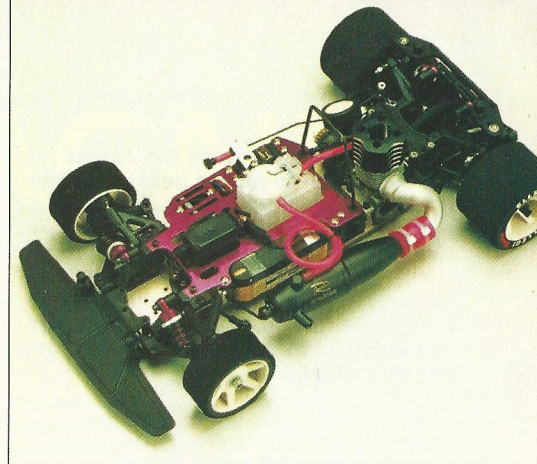


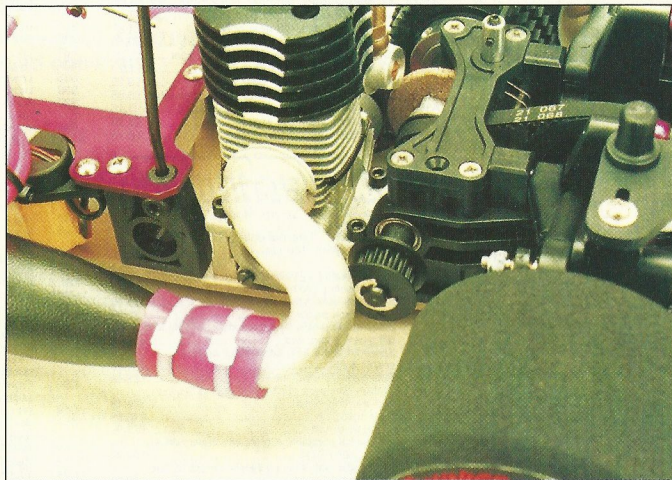
Mugen K2-X 295

1/10 1/C CIRCUIT CAR



Literally a miniature 1/8 car, the Mugen is very smart, well laid out, and for the price offers a good introduction to the ballistic sport of 1/10 IC racing!

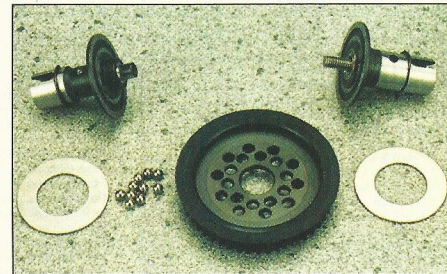
Over the last five or six years or so, Mugen have become well known for producing high performance 1/8 IC Off Road (or RallyCross as we call it) cars, but what a lot of people do not know is that the first R/C model car they produced, some ten years ago now, was in fact a 1/10 Electric Off Road electric buggy. Well, things have turned full circle as they've now made another 1/10 scale car, this time powered by an IC engine and designed purely for On Road racing. Called the K2-X295 (the shell pictured is mounted on the 4wd version, hence the X495 designation), making it sound either like something out of Dr. Who or a mountain in the Himalayas (!), the car is certainly worth more than a cursory look.



The disc brake cam is supported by a sturdy top plate, which also serves as the bracing for the rear transmission/suspension mountings. The fibre disc and brake pad back plates can be seen here. The pulley under the exhaust manifold allows easy conversion to 4wd.

In Japan and the Far East, On Road, and in particular 1/10 IC racing is all the rage at the moment, and most of their manufacturers are getting in on the act and producing models for this scale of racing. In Britain, the Class has strict rules to limit the cars to 2wd, and to control the specification and cost of engines and fuel, quite commendable in our financial climate, but in Japan there are far fewer restrictions, and therefore 4wd cars with eight port engines are quite acceptable.

To all intents and purposes, 1/10 IC circuit cars are just smaller versions of their 1/8 brothers, so this kit review is therefore of a car that has as standard all of the features associated with a sophisticated 1/8 circuit car. In this respect it succeeds admirably, and although it does bear an uncanny resemblance to



The ball differential is totally conventional in design, and simple to assemble and adjust.

another popular chassis, this isn't altogether unsurprising, as the top 1/8 (and 1/10) cars seem to have recently all gone down the same path of development regarding geometry, layout, shock mounting angles etc. The asking price is extremely attractive at well under £300, so by the time an engine and pipe, manifold etc., has been purchased (buy them together from the same shop and you'll probably get a good 'deal'), for around £465 or

so you will have the car and the motive power, leaving just the radio, bodyshell and starter gear to purchase, plus some alternative wheels fitted with different grades of tyres. The usual dry weather set up is either 40° (or occasionally 35°) front tyres, with 25° or 30° rears, and that's all you need. A competitive package can thus be put together for around £570 or so, making the Class quite attractive for those wishing to race at ballistic speeds without spending a fortune.

Open The Box

On opening the box, you will find that all of the parts are bagged in their relative assemblies, with all of the necessary nuts, bolts and screws included to assemble each particular item grouped together. Before you keenly tear into the bags, I would suggest that you fully read the instruction manual, which is full of very good

illustrations and setting up tips. A raw beginner should be able to build the kit OK, as the manual really is very comprehensive.

I started on the rear of the car first; the differential, suspension, two speed gearbox and disc brake. The diff is of the 'ball' type, and is very simple to assemble and adjust. The diff halves have the faces that grip the diff rings rebated, therefore the mating surface is smaller and thus 'grips' harder. Spinning diff rings shouldn't be a problem with this car! The two speed gearbox of the single pawl type, making it easy to assemble and even easier to set with its single point adjustment (more on this later).



Far Eastern Flyer!

The 'business end'. Note the colour coded, screw-on pinion gears, and the neat moulded housing for the foam air filter. The flip-top tank's lid is situated near the tank's front, and is therefore easily accessible through a saloon car windscreen for quick pit stops. The rear body mounts transmit any downforce generated directly to the rear wheels.

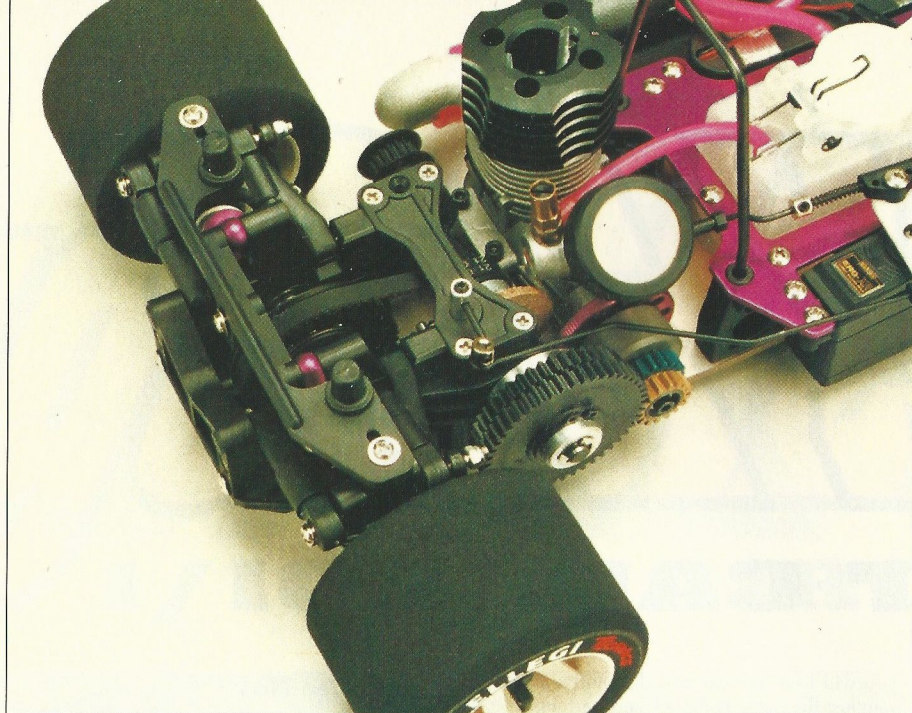
The disc brake is made of Ferodo type fibrous material, which works very well. First though, I decided to reinforce the edges by soaking them in superglue. This helps to stop any fibre type of disc from breaking up and gives them a reasonable life span. The rear suspension was then built up and the quick release rear wheel catches fitted. These are very handy devices when quick wheel changes are required, for instance during a Final or in practice. The suspension uprights and suspension arms are fitted with captive ball joints so that the camber and toe-in angles can be adjusted independently. I followed the instruction manual for all of the initial settings. The rear end was now complete, so was attached to the 3mm thick alloy chassis with six countersunk screws.

In the 4wd version (OK in Britain for 'beginners' Club racing but definitely frowned upon by the BRCA for National competition) the front axle is driven by a toothed belt from a centrally mounted layshaft. This in turn is driven by another belt that runs behind the engine from the two speed gearbox shaft. As this review is of the 2wd car, we'll say no more! The front suspension, like that at the rear, is fitted with ball joints so that the camber angle and track width can be adjusted. After assembly, each side of the front end was fitted, completing the basic rolling chassis.

The engine mounts are ready drilled and tapped to suit the popular Nova Rossi CX 15 engine, so this was the obvious choice, complete with the Nova Rossi tuned pipe and manifold. A very neat little air filter is supplied in the Mugen kit, but to ensure proper filtration, don't forget to coat the filter's foam with air filter oil.

The clutch used is of the conventional three shoe type, and I must admit looks exactly the same as the one used on the Mugen Athlete 1/8 Off Road car, so it should be more than man enough for the job! The clutch bell features 'screw on' pinion gears for the two speed gearbox, so this enables them to be changed easily, either as replacements or for gear ratio alterations.

The radio gear was then fitted to the smart anodised alloy top plate, along with the fuel tank etc.,



and then the whole assembly was attached to the car. All that was left to do then was to glue and true the tyres and spray the bodysell.

Altogether, the kit went together with no difficulties whatsoever, and the finished article is certainly a smart looking car.

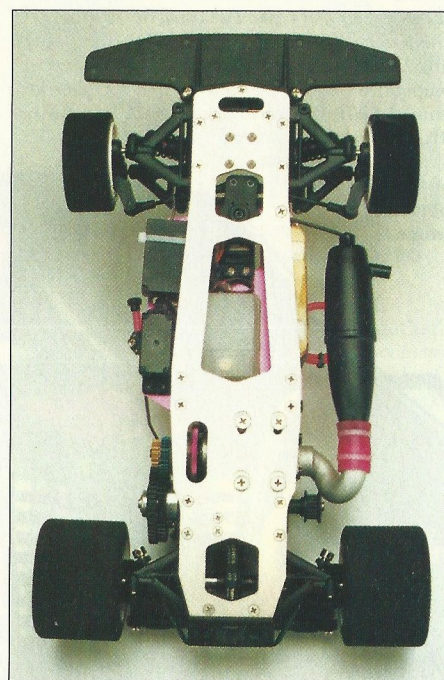
To The Track... (where rain stopped play)

Off I went to a Club meeting to try out the car. After running the car around gently to loosen the engine up a little, the Mugen was progressively 'given more stick' and the gearbox adjusted 1/8 of a turn at a time until it changed up about 1/4 the distance down the main straight. Everything else seemed OK, so the suspension settings were left as per the instruction manual. The kit tyres gave a slight degree of understeer, but because at the time we didn't have any other wheel/tyre combinations to try, we had to make do with what we had.

Unfortunately the heavens soon opened, ending our day's racing as we obviously didn't have any suitable wet weather tyres and it rained for the rest of the day.

The use of captive balljoints at the top and bottom means the front suspension geometry is fully adjustable for both camber and track width. Note there are two alternative

outer pick-up points for the coil-over shocks.



The 3mm alloy chassis features fully recessed motor mounting screws, housed in cup washers, and the minimum of lightening holes for rigidity.

So, unfortunately we had a rather inconclusive first testing session, but in the short time we had with it on the track, the impression we got was of a stable, solid feeling car. I gather that in France the Mugen is growing in popularity, with some of that country's better IC racers choosing to run it in preference to the more established marques just to be different, so it can't be bad!

To sum up, I think the Mugen K2-X295 is a well designed and produced car that promises extremely good performance, especially once a core of drivers have got together and learnt how to get the best out of it. It has performed well in the Far East in its 4wd form, so it will be interesting to see how the 2wd version, produced for the European market, fares in the heat of British competition.

The Mugen K2-X295 is available either from the importers/distributors: Ted Longshaw Model Cars ((01689) 855313, or from your local model shop.

