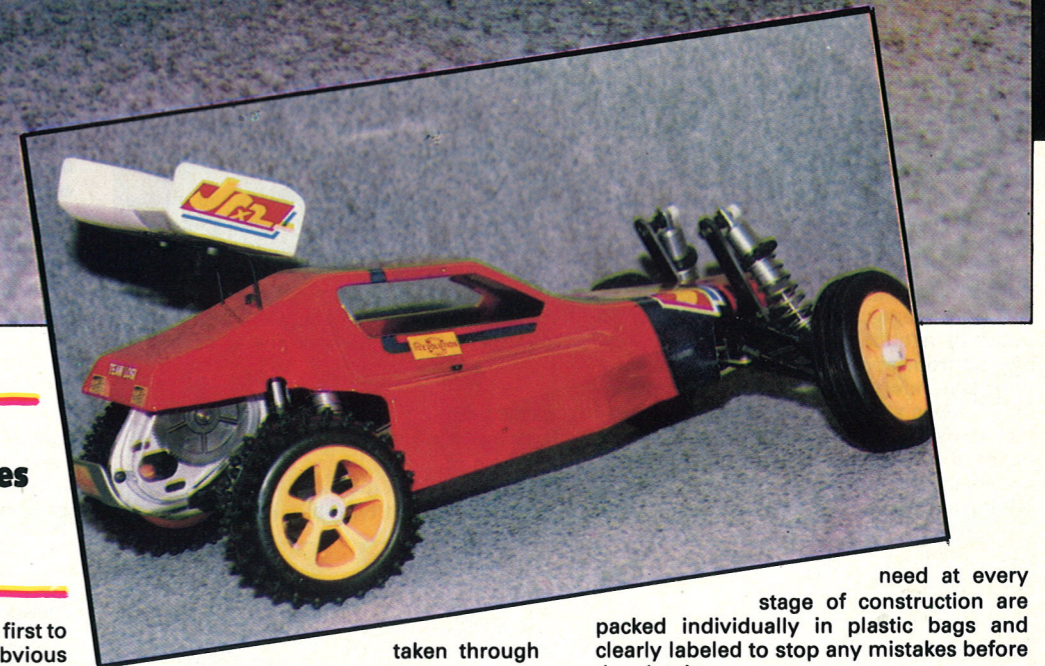


Above, spur gear and motor mount. Motor mount and guard is manufactured from high grade aluminium and provides an excellent heat sink. Below and right, ferocious amounts of lock are available, just what the doctor ordered. Aluminium stub axles are used on the front to keep unsprung weight to a minimum.



### The best yet, or just another hype? RRC takes the lid off Losi's new JR-X2

Someone has always got to be the first to do anything, that is perfectly obvious to us all. Whether it is always wise to be the first only time and history can tell. Losi have, by producing the JR-X2, been the first to manufacture a 2WD car that retails at around the £175.00 figure, which is arguably a great deal of money. However, the argument must go a little deeper than that as just to dismiss the car solely because of its price would be nonsensical. Exactly what then does your £175.00 get you. First and maybe the best thing it buys you is close to three years development time by the factory. Three years in which the car was raced and rebuilt, raced and rebuilt again and



taken through several design changes in order to provide just one thing, the end user, you, with a car that is as competitive as anything else in the world straight from the box, no extra add on or go faster goodies are needed with a JR-X2 you already have the best! Well that is indeed the theory, does it stand up in practice we built one to find out? The first thing noticeably different to most other kits on the market is the lack of blister packs and fancy marketing techniques displaying components inside the box that you so often find these days. Instead the components that you will

need at every stage of construction are packed individually in plastic bags and clearly labeled to stop any mistakes before they begin.

#### Construction

To use the word construction is quite misleading as the car is so accurately manufactured it really only leaves you with an assembly job to do, you are even aided in this as Losi provide the three allen keys that you will need to construct 80% of the car, all other fixings (14 to be precise) are aluminium cross point self tapping screws. Assembly begins with the chassis, a carbon fibre item of top quality, the chassis provided is by far the thickest that this writer

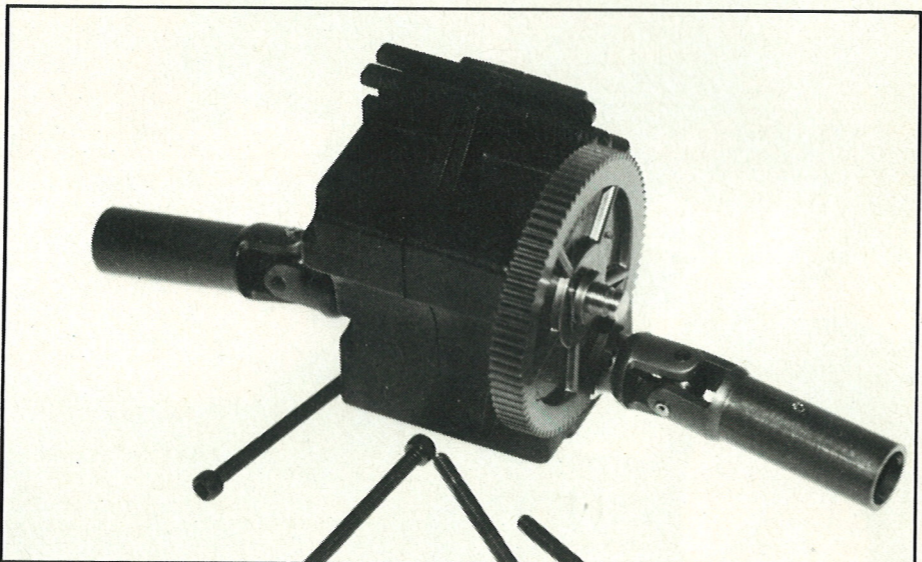
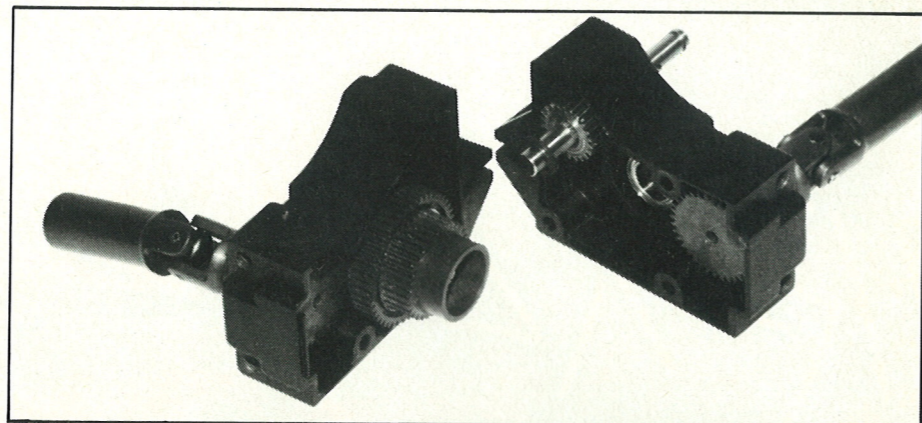
has yet come across needless to say the result is a strong, completely flex free platform to build the rest of the car around.

Front uprights, wishbones and steering components are next to be added. Uprights and wishbones are housed in or on a glass or fibre filled nylon toe plate again in order to soak up the stresses imposed during today's racing or the impact force of another driver trying to take your front end off in a moment of stress and confusion! Front axle blocks are once again manufactured from a glass fibre filled plastic and again are remarkably strong yet flexible and hold in place the aircraft grade aluminium stub axles beautifully.

Steering action is provided through a bell crank and slave arrangement that has been worked out and manufactured by Losi to give a smooth action and just the correct amount of ackerman effect to the steering as later tests were to prove. One point that shouldn't be missed here is that it is impossible to induce any bump steer at all throughout the entire travel range of the front geometry. Both top links and steering tie rods are of the single action variety that allow all ball connectors to be left on the car whilst any toe in/out or camber adjustments are being made, the advantages of this type of link are obvious and need no explanation.

**The Business End**

This is where the JR-X2 differs from just about all other cars on the market today, the rear suspension layout really is in a class of its own. The technology has been around for quite sometime but never put to practical use on any production r/c car until now. A trailing arm, five point suspension set up is used to iron out just about any bump that the JR-X2 has to deal with. Those drivers that look at other drivers cars may have noticed that some of the more successful amongst us employ a technique known as anti squat or kick up, especially on two wheel drive cars. What this means in real terms is quite simply this, without anti squat the car hits a bump and the wheel is forced to move upwards, upsetting the balance and therefore handling characteristics of the entire chassis. If anti squat is introduced it simply means that the wheels angle of attack in relation to the ground has been altered from approx 90 degrees to something less, now instead of the wheel moving up it moves slightly backwards and therefore transmits less of the shock upward to upset the handling characteristics. Now comes the interesting bit, there is a snag in adding anti squat the home developed way,



by lowering the rear mounting point of the wishbone or tilting the gearbox backwards by using wedges you are also introducing an effect that puts the wrong contact area on the ground, this can affect both grip and directional stability.

The Losi trailing arm set up has all the benefits of an anti squat system as it does transfer all the suspension loads rearwards rather than directly upwards, the system also has none of the drawbacks as the true bottom of the tyre is always in contact with the road surface, always giving optimum grip and stability.

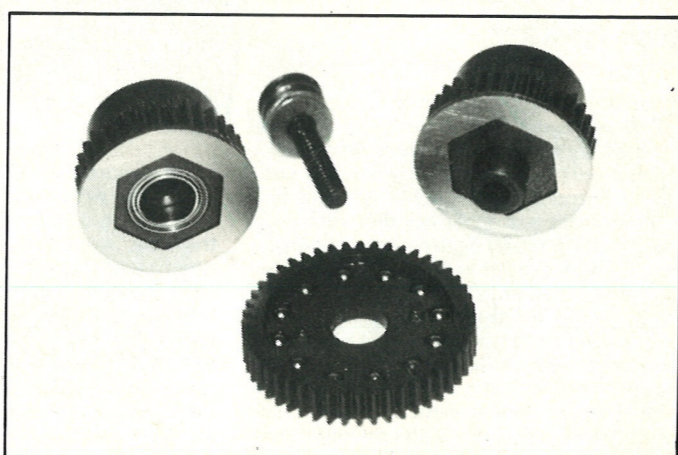
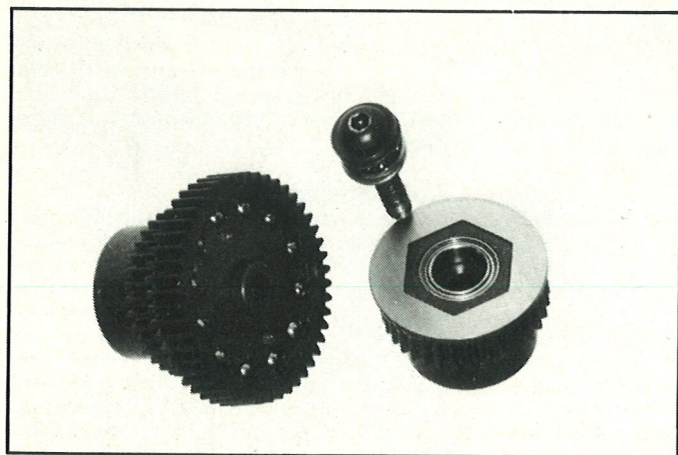
**Gearbox**

Here again we see a different approach to a couple of old problems first the differential itself. A quick glance will show straightaway that a ball type diff is used, what it

Top gearbox internals, neat no fuss efficiency.

Above Schumacher type drive shafts transmit all the power you can get your hands on.

Below, the differential that caused so much head scratching, in real terms it is super smooth and completely unbreakable, but go easy with the Losi grease.



will also show is that the retaining holes in the centre gear are not round and they do not lie directly one behind the other. I am sure that Losi have their reasons for this but do not know exactly what they are. However a stab in the dark explanation would go something like this. First let's deal with the square holes as this choice of bearing seating in retrospect should have been fairly obvious to all of us. If you put a sphere inside a square then there is only four points at which the sphere can make contact with the square. Whereas the present method of a sphere inside a circle has a contact point of the whole circumference of the bearing, it's easy to work out which system has a higher friction coefficient.

Now the second half of the explanation goes something like this and if anyone knows any better then please let R.R.C. know.

In order to manufacture the gearbox as small and lightweight as possible the centre gear has to be rather compact, this automatically positions the diff bearing toward the edge of the gear. This would tend to make the edge of the gear weaker if round holes were used, simply because a round hole uses more material than a square one!

Of course there is always the third theory, the one that says if you do something unusual then some half baked reviewer will make an idiot of himself trying to invent reasons why you did it, if that was it then congratulations Mr Losi I just did! Whatever the real reason the differential is ultra smooth and adjustable from the outside.

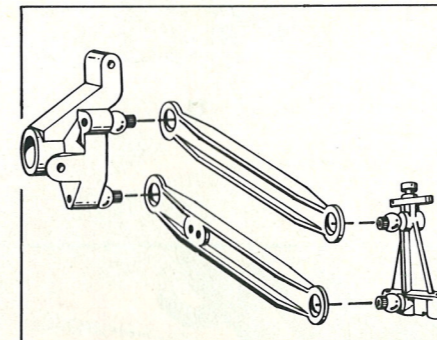
All the bearings that you will need are supplied in the kit and are very high quality indeed. Drive is transmitted to either wheel along universally jointed sliding shafts similar to those on the Schumacher C.A.T., all in all the wisest choice that could be made as any C.A.T. owner will tell you.

Shock absorbers front and rear are aluminium housed coil over oil type and incorporate stainless steel springs, the shocker action is very smooth and progressive throughout the travel range. One impressive fact concerning both shockers is that all O rings are carried inside a sonically welded, sealed bushing this makes not only for easy maintenance but for easy replacement when the inevitable happens, no fiddling about just unscrew one housing and screw in another.

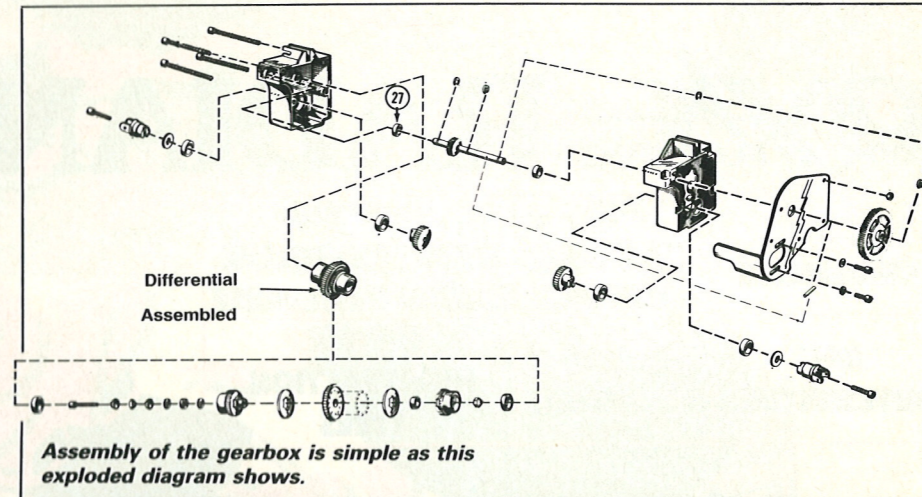
Well there we are then just about built, radio gear is of course your choice but Losi even provide a threaded actuating arm.

**Pudding time again**

The proof of any pudding is in the eating, or so they say, however as we did not intend to eat the JR-X2 we decided to drive it instead, what follows is the initial reaction. After hearing of Jason Varley's exploits with his J.R. straight from the box, namely that of taking T.Q. first time out it was decided to really test both car and driver and using a very high draw seventeen double the car was thrown around heavily for some seven and a half minutes before it started to loose power, enough said about the free running abilities, now how about the handling qualities. After a little spring rate adjustment was done the car began to handle superbly suffering no detectable under or oversteer just being that long sought for neutral that instils confidence in any driver, bumps and ruts are coped with easily by that five point trailing arm, lock available is more than adequate and much more than



Losi's trailing arm rear suspension set up looks different and works very well.



Assembly of the gearbox is simple as this exploded diagram shows.



You can win a JR-X2. Find out how in next month's Radio Race Car. Don't miss your copy, order it now.