

# FUN TIME

With

# Schumacher's "Vyper"!

A brilliant bargain for beginners...



Isn't it great when a new car comes onto the market which just screams out "r/c cars are FUN, buy me"! The 'Vyper' is just such a car...

The Vyper is very, very different. It's short, tall and wide, the centre of gravity is above the axles, and the yellow banana shaped chassis plates are vertical instead of horizontal.... Weird! Big fat soft truck tyres, absolutely no suspension at all and a solid back axle (there isn't a differential), means there is nothing normal about this cute little machine! The inspiration for the bodyshell's design and the name obviously comes from America's awesome muscle car, the Dodge Viper, while from this side of the pond, it also has some of the lines of the latest TVR's. The obvious design brief was "Let's keep it simple, strong, and above all fun with a capital F"!

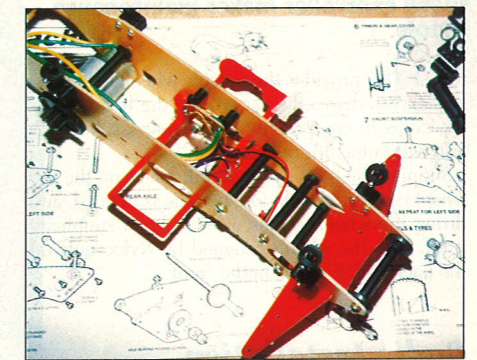
## Build Time

The unorthodox chassis is built up from the two vertical side plates, with eight moulded chassis spacers holding them apart. The side plates are milled from 1/10" epoxy glass sheet, finished in yellow, which makes quite a change from black! The chassis spacers and other mouldings are made from Schumacher's tough plastic, whilst the front 'suspension arms' and nicad holder are produced from red epoxy glass sheet, making the completed chassis very colourful and smart.

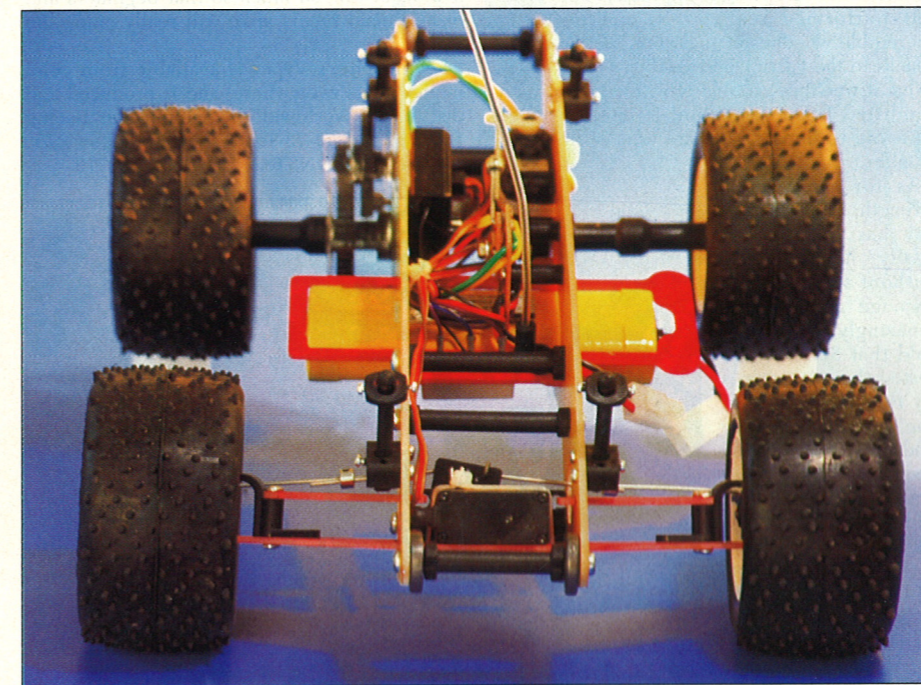
The manual takes you through the simple building sequence by using good diagrams accompanied with a few notes. It's worthwhile studying the details properly to avoid making a couple of easily made mistakes here.



**Back to basics! A low component count means that the Vyper can be put together in about one hour!**



**Nearly there... The clearly illustrated instructions should ensure that even the total novice can get the Vyper up and running without any trouble. Note the 'rollers' on the front - they stop the front end 'digging in'. Believe me, you'll need 'em!**



## Back to Basics

Inside the colourful box there were actually very few components to be found: A few bags of screws, the chassis sideplates, plastic mouldings, a motor, a mechanical rotary speed controller, and the lexan bodyshell, decal sheet and the instruction manual, but the lack of bits and pieces was misleading in terms of the amount of enjoyment it gave later when we tried it out for the first time.

## What Else Did We Need?

Very little really. Two servos, a 27 or 40mhz transmitter and receiver, a 7.2 volt nicad stick pack and charger, plus a can of lexan paint for the bodyshell. Only a few tools were needed: just a philips screwdriver, a pair of pliers, a file and a scalpel ( a junior hacksaw also comes in handy if you can lay your hands on one).

The body posts have to be cut to size before being fitted to the chassis sideplates. These are very tough, and although they could be cut with a pair of pliers or sidecutters, I used a junior hacksaw to make a neater job. There are three types of chassis spacers, although at first sight it appears there are actually only two! The front and rear spacers house rollers to prevent either end of the chassis dragging on the ground when indulging in some of the wilder antics you can get up to with the beastie, and are obvious, whilst two of the others have holes for M5 screws whilst the others are for No.8 self tapping screws.

An RS-550SH motor is supplied in the kit, already wired up to the vyper arm speed controller fitted with a BEC lead and the resistor wires, all ready to be plugged in and used. Just the job for the novice, who quite probably won't possess a soldering iron, let alone know how to use one!

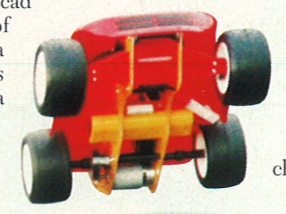
The motor and six of the eight chassis spacers are bolted to the

right hand chassis sideplate, and then the nicad holder and lower front wishbone are inserted into their respective slots before the left hand sideplate is added. When adding the left sideplate to the assembly, it's important to feed the battery leads into the slot FIRST!

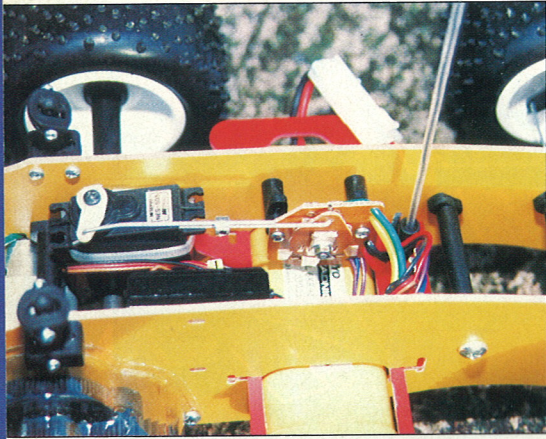
A substantial 8mm diameter steel rear axle is used, that runs in moulded bearings. The drive from the motor to the wheels is taken via simple pins locking the mouldings to the axle. The gears are contained within a clear polycarbonate moulding to prevent fingers getting mangled and to keep dirt out, as with most Off Road buggies etc. This can be sprayed, but I left it transparent so that I could inspect the condition of the gears easily.

That just leaves the front 'suspension' (there isn't any at the back). The front suspension effect is provided by the flexibility of the fibreglass 'wishbones', and the 'give' in the tyres themselves. The wishbones slot into the chassis sides and are then screwed to the steering block supports. The steering blocks pivot on steel kingpins held in place with 'E' clips, as are the axles. Simple and effective.

The steering geometry comes from the karting scene. It's arranged so that as full lock is applied, the inside front wheel lifts off the surface, 'jacking' that corner of the chassis up, therefore transferring more weight onto the outside rear







**A clear lexan gear cover prevents fingers from straying into the two-stage reduction drive train. Ease of access to the radio equipment and speed controller makes maintenance simple.**

wheel. This provides the outside wheel with more grip and so drives the car around the bend better - it helps to compensate for having a solid back axle without a differential.

Slipping the tyres over and into place on the wheel rims is a simple job, no glue is needed, and fitting the wheels to the axles is again simplicity itself, with the wheels retained by Nyloc nuts on the back and 'E' clips on the front.

### Radio Installation

A simple servo saver is supplied which will fit quite a variety of servos, old and new. Pre-bent wire links are supplied for the steering and speed controller linkages; two are used for each track rod (the extra long one is for the left wheel), and are clamped together with collets to allow for easy and quick adjustments to the tracking, again simple and effective!

The servos are held to the chassis assembly with servo tape (supplied), with an option to use tie wraps as well for extra security.

Fitting and connecting the throttle servo to the rotary speed controller is the area

where care is needed to set the throws etc., up properly, but the knack of using the different holes on the servo's output arm to end up with differing amounts of travel is soon picked up: Using the holes on the inside of the arm gives a small amount of travel, whilst the further out the hole, the greater the movement.

### Those Finishing Touches...

The bodyshell needs to be cut out and painted. There weren't any problems here, and the moulded dimples indicating the positions for the body post holes lined up perfectly! Spray a couple of light coats of Pactra lexan paint on the inside, add the decals and you have a colourful bodyshell that's 'The Business'!

Before installing the motor, I took the trouble to give it an hour's running on 3 cells and off load, to run the brushes in, then, once it was snugly mounted to the chassis with the pinion correctly meshed, I ran it again with the wheels off the ground to let the gear train bed in. I decided to use a stock 'off the shelf' set of 1300mAh SC

nicads for power, the cheapest cells possible, on the basis that the Vyper is really a car for the beginner who just wants to have some fun, so a basic pack is what they will use.

### Having FUN!

It works! It really is fun! In fact, it's crazy! Super wheelies - No Problem, and those rollers really are essential. The Vyper goes anywhere and everywhere; it's one tough little cookie.

The soft truck tyres give a bit of suspension effect, and the front 'wishbone' does flex a bit, but other than that there is no give whatsoever, so the Vyper will take to the air and bounce around quite a bit on landing from a jump or over rough surfaces, but who cares? It all adds to the fun!

The first run gave me all of 15 minutes duration and a reasonable turn of speed, plenty to start off with. As the motor and battery pack have 'run in' more, the performance of both has improved. The Vyper has performed really well, and performs incredible wheelies at the whim of the driver, thanks to the gearing and position of the motor. What it would be capable of with a hot, torquey modified I can't imagine! It could well be possible to 'loop it' off the line without any trouble...

As for the Vyper's strength, RRC's review car has taken some really hard knocks without suffering any damage at all, it is amazingly strong. I'm told that Schumacher tested their prototypes by throwing them off the roof of the factory and driving them at full speed straight into brick walls, but even that didn't damage them. I do believe them, but I don't think I'll try this sort of thing myself!

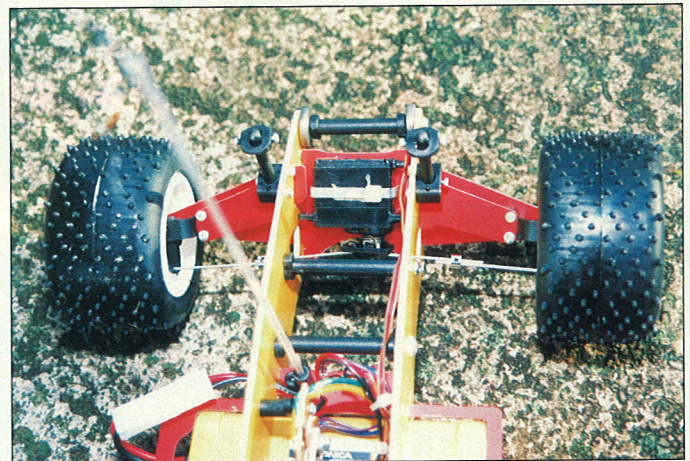
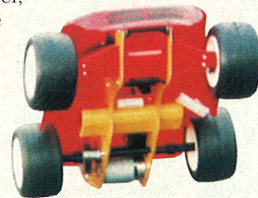
To sum up, the Schumacher Wildcat

Vyper certainly brings its own style of fun to the hobby. It's very, very strong, simple to build and finish, and is a very complete kit. As for the time taken to build it, this was as quoted, all of an hour, which yet again shows just how easy it was to put together.

A ball bearing up-grade kit is available for £17.50, which will make things run a bit smoother and doubtless give even longer duration, although I don't think ball races are really necessary as the plain bearings do a good job themselves. It is also possible to fit a 'High Speed Pinion' with 32 teeth instead of the standard 22, a 50% increase in teeth, and this will give an increased top speed at the cost of acceleration and duration, but I think that the kit's 22 tooth gear is ideal, as it gives more 'grunt' for stunts etc.. Another good option is that for quite a small outlay, you can convert the Vyper into the road going Saloon car: All you need are the relevant chassis side frames, wheels/tyres and the bodyshell.

For a recommended price of £69.50, the result is a lot of fun, so much so that beginners and experienced racers alike will really enjoy the Vyper!

Schumacher's Vyper is available from good model shops everywhere, and is produced and distributed Worldwide by Schumacher Racing Products Ltd, 71-73 Tenter Road, Moulton Park, Northampton. NN3 6AX. Tel (0604) 790770



**Above: Suspension - what suspension? The front end actually does flex slightly, and, combined with the shock absorbing qualities of the fat tyres, gives a respectable ride.**

