

# Mr McRae's Magic Motor

## What's Your Problem?

OK, so you've got a problem. Your into R/C cars big time, but the trouble is you like cool, scale looking cars, so off-road buggies are not your thing. No problem you might think, just get yourself a scale saloon or even an F1 car. The trouble is you live 50 miles away from the nearest on-road track and the local Supermarket car parks are always being used. Big problem.....nope, not any more. Allow me to introduce you to the HPI RS4 RALLY!

## The Concept

The RALLY is based around the existing and highly successful RS4 Touring car chassis so I wasn't expecting too many surprises when I finally got hold of my review kit. As expected the chassis is the same double deck fibreglass construction as a standard RS4 Sport. No complaints from me there as both upper and lower deck are beautifully produced and ready drilled and countersunk to accept the rest of the cars components. The car features geared diffs front and back and a double belt drive train. This means you are buying into proven technology as almost every manufacturer of Touring Cars has settled on a belt drive as the most efficient means of delivering the power to all four

## HPI Subaru WRC Review

wheels at once. Just take a look at the Schumacher SST, Yokomo YR-4M2, Losi Street Weapon, Tamiya TA03 etc. etc. The main thing that does differ between the Rally and a standard RS4 is the length of the shocks. If your going to race over rough 'rally' style conditions your going to need more travel in the suspension and this is exactly what HPI delivers. The shocks are roughly half way between the length you'd expect for an off-road buggy and those on a standard Touring car.

## The Features

One brilliant feature of the RALLY is that it comes with ballraces as standard despite it's relatively low RRP of £156.00 in the UK. Personally I never build a car

with-out ball-races and there's nothing more annoying than ditching all the bushings supplied with a low spec. kit straight into the parts box never to be used again. Come

to think of it I must have dozens of those little gold hoops stashed away, maybe I could turn them into earrings and give them to Auntie Flo for Christmas!

As well as the bearings the other real bonus that the RALLY provides is its innovative body dirt and splash protector. Underneath the sleek looking Colin McRae Subaru Impreza body shell the chassis is protected by a separate under tray and cockpit interior combination. The cockpit and driver figures not only look great (after all only Herbie and Knightrider's 'Kit' can drive around without drivers) but also go a long way to protecting the drive train from damage by loose stones and general crud. As you can see RRC's ace 'shellman' Terry



off-road surfaces, What you have to bear in mind however is that it is not designed cope with some of the huge jumps that are a feature of many modern Off-road tracks.

Try and imagine the kind of conditions that real rally cars encounter such as dirt tracks, wet muddy conditions, pitted tarmac and medium sized jumps, then scale that down to 1/10 size and that's the sort of terrain that the RS4 Rally thrives on."

Well that sounded fair enough to me, so I headed off to test my new baby out at a local park which provides a nice assortment of different surfaces.

At one end of the park is an area that was once a play area with swings but is now just a rutted, rough concrete square about 60 foot wide. If I ran my regular saloon car here it would spend most of its time jumping in the air as it hit the ruts or

bottoming out on the bumps, but the Rally just loved it. It flew round the basic course I'd laid out, power sliding round corners and coping with the loose, uneven surface with ease. The only problem

was that I'd set the body shell a little low and it was scraping the ground a few times over the bigger bumps. Luckily I'd

Atkinson did a super job on the bodysell and inner shell, thanks Terry. The cockpit simply velcros onto the under tray, which means that it's also relatively simple to remove it for maintenance etc. Here however I have my first real complaint. The under tray itself extends up and around the chassis to join with the cockpit moulding, and therefore has to be bent backwards awkwardly every time you want to change battery packs. Not only is this a pain in the backside, but I'm pretty sure that the constant bending is going to weaken the lexan and eventually lead to it cracking. To solve the problem I've made two cuts vertically down the under tray on either side of the battery door. The battery pack is now a lot easier to remove, and because the area that has been cut is attached to the cockpit by Velcro it should still keep mud and stones at bay. On the whole though The RALLY goes together beautifully and really does look like a well engineered racing car.

guessed that this might happen, and had trimmed the body posts three holes higher than needed to give room for adjustment. So I simply lifted the shell up a notch replaced the body clips and the scraping was gone. The car handled very well and on some of the smoother sections of tarmac I was even in danger of getting too much bite from the treaded kit tyres and grip rolling. This was proving to be a lot of fun. Nearby were some well used football pitches, so I walked over and was delighted to see that the whole penalty area was almost devoid of grass apart from a few tufts.. it was time to see how the rally coped with dirt!

I set myself up on one side of the box looking across the goal-mouth, worked out a rough track in my mind and let the Rally rip. It tore off toward the penalty spot, kicking up a rooster tail of dust as it did so. I was a little bit slow with my braking round the tight turn at the penalty spot and the back end slid out sending a small clump of turf flying, but I managed to straighten her up by booting on the power and the car turned into a blue streak as it headed off toward the edge of the box. Let me tell you here and now this is one fun racing car. The Rally took everything I could throw at it in its stride and came back looking for more. Admittedly I haven't tried it over any jumps yet, but I'm sure it will cope OK. If you are going to jump it a lot it may well be worth investing in the slipper clutch that's available as a hop up, as it will take some of the pressure of the transmission on any lumpier landings.

## The Conclusions

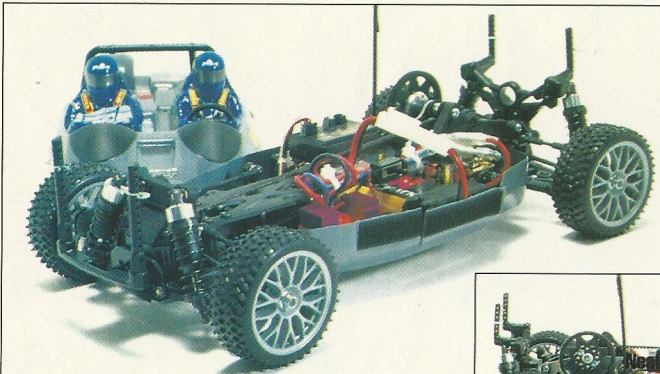
In short, the car builds nicely, looks great and provides unlimited fun on a variety of surfaces. There are strong rumours that plans are afoot to set up a race series for Rally cars in 1999 and with the news that Yokomo had a prototype rally car of their own on show at the Shizuoka show in Japan earlier this year it looks like Rally racing could be the big fun racing of the future!

## The Drive

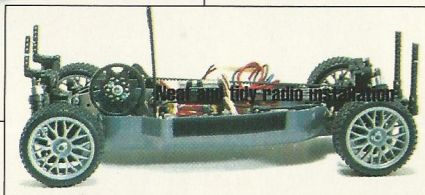
If the proof of the pudding is in the eating then the proof of the RALLY is in the driving. Before I built the car I spoke to Jason Dearden, the Big Cheese at HPI Europe and he explained HPI's thinking behind the RALLY. "The car is designed to be raced on both on-road and



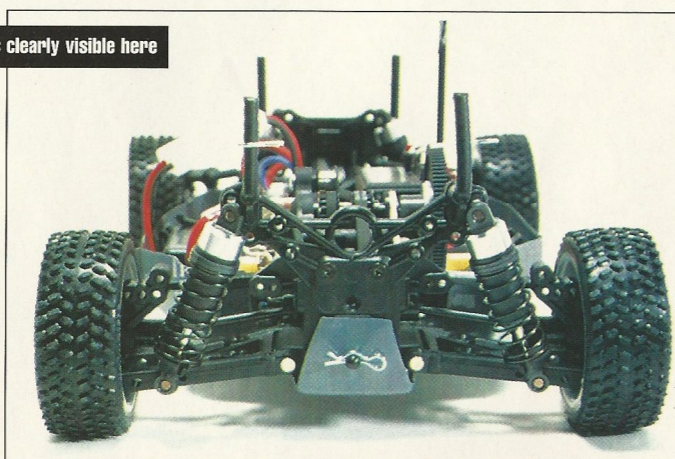
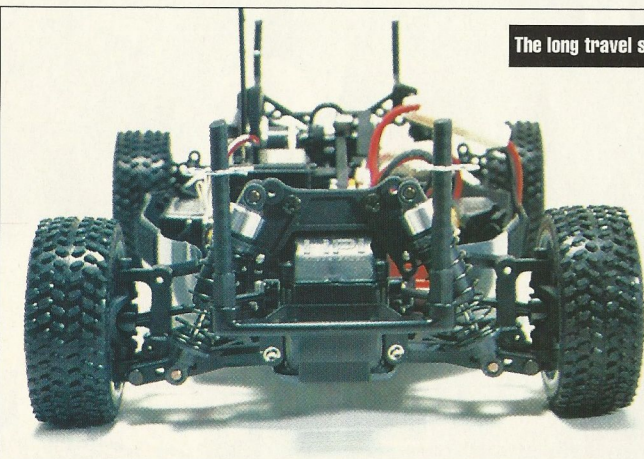
The HPI Rally looks good from any angle



The inner shell is a great idea



The long travel shocks clearly visible here





# Before you can race the car you will need

- \* Two channel radio with receiver and 1 steering servo.
- \* Electronic speed controller
- \* Motor
- \* 7.2 volt 6 cell Ni-Cad stick pack battery & Charger

## Before you can build the car you will need

- \* Medium (size 2) Phillips screw driver,
- small (size 1) Phillips screw driver
- \* Needle nose pliers
- \* Hobby Knife
- \* Cutters
- \* Fine sand paper or emery board
- \* CA (super) glue
- \* Lexan paint for body shell



## Building & Set up tips

\* The RS4 Rally shares many parts with other members of the RS4 "family" of cars. However, there are also a number of parts which come with the kit which are not used on the Rally, so don't worry if you have built the car and find you have a number of bits left over! Check them carefully against the parts list on page 5 of the building manual to ensure they are not needed.

\* In many ways the most difficult part of the building process is removing the plastic parts

from the sprues and getting rid of all the excess flashing. Sometimes this can be a bit boring and it is tempting to rush a little more than you should....don't. You only get one chance at preparing these parts and if your sloppy the parts will look bad and may not fit properly. Cut them off the parts trees with a pair of cutters, then remove the excess with a hobby knife, with some of the more important parts such as the shock pistons and the suspension arms it's well worth going one stage further and carefully smoothing down any blemishes with some fine sandpaper.

\* As with all R/C cars there are a lot of small parts such as screws, e-clips, O-rings etc. which can easily be dropped and lost during building, so when you empty out the parts bags make sure you do it onto a high rimmed white saucer or something similar. Not only will this stop the parts from dropping off the work-bench but they'll also be easier to identify against the white background.

\* HPI have made the wheel hub pins extra tough on the Rally to cope with the abuse they are likely to face. This means that they're a really tight squeeze to fit and require strong hands and a pair of needle nose pliers. Younger builders may even need an adult to help them with this. **RRCI**

## Quick Spec

1/10th scale belt drive 4wd rally car for 2 Ch. radio  
 Fibre-glass double deck chassis  
 360mm long x 190mm wide  
 Oil filled shocks with coil over springs  
 All-up weight (including radio gear, speedo, motor cells etc.) 1476 gm

## Testers Kit

Futaba Attack radio gear and servo  
 Novak Explorer speedo  
 Team Orion 14 triple Mach Mod motor

## Likes:

Team Orion Active sports pack cells  
 Looks awesome  
 Well engineered  
 Good value  
 Multi-surface driveability

## Dislikes:

Awkward access for batteries  
 Wheels might look nice but are not the same as McRae's Subaru\*  
 Wheel hub pins can be tricky  
 \*Although our resident anorak says that Subaru use this pattern sometimes on Tarmac Rallies.

## Factory hop-ups available

Description	part no.
Anti-Roll bars set	A209
Super Shock set	A721
Red (soft) shock springs	6735
Green (hard) shock springs	6737
Slipper clutch set	A507
Graphite front shock mount	A570
Graphite upper deck	A565
Graphite rear shock mount	A218
Graphite belt tensioner	A253
Graphite Chassis	A232
2 speed transmission	A297
One way pulley (14 teeth)	A254
One way pulley (15 teeth)	A255
32T Ball diff	A508
Motor heat sink plate	A248
Universal dog bones front	A513
Universal dog bones rear	A514

'worked out a rough track in my mind and let the Rally rip'

