



For some unknown reason 1/10th scale buggies are not supposed to have an IC engine fitted to them.

They should have an electric motor and batteries – and that's that. Why this should be is not clear because there is no reason why a small IC engine shouldn't do the job of an electric motor just as well if not better. In theory an engine should be more powerful than a motor anyway and last a lot longer.

So why don't we reckon much to 1/10th scale engine-powered cars?

Probably because after ten years of electric buggies we are so conditioned into thinking that only the bigger, 1/8th scale cars should have engines.

Also, for some reason, there is a widely accepted feeling that IC engines are more difficult to set up and

ON THE **Rampage**

get to perform well. Show your average buggy racer carburettor, clutch and fuel tank and he'll tell you he doesn't understand anything about engines.

This is a bit strange because anyone who can set up a speed controller or take apart a motor and then adjust the timing is more than capable of setting up an engine.

There are other advantages to racing with IC powered cars. First, you don't have to worry about charging up sets of batteries every time you want to race. Bung some fuel in the tank and off you go, when it starts to get low - bung in some more. So long as you have some fuel you can, unless something goes wrong, keep going for as long as you like.

The only thing that might stop you is if the batteries powering the radio gear run out of power, by which time you will probably have had enough of the car as it is.

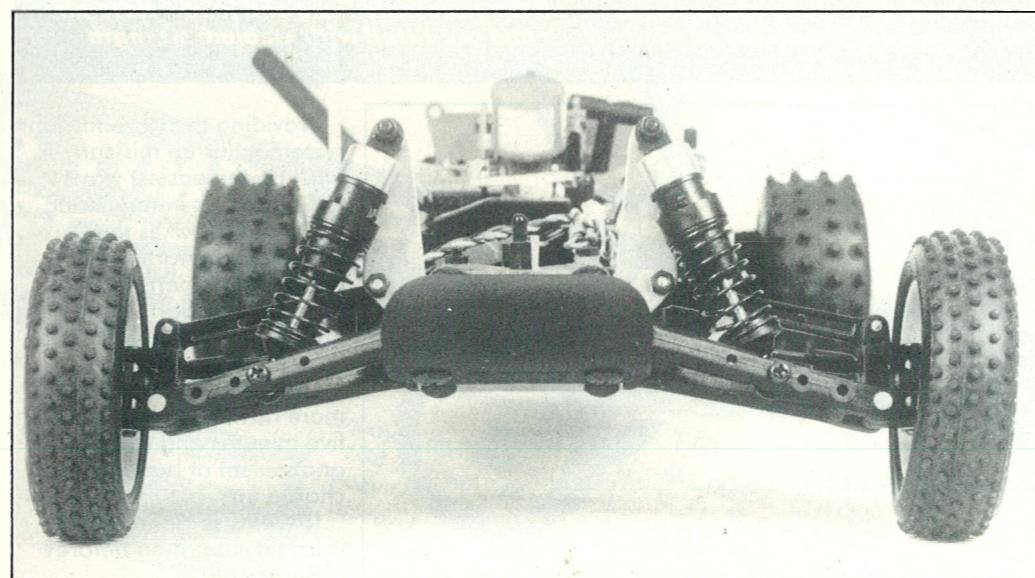
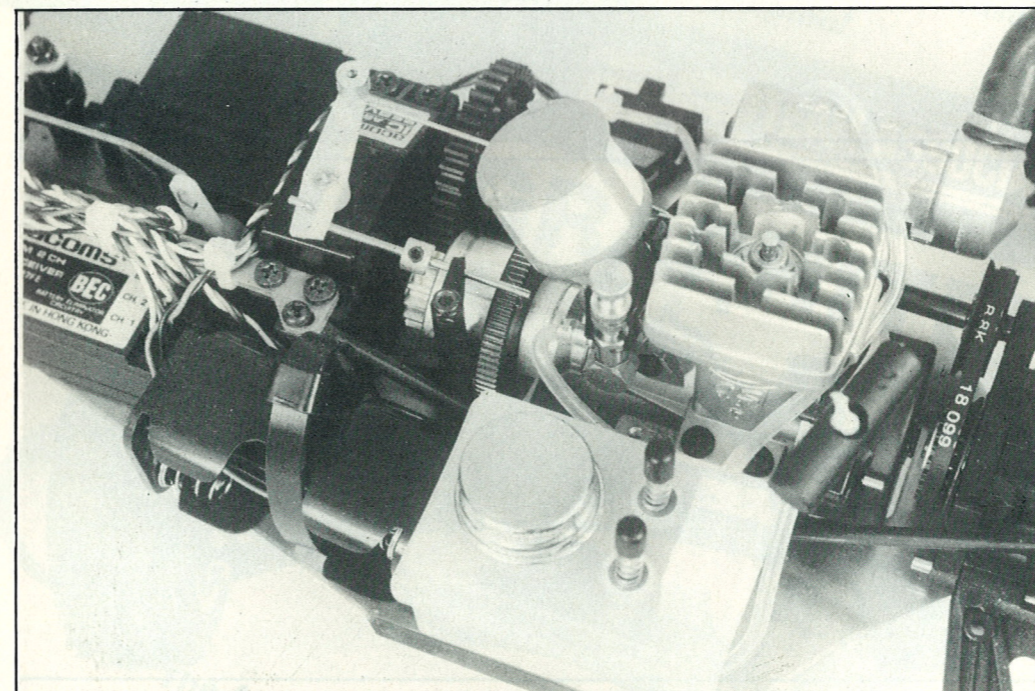
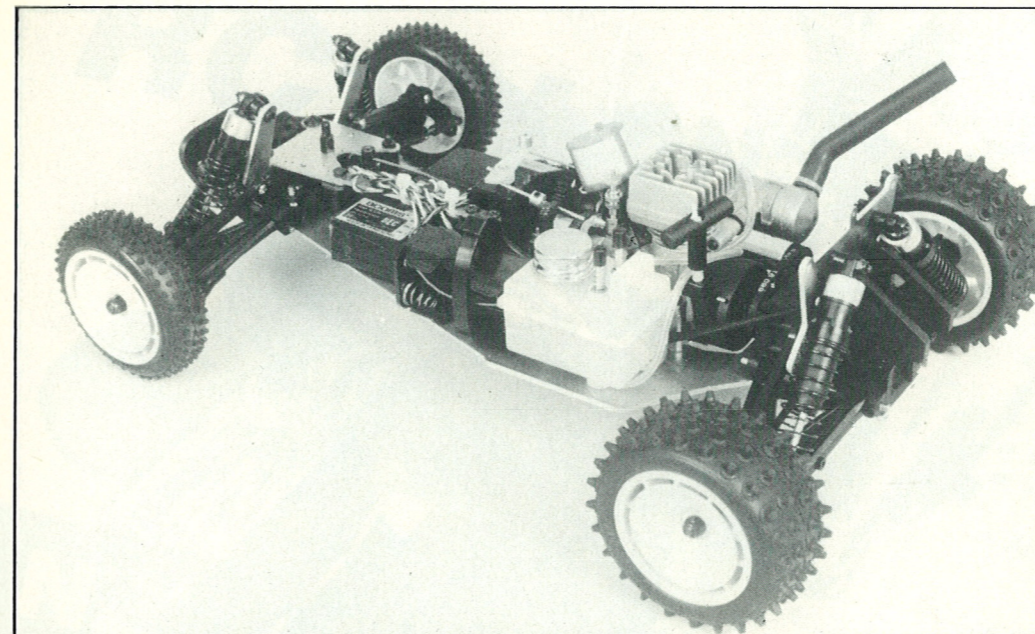
The big problem for most would-be IC-powered racers is the fact you need quite a lot of gear to get the engine started. A starter is the first item, usually powered by a 12 volt car battery, then you need a two volt supply to light the glow plug. All this stuff has to be bought separately along with the engine which unlike electric motors is not usually included in the kit.

For some reason all this supposed fuss and bother put people off having a go with an IC powered car. Which is a shame because they are a lot of fun.

Kyosho think so too because they have introduced a range of 1/10th scale buggies powered by small .10cu.in. engines over the past couple of years.

Their latest is the Rampage, an aggressively named buggy modelled mainly on the Ultima but with an engine instead of a motor. The Rampage is also the most complete IC buggy kit available because it comes supplied with not only the engine but a built-in starter and glow driver lead.

In fact the only thing you need to get it going besides



the radio gear is some batteries for the glow driver and fuel, both of which are available at most model shops.

Inside the kit box the alloy plate chassis is supplied with the .10 OS engine already bolted in place along with the gearbox. The Rampage, like the Ultima, is two-wheel drive with the drive transmitted from the clutch bell down a shaft running back down the chassis. At the end a small drive belt passes the power onto another shaft fitted to a crown gear and from there to the rear wheels. Yes it is a bit complicated but should work well enough particularly as the final drive shaft is ball raced where it passes through the gearbox bulkheads.

The instructions show ordinary phosphor bronze bearings being used but inside the kit is a small packet of two real ballraces which seems to show that Kyosho found a problem and have put it right after the kit was produced.

The engine has everything to make it go, including an air filter to stop muck and dirt entering the engine, plus a glow plug. You start the engine rather like you would an outboard motor with a pull start. A lead which connects to four ordinary AA size batteries powers the glow plug so that a swift tug on the pull start turns the engine over. If the engine and carburettor is set up in accordance with the instructions then it should start first time.

To make things easier, the fuel line between the tank and the carb has a neat

The neat Rampage chassis uses Ultima components and the unique pull start OS engine. Fuel tank incorporates screw cap a priming valves. Plastic oil fitted dampers work well, don't leak and are light.

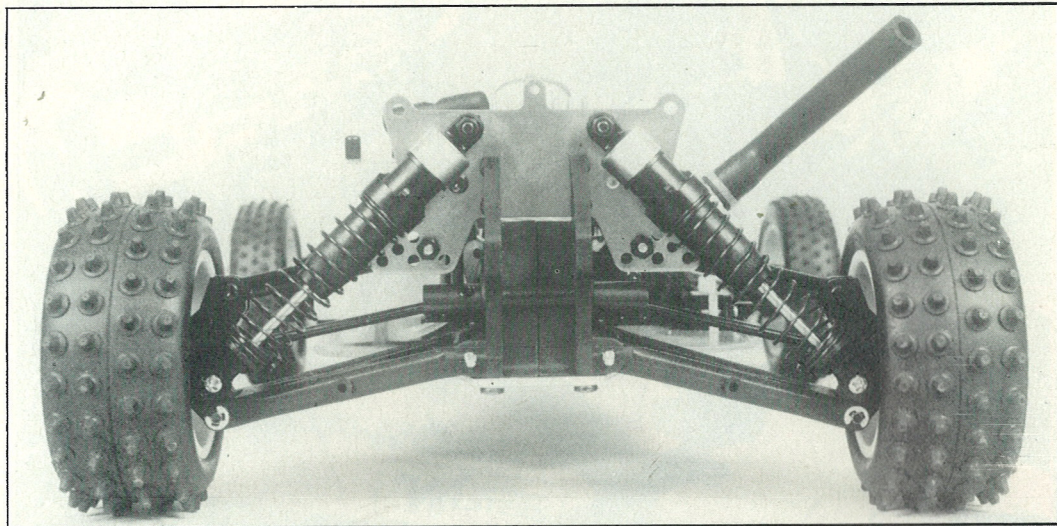
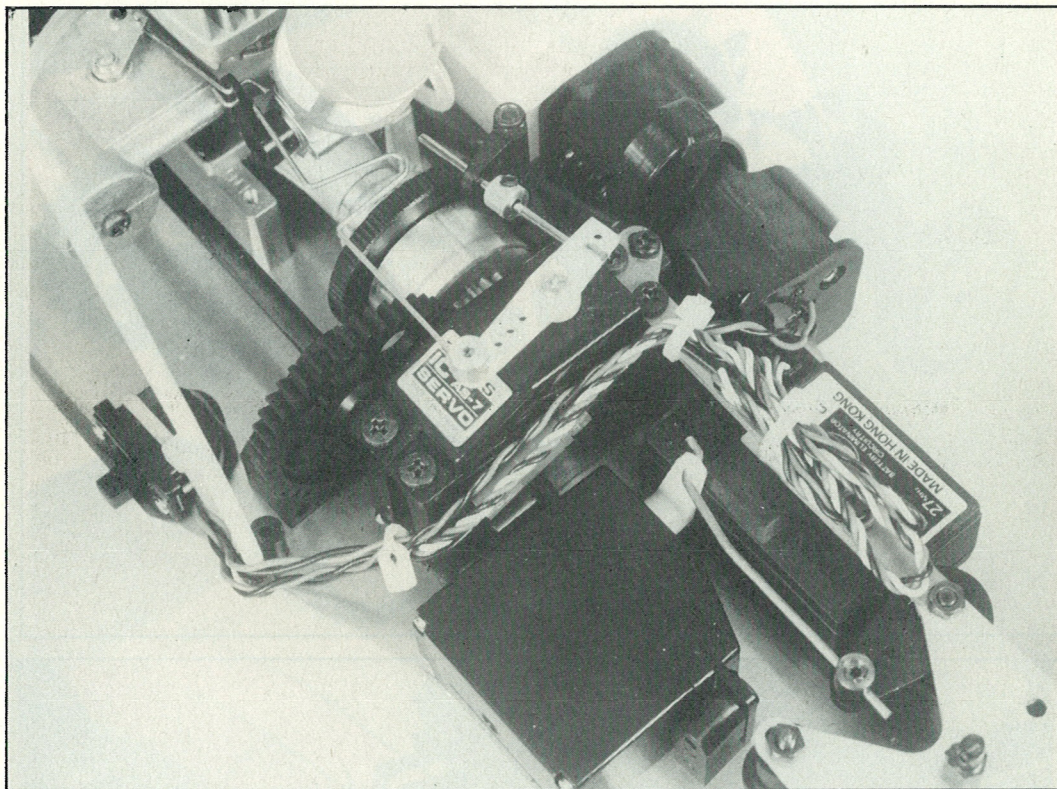
pump so that the engine can be primed with fuel, again to get it to fire first time.

Of course unlike an electric motor an IC engine has no automatic braking so some has to be provided with a disc brake which comes into action when the throttle stick is pushed down. The throttle servo provides both functions through a linkage which is also included in the kit.

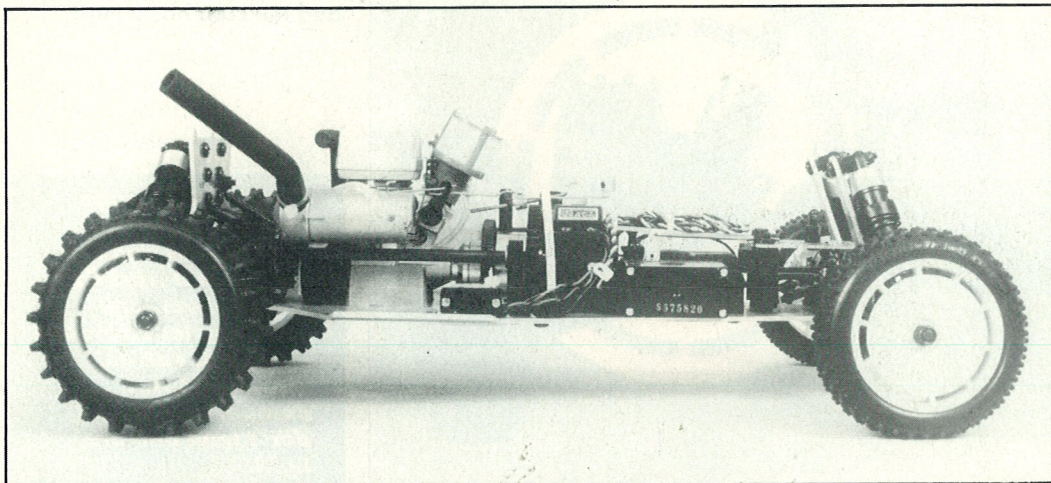
Unlike larger IC cars the Rampage doesn't need special radio gear or servos, but instead uses ordinary equipment. It is probably a good idea though to seal the servo and receiver casings with silicon grease or vaseline to prevent fuel getting into the electrics.

As to the car itself, as we said before it is based primarily on the Ultima with that car's suspension arms and top links. If anything it is the Pro version of the Ultima with the flat plate alloy chassis. The shocks are produced from black plastic with a metal cap – you could fit Option House types if you wanted to.

With the sort of power to weight ratio provided by an OS engine in a 1/10th scale car the Rampage has probably got more speed than most buggy racers will have experienced. Being two-wheel drive as well should make thrashing the Rampage around a buggy circuit or even in the local part will be an exciting experience.



Radio installation in the Rampage is made easy by the inclusion of all the necessary links and joints. Note air filter is included but a fuel filter is not. Rear shocks lay at 45 degrees and are fitted with medium strength black springs.



Providing the transmission system holds up this car must be the easiest way to get into IC powered racing – it certainly takes the hassle out of starting the engine. Even better replacement parts for engines are usually cheaper than those for electric motors. And there is no more having to stop every five minutes and wait for another set of batteries to charge up.

It seems so good – why hasn't it caught on before?
Beats me!