

CHRIS FIFE-SCHAW

# FORMULA for fun



GP loaded with receiver battery pack, servos and wheels.

## Kyosho Volvo 850-electric and gas powered kits

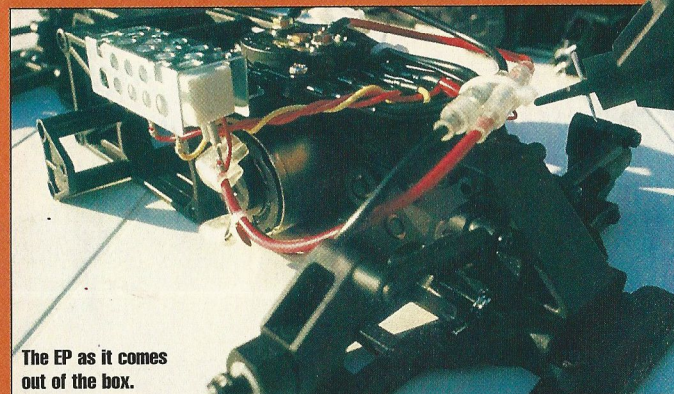
# Gas or electric?

**W**hen Chris the Ed asked if I would like to do a double review of these Kyosho Mantis chassis kits I was particularly keen to get my hands on the IC

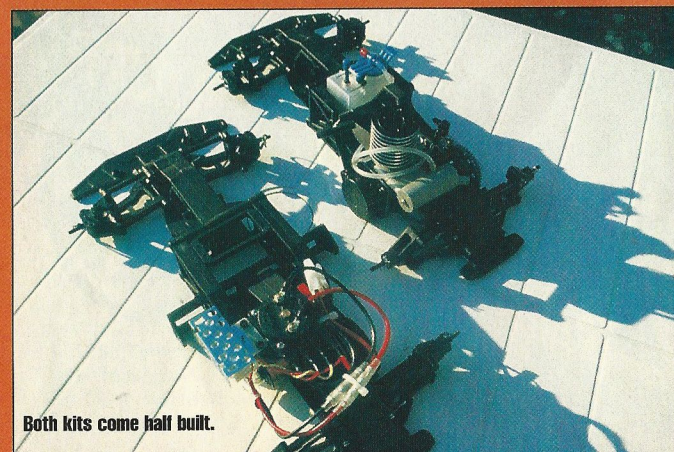
version of the kit (known as 'GP' for gas powered in Kyosho-speak), since I had never owned one of these things myself. I had driven other people's IC cars and pitted for them at meetings but never had to deal with the whole ownership experience myself. It has to be said that one of

the reasons (apart from poverty) that I have not bought an IC car in the past is that they have a reputation for being difficult to get started and set

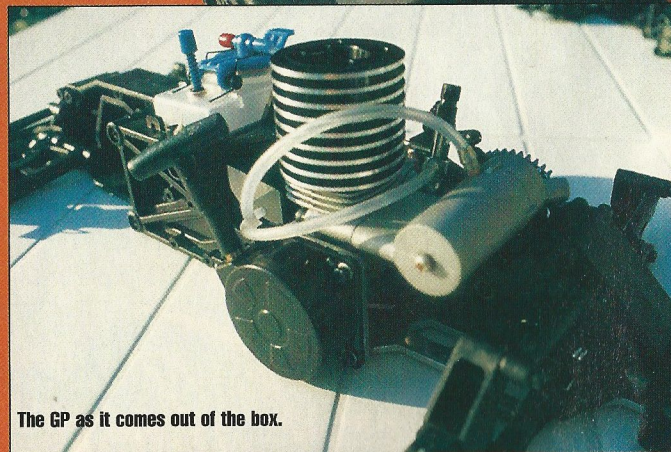
Fuel priming is achieved with this plunger.



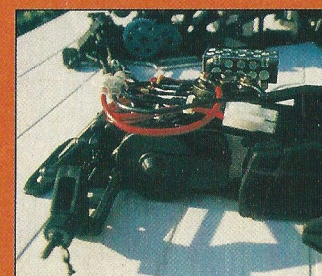
The EP as it comes out of the box.



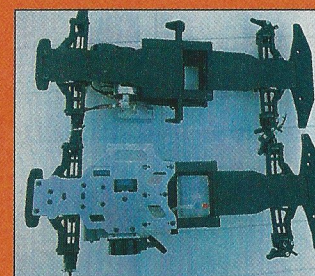
Both kits come half built.



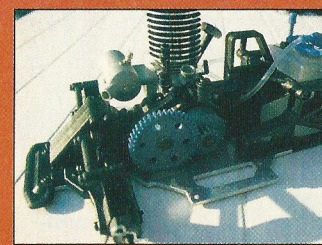
The GP as it comes out of the box.



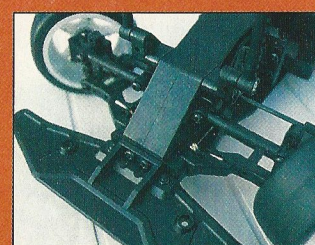
The EP's mechanical speed is very smooth for such a unit.



Both cars share a lot of common chassis parts.



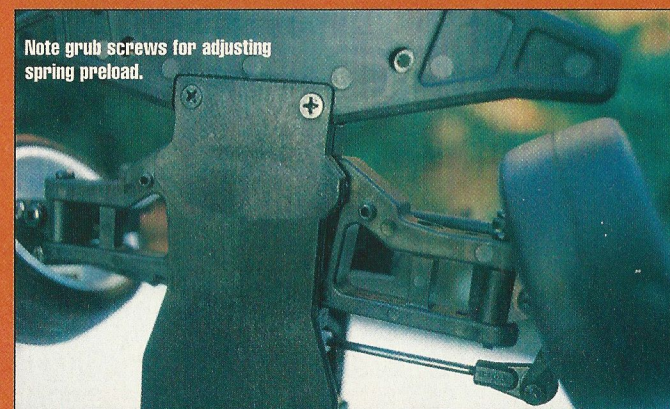
The GP comes with a plastic 14T pinion that can be changed for a 15T or 16T.



Front end detail.



The other bits you get in the boxes.



Note grub screws for adjusting spring preload.

up properly. The noise and smell of IC obviously have more in common with 'real' race cars and that is an undoubted attraction. However, you often see IC races start with a full grid only to have a couple of cars still running on the track at the end of the race. Electric cars are much less hassle, cleaner and much more reliable so now I was to be presented with the chance to see if I could be tempted by the IC bug. Would it be reliable enough to make me change my mind?

### What you get

Both cars come with about half the assembly done for you. With their power plants already in place and in the case of the electric powered (EP) car you get a very good quality mechanical speed. Many of

the chassis parts are shared which ought to reduce production costs and make buying spares cheaper.

Both cars come with the same body shell and decal set and the same wheel and tyre combination. You get a pair of 'hard' tyres for the front and 'softs' for the rear - make sure you get them round the right way as there are no moulding marks to tell you which is which, though you do get some decals which you can apply to the wheels once the tyres are mounted later on. Note that you must glue the tyres on as they won't stay on if you don't!

Ride height and spring preload can be fine tuned via some large grub screws and the (supplied) Allen key, however there are no dampers in the kits as standard. Upgrade parts are available if you want to add dampers at a later date.

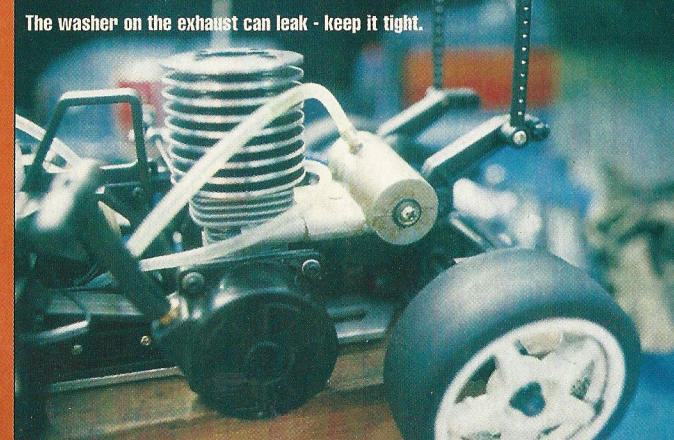
### What you don't get

Both cars obviously need radio gear (transmitter, receiver, two servos and in the case of the GP a battery box) to run and I used basic 27mhz beginners radio outfits for this review.

To run the EP you will need at least one rechargeable 7.2 volt 'stick' pack and some means to charge this battery pack. Chargers that run off the mains can be had but most people will opt for a peak detecting charger that operates from a 12v car battery.

The GP will need a bottle of fuel, a squeeze bottle for getting the fuel into the fuel tank, a glow plug heater and a glow plug spanner (strangely not included in the kit). I was surprised to find no fuel filter included (it is an optional part) as fuel is easily contaminated and grit getting in the motor is one of the quickest ways to ruin it. Since beginners are more likely to get dirt in their fuel this extra protection would be worthwhile. There is no roll over hoop to protect the engine and help you hold the car when the body shell is on.

In both cases shops will offer you a 'deal' which will contain all the things you need at a bit less than the cost of buying them separately. The only other things you will need

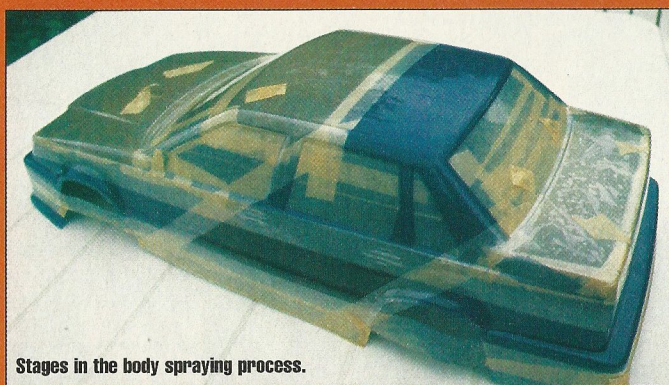
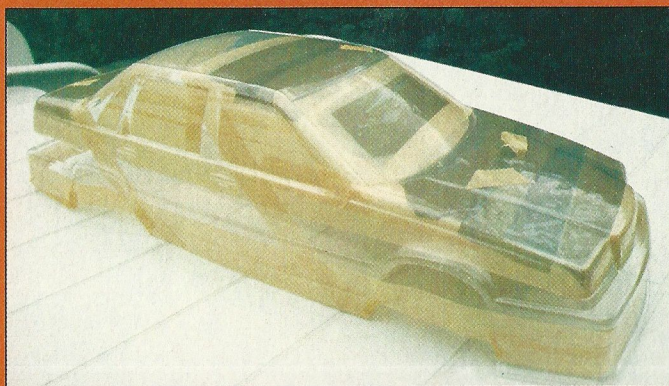


The washer on the exhaust can leak - keep it tight.

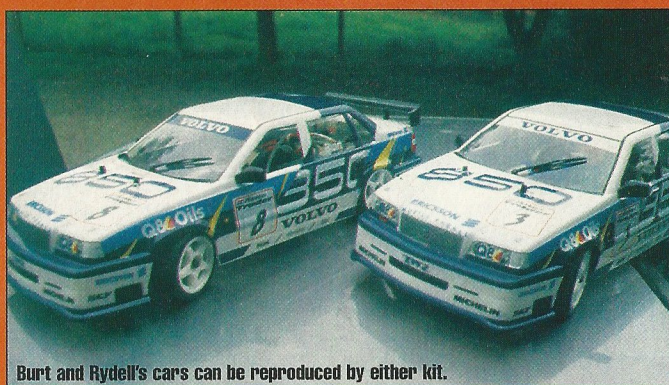


Some of the extra bits you'll need for the GP car.





Stages in the body spraying process.



Burt and Rydell's cars can be reproduced by either kit.

Volvo was especially complicated as it involved four different colours and therefore a lot of masking. Unlike Tamiya's saloon shells no window masks were provided and some of the decals had to be cut back to fit in with your (the builder's) masking. Since most beginners will want to get on the track quickly some way of speeding up the body finishing process would help. I finished the build up of each chassis and radio installation in little over an hour and a half but each body took three evenings to do properly. Having spent all that time on them it almost seems a shame to actually risk damaging them on the track.

## Before you hit the track....

Before you rush out with the GP car you have to run in the engine if you want it to work well and last a long time. Thrash it from the outset and it will almost definitely break or seize. Anticipating a lot of trouble getting my GP to start I was bowled over when it burst into life on the third pull of the starter. I simply followed the instructions supplied and it just worked. Alan Gray of Woking Models suggested that I run it in using 10% nitro fuel rather than the 16% used in the Kyosho series since it would be kinder to engine. The idea being to run a full half gallon bottle through before moving up to 16% and tuning the engine for maximum performance.

During this running in period a small washer on the muffler split causing the whole left side of the car to become engulfed in a fine mist of oil and exhaust gunk. Since I had left the car

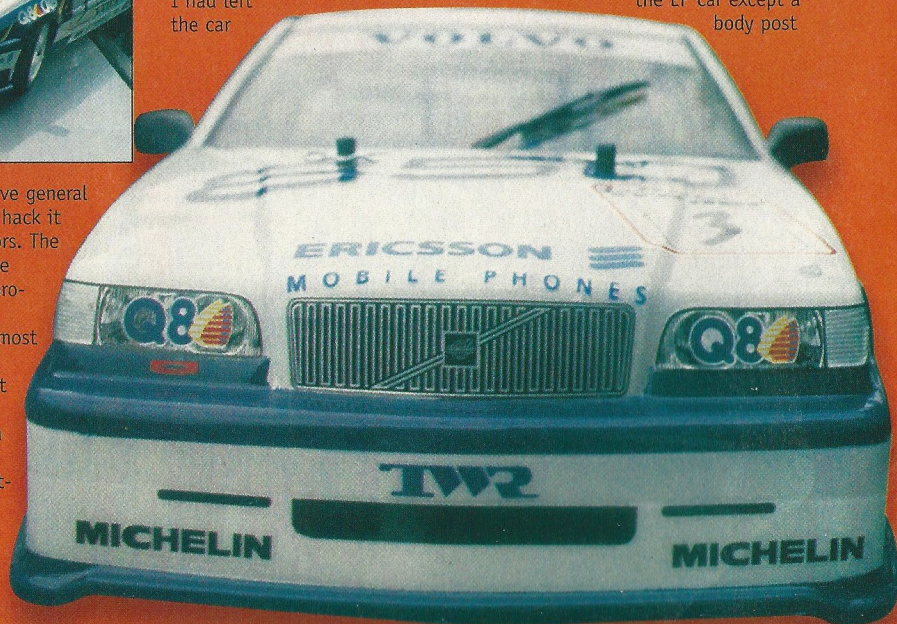
running at the bottom of the garden while I went for a cup of tea (it takes ages to get through a tank of fuel at tick over!) I came back to find my pride and joy looking decidedly second hand (and I hadn't finished



taking the photos yet!). A simple thing to replace however but keep an eye on it. Similarly, though the car comes largely pre-built it is worth giving all the screws a quick once over as the engine can vibrate these loose.

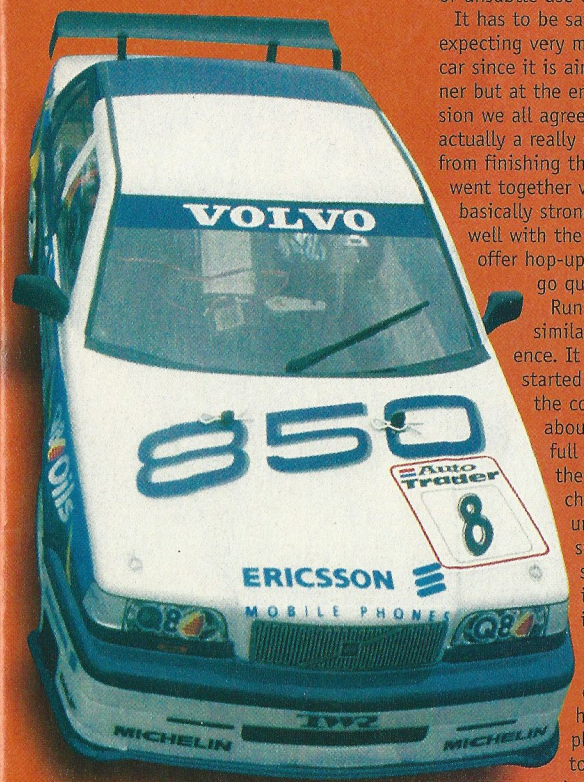
## Hitting the track

As an Aldershot club member it was a simple matter to set up a test day with my two lads and another friend. I concentrated on running in the GP car while they thrashed about with the EP version. Two of them are complete novices yet they were unable to break anything on the EP car except a body post



which is a testament to the basic strength of the chassis.

The mechanical speedo is a three-step version that works really nicely with a good progressive feel to it. Unless you intend to run hotter



the main handling characteristic. Swapping the soft tyres off the back of the GP car to the front of the EP gave much more positive turn in, though you could induce oversteer with a heavy left thumb or subtle use of the steering.

It has to be said that I was not expecting very much from the EP car since it is aimed at the beginner but at the end of our test session we all agreed that this was actually a really good kit. Apart from finishing the body shell this went together very quickly, it is basically strong and goes quite well with the kit motor. Kyosho offer hop-up parts to make it go quicker.

Running the GP was a similarly pleasant experience. It has so far always started within 2-3 pulls of the cord and runs for about ten minutes on a full tank. Like the EP the basic handling characteristic is mild understeer and a switch to running soft tyres all round improved the turn in quite noticeably. Alan Gray suggested running a larger 15T pinion and hotter No7 glow plug which seemed to stop it running out of breath at the



motors in the car this speedo is more than man enough for the job. The motor, which is Kyosho's equivalent of the good old '540' style motor, has quite a lot of go in it but was under geared for the Aldershot track. You could get impressive wheelspin off the line but the top speed down the straight was too low. A change to a larger 48DP pinion sorted that out. If you only intend running on a tighter track or car park then the kit pinion is just about right.

The handling on smooth tarmac is quite pleasingly stable. I had expected the absence of dampers to mean the car would bounce all over the place but, unless you ride the curbs too much, it was pretty stable with basic mild understeer as

end of the Aldershot straight and improved pickup out of the corners.

A trip to Ashby which is somewhat more bumpy than Aldershot showed up the lack of dampers. Around the twisty sections of the track the car handled well but hitting the bumps at high speed on the straight tended to result in the car bouncing around and off the track. This seems to be partly due to their being quite a lot of bump steer (wheels turning as the suspension is compressed) in the steering geometry which could be partially cured by reducing the ride height. We also got through 3 more



body posts here. Despite these problems I had to spend most of my time fighting to get the transmitter back off the various folk who wanted a go. Basically IC cars are a big pull and a lot of fun.

To conclude then both cars are good value for money and worth seriously considering. The EP is a good car to get started with and should provide endless hours of fun. I personally found the GP excellent fun and revelled in the ability to get so much track time in while only having to worry about the state of the receiver batteries. It was so reliable that I have been converted to IC and will run the thing competitively at various events for the rest of this year. I think Kyosho should seriously consider adding basic dampers to both kits, however, to make them more usable on rougher surfaces. Since this ought to only increase prices by a small amount these kits should remain competitive in the market place.

Kyosho are running a national series for both these cars and the Aldershot club will be running classes for them from this summer onwards (ring 01252 542363 or 01252 343132 for details). Thanks to Alan Gray at Woking Models for helping with parts and advice for this review.

Available from most model shops.

The finished products.



## Tester's Kit:

Acoms and Sanwa basic 27mhz radio and servo sets  
Demon 1700 SCRCs  
Model Technics 10% nitro glow fuel  
Ripmax glow starter  
Model Technics No7 Fire Power glow plug

## EP Likes:

Easy build up  
Smooth mechanical speedo  
Safe handling  
Film covering the body shell

## EP Dislikes:

Complex to paint  
Weedy body mounts

## GP Likes:

Easy to build  
Easy starting reliable motor  
Lots of track time

## GP Dislikes:

Lack of dampers  
Lack of fuel filter  
Lack of roll-over bar  
Weak body mounts