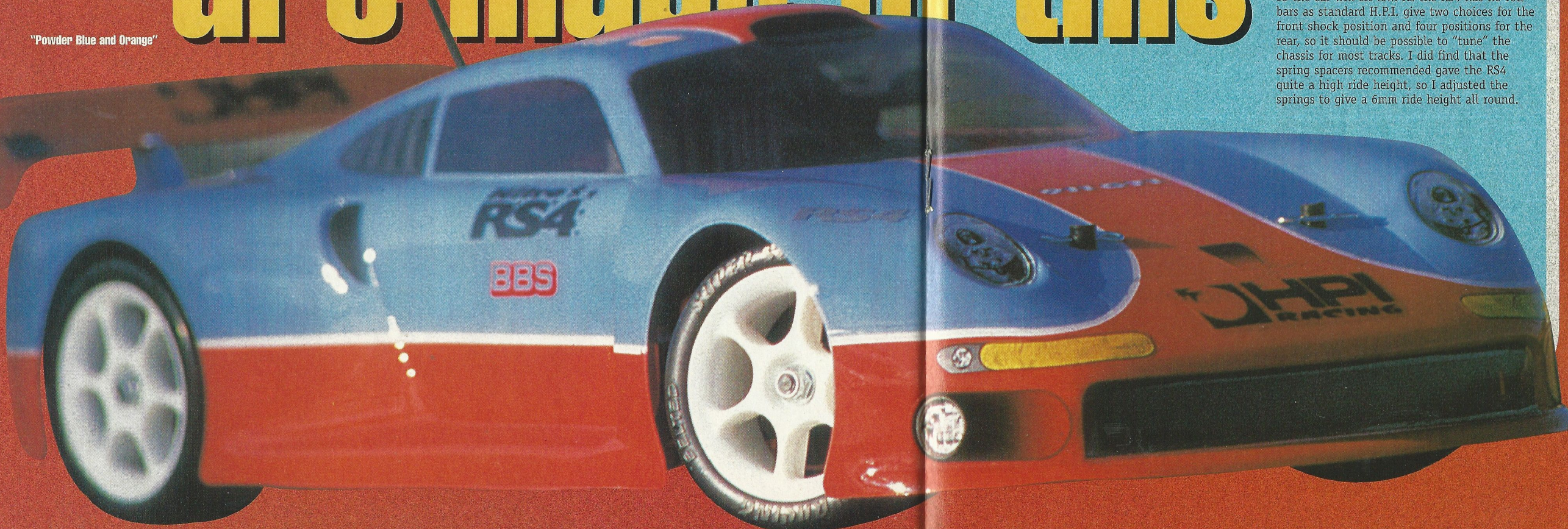


The completed rolling chassis.

H.P.I. RS4 Nitro Star Review

dreams are made of this

"Powder Blue and Orange"



It's now some twenty four years since a fresh faced, smooth chinned, leaner Chris Deakin sauntered apprehensively past the Mars plant in "down-town" Slough. I was on the way to an interview which would dictate my working life to date. Two years prior to this fateful day my next door neighbour had taken time out to "make my day". He took me to Brands Hatch to see the 1000 kms sports car international. I was mesmerised. The sight of the Ferraris and Porsche's dabbing the brakes, down a cog, drifting through paddock bend, was more than this boy could take in. I had to be part of the "parade". So on "that" fateful day I was on my way to meet John Horsman, Team Manager of J.W. Automotive. They were the team responsible for the running of the GT40s which won Le Mans, also the Porsche 917s I had seen two years previously at Brands Hatch. I got my job, and served an apprenticeship with J.W. working on the Gulf liveried Mirage Fords, the rest is history.

Stuff dreams are made of

To this day, the powder blue and orange cars have a special place in my affections, this

being the older Gulf Racing livery which has just made a come back on the latest McLaren F1 GTR. I vowed as soon as a suitable I.C. racer came across my desk it would get the Gulf treatment, but it would have to be a very special car and the H.P.I. RS4 Nitro Star is just that. As a lot of you regular readers will know RRC has twice featured the electric powered RS4 in our pages. In both reviews the car came out as a solid performer. A real racer.

Having cracked electric, H.P.I. have gone "gas". Now a lot of you nicad junkies will say "no way", IC engines are dirty, smelly and temperamental things... WRONG. The current breed of relatively small (.12-.15) engines are very easy to live with. The detailed instructions for setting-up and running are very clear and concise, and with the Nitro Star 12 only having one mixture screw it really couldn't be simpler. But I'm getting ahead of myself.

Box Top

Having purchased your Nitro Star you are greeted with a nice large box, there's something very satisfying about getting a lot for your money, and of course in this case I'd got a Porsche, a 911 GTI Le Mans racer to be precise. Within the box is a collection of neatly bagged parts, but where was the engine?

It was to be found loose in the main bag of parts, just wrapped in a plastic bag. This I found very odd. I would have expected a more secure method of packaging. The alloy casting of "my" engine did in fact bare the scars.

Build Time

As you would expect with the RS4 being a successful car, a lot of the running gear has

been "pinched" from its electric brother. Construction begins with the two gear diffs. With the clear pictorial instructions, anybody should have no problem assembling them. Don't be to concerned if they feel a bit notchy. Once they have run, they do free off very quickly. Although it doesn't suggest it in the instructions I packed the diffs with grease till they were full, this will help to give a little "spin" reduction if one wheel loses grip, as all the power will try to get to that wheel.

Shocking

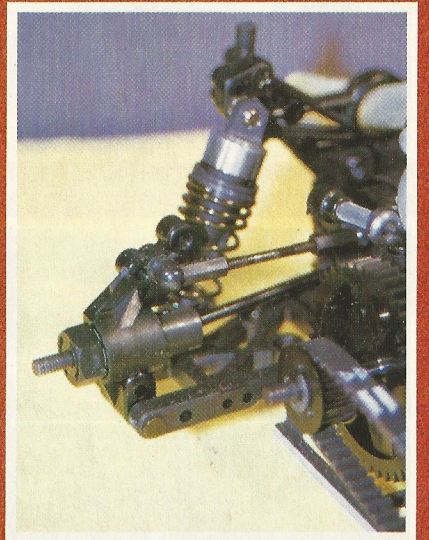
At this point (in time) it's probably a good time to build the shocks, so that they can be left to bleed all the air out. The polymer body shocks are as about as good as they get. The pistons have slightly different bleed holes, so a large range of damping can be achieved with one grade of oil. As the instructions didn't say what weight of oil was supplied in the kit, I filled them with Schumacher 40wt. This would I think give a good starting point. After leaving the shocks for a good hour the alloy top caps and rubber bladders were fitted. Boy were they smooth! (nearly as smooth as John Cheyne, RRC's ad manager, sorry John!).

Suspenders

Having built the diffs, they are quickly slipped into their respective bulkheads, not forgetting their bushings and drive belts. The bottom wishbones run in steel hinge pins both front and rear, at the rear there is a 4° of anti-squat, at the front the pin runs parallel, the caster being set by the axle blocks. A single top link completes the assembly, lengths of "all thread" allow a camber adjustment. At the rear the hub carriers have several choices for top link position, so roll centre and camber curve can be adjusted as well as static camber adjustment. Having built your shocks now is the time to add the progressive rate springs. Although H.P.I. don't specify an overall length for the shocks, so I built them as a short as possible, so the car will sit low. As the RS4 has no roll bars as standard H.P.I. give two choices for the front shock position and four positions for the rear, so it should be possible to "tune" the chassis for most tracks. I did find that the spring spacers recommended gave the RS4 quite a high ride height, so I adjusted the springs to give a 6mm ride height all round.



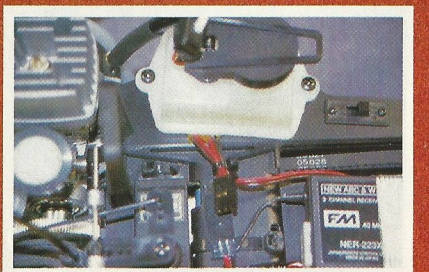
Kerb hopping.



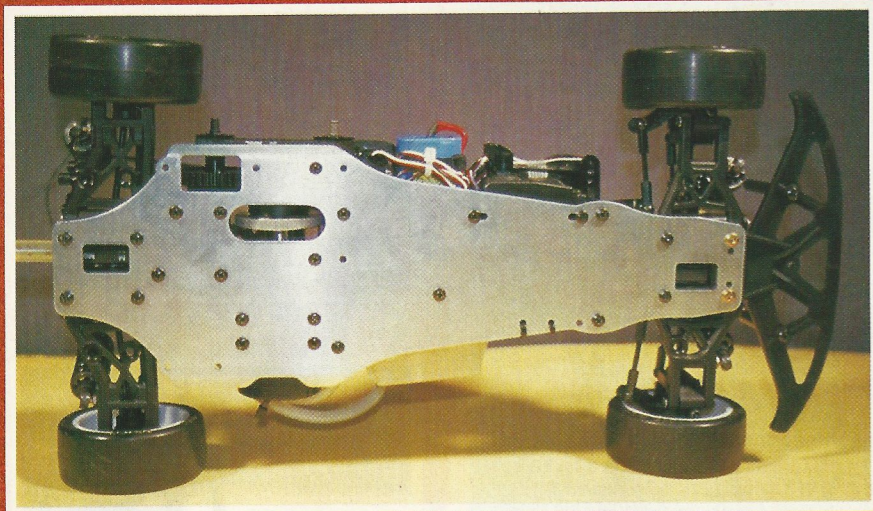
A choice of positions is given for the rear top link.



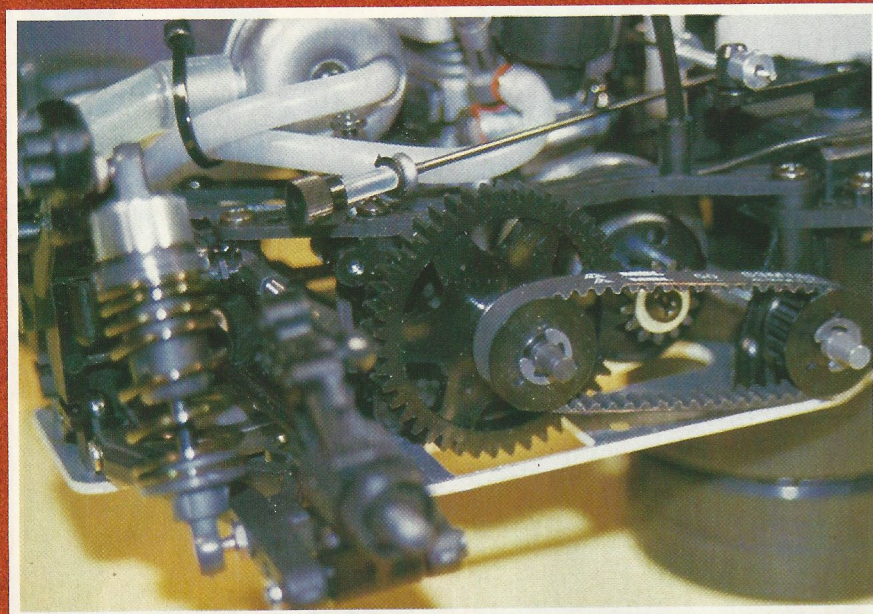
Most of the suspension parts either come from or are very similar to it's electric cousin.



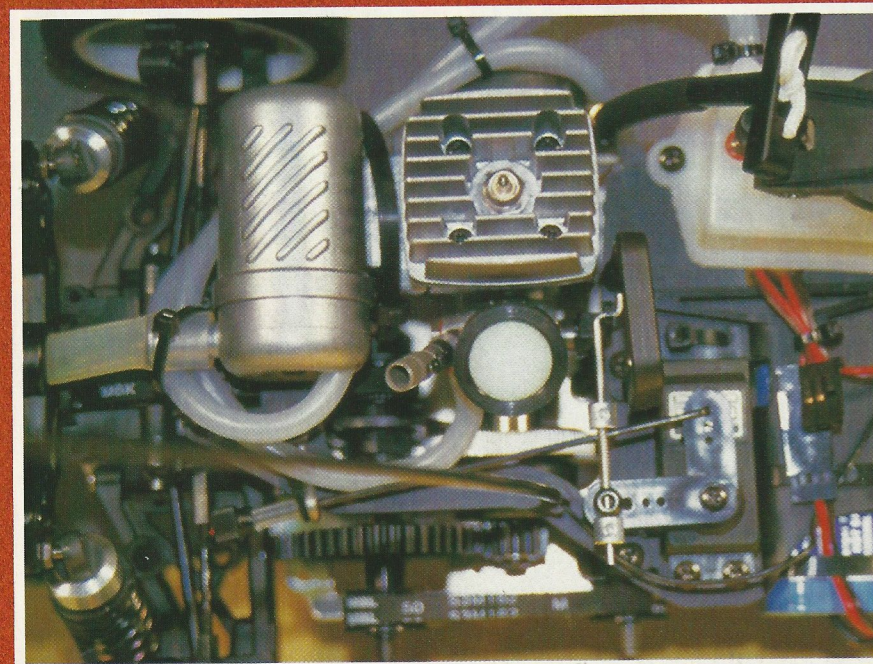
The fit of the radio gear is very snug, note the cut-out in the radio tray for the switch wiring.



The alloy chassis has its edges rolled so you can slide over the kerbs.



The top brace for the radio tray can be clearly seen.



All you need for the throttle linkage is included in the kit.

Drive Train

A very neat rear layshaft splits the drive front to rear. The spur gear and rear/front drive pulleys use silver steel "cross pins" Serpent style to locate them, this is very neat and simple to build, the polymer vented disc brake is "pinned" to the layshaft as well. A simple operating cam and twin pads retarding the car. The moulded mounting blocks for the layshaft are located on the chassis with dowel pins and self tapping screws. Also a brace runs from the diff housing to the middle radio plate supports, stiffening it and keeping the middle belt tension constant. A short middle layshaft again with "steel" "cross pins" locating the drive pulleys, takes the drive to the front. The drive to the wheels being by dog-bone drive shafts, please remember to add the rubber "O" ring spacers to the front drive cups, if you don't the shafts will fall out. Short stub axles and Tamiya style hex drives, take the power to the tyres.

Steering and Radio Plate

A twin bell crank system turns the wheels, the right hand pillar having a built in sprung servo saver, the tension of this being adjustable with an alloy nut. Turnbuckle track rods go to the wheel.

A moulded polymer radio plate is provided, space is a little limited but it does all go in, just, snug I think is the word. The receiver is "servo" tapped to the radio plate, as my JR receiver overhung the plate I added a little extra security with some glass fibre tape. The throttle servo cut-out will take most standard servos, the receiver battery being tie wrapped to the plate next to the servo, a neatly profiled section of the plate giving a strong location point. A very tidy flip-top fuel tank completes the radio plate, do remember to leave the tank a little loose on its mounting screws, this will stop the fuel frothing up, and giving a lean mixture.

Links and Loud Bits

The Nitro Star 12 comes complete with pull-start, fly wheel and clutch factory mounted. The twin shoe sprung clutch appears to be very good and should allow the engine to pick up before it starts to engage. The clutch bearing requires lubricating and the bell-housing fitting. Add some Loctite to the locking screw, I didn't and the screw fell out the first time it ran. A cast dustbin silencer has to be assembled and mounted to the engine. Two alloy blocks mount engine to chassis, adjust the back-lash between the pinion and spur-gear to the minimum without it being tight.

As the engine has a barrel type carb it is sometimes difficult to make a neat throttle linkage, and often some form of extra bell crank is required. H.P.I. had obviously done their homework and all that is required is the kit supplied 90° servo arm which operates both brake and

throttle, all links, override springs being included in the kit. When I came to plumb the fuel system I found the kit supplied fuel pipe to be of a very poor quality and I replaced it with some thick walled Associated line. With the respective positions of fuel inlet/outlet/pressure connections I found it very difficult to get a neat run for the fuel lines, in the end having quite long lines. A clear silicone extension dumping the exhaust gases just below that stunning Porsche bodyshell.

The bodyshell was trimmed and drilled, and mounted as low as possible, both sets of mounts required quite a lot to be trimmed off. The H.P.I. shell is very strong and well detailed, and was lovingly painted in my "dream" colours. You are given a choice of rear wings for the shell, I went for the more "scale" wing.

Treaded Tyres yuk

Now for the only disappointment in the kit, the tyres, now as a replica of the racing 911 GTI I would have expected "slick" tyres, wrong, H.P.I. supply some very hard treaded tyres, tyres that were totally grip less, I found it very strange that H.P.I. having such a range of excellent rubber, fitted such poor tyres. I replaced them with some of H.P.I.'s belted radial slicks in very short order, they look the part and grip very well, however the six spoke wheels are great.

How Does It Go?

H.P.I. included a very detailed set of instructions on how to set-up the engine and, if you use a fuel of around a 15% Nitro level, it should start and run very easy. I used P.B. Racing S.O.S. fuel and a Rossi No 5 glow plug on a main needle setting of 11/2 turns from fully closed, the motor burst into life after priming the fuel system, after three pulls on the starter cable. One tank full of fuel was run through the engine at just off tickover.

Time for some proper running

Once more my "wheels" headed for Ashby Wouds Model Car Club, at first I ran the car sans the bodyshell just to keep it fairly cool. The mixture being just a tad on the rich side. After another two tank fulls the shell was fitted. Although not shown in the photographs, the left hand side window was cut away and also a small round hole was made in the screen, this would allow a good airflow over the engine.

The next twenty minutes was spent gleefully howling the car around, the initial "sharpness" of the brakes bedded into a smooth and progressive retarder. Punch was excellent, the clutch springing being just right. Handling wise the chassis was very safe, almost docile, a little

playing with the shock positions giving a stiffer rear and softer front made it "steer" a little more aggressively, allowing the power to be applied earlier in the corners. Straight line performance was more than adequate, although I think a lot of people would add the optional two speed gearbox, for that extra bit of speed.

Are Dreams Make of This??

An unconditional yes, the Nitro Star has the same pedigree as its electric brother, the quality of material, the fits and finishes.

The .12 engine is a "honey", smooth and sweet. If your thinking of trying IC for the first time, this is more than suitable, and I suspect with a few of H.P.I.'s goodies added you could race very competitively in the B.R.C.A./RRC Sportsman's class.

The Nitro Star should be available from most good model shops, if not contact GM Racing/H.P.I. UK, see their advert in RRC RRC

Likes

Quality
Very clear instruction manual
No assembly problems
Neat layout
Amazing bodyshell
The Nitro Star 12 engine
Disc brake

Dislikes

Bushings
No fuel filter
Fuel lines
Tyres

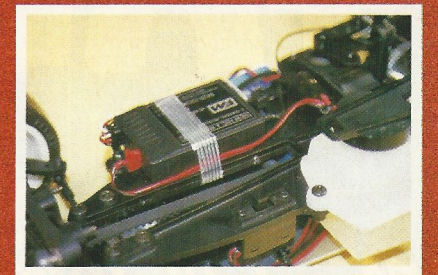
Testers Kit

Radio - JR X756
Receiver - JRX756
Servos - Futaba S3001
Fuel - PB Racing 16% S.O.S.
Plug - Rossi No 5
Tyres - H.P.I. belted slicks
Body - Kit

Quick Spec

4WD Triple belt drive. Alloy chassis. Bushings. Twin gear diffs. Moulded radio plate. Dog bone driveshafts. Oil filled coil-over shock absorbers. Progressive rate springs. Bottom wishbone. Top link all round. Nitro Star 12 engine. Twin shoe clutch. Dustbin silencer. Disc brake. Treaded tyres. 6 spoke wheels. Porsche GTI bodyshell.

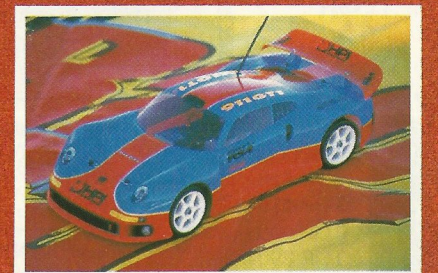
A choice of two rear wings is given with the bodyshell, the wingfitted like more scale like.



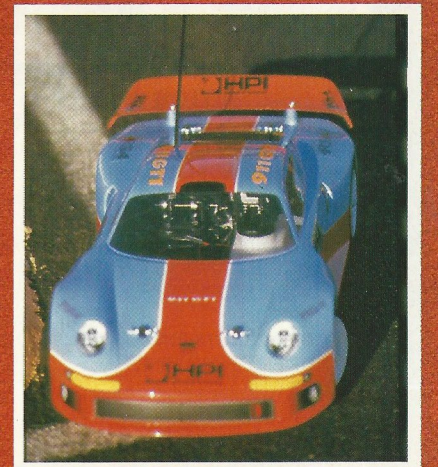
Glass fibre tape was used to back up the servo tape retaining the receiver.



I replaced the kit fuel pipe with some thicker Associated line.



Time to wake up.



"Dream Machine"

dreams are made of this

