

**KIT REVIEW**  
Review by Graham Creasey

# MAGIC CARPET RIDE

Beating Corally and Associated in 1/12th racing is no easy task. But that's exactly what Trinity hope to do with their new Magic Carpet Ride racer.

RADIO CONTROL MODEL CARS

38

MODEL RACING TECHNOLOGY

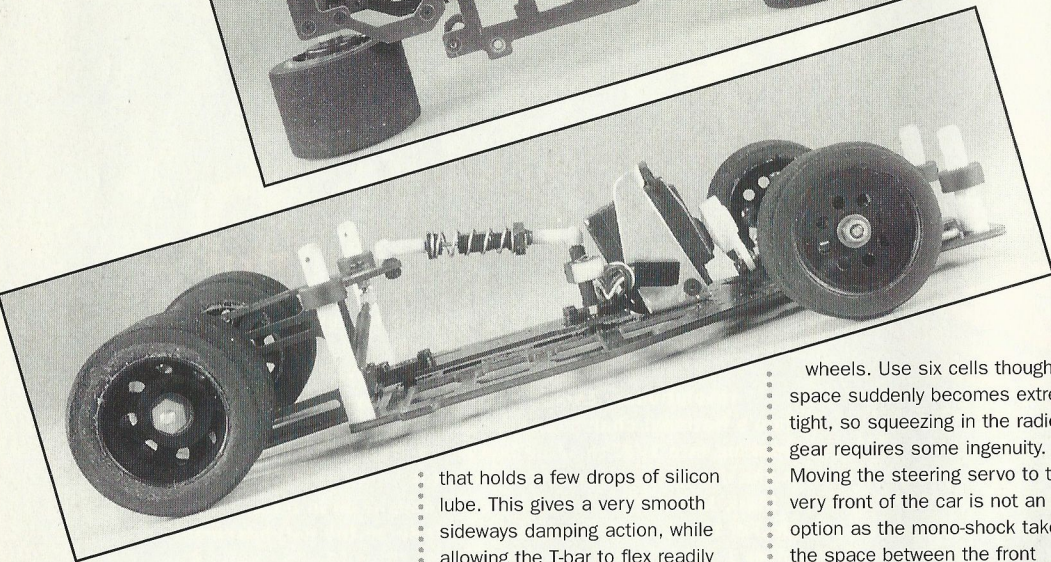
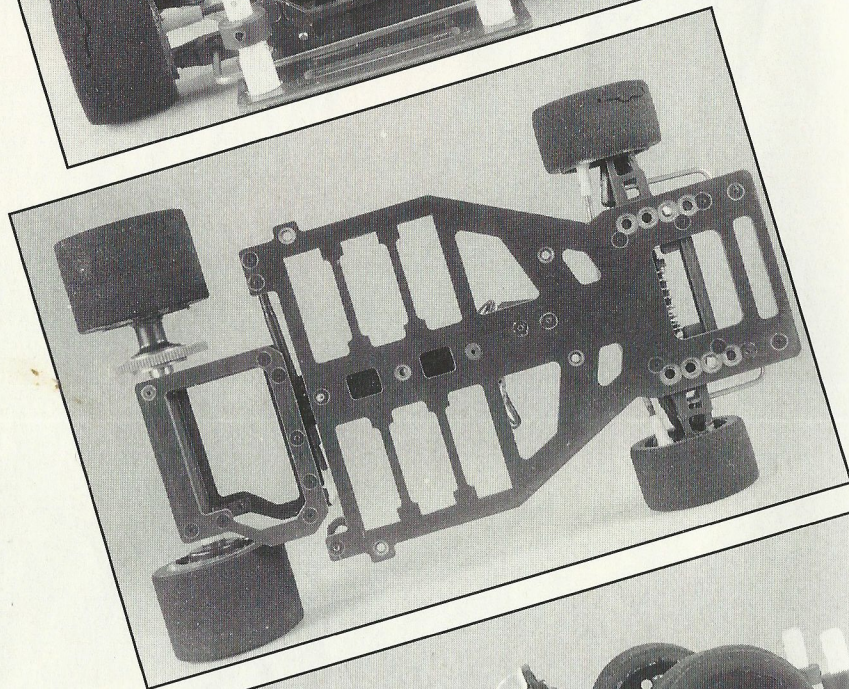
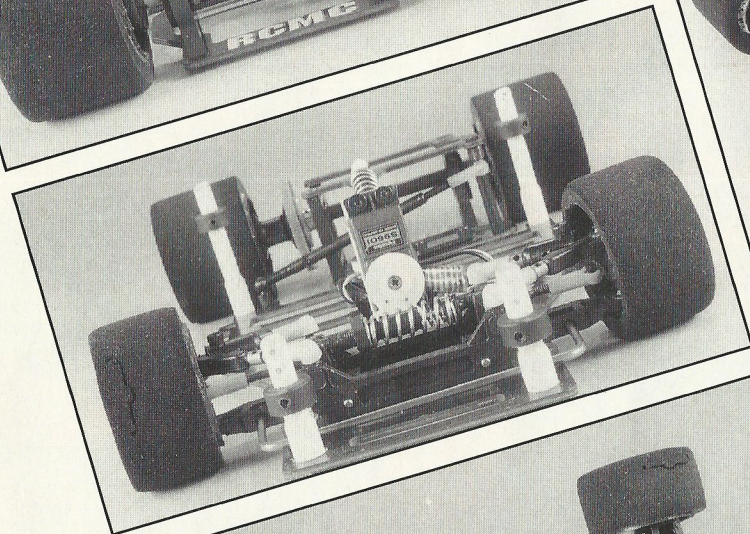
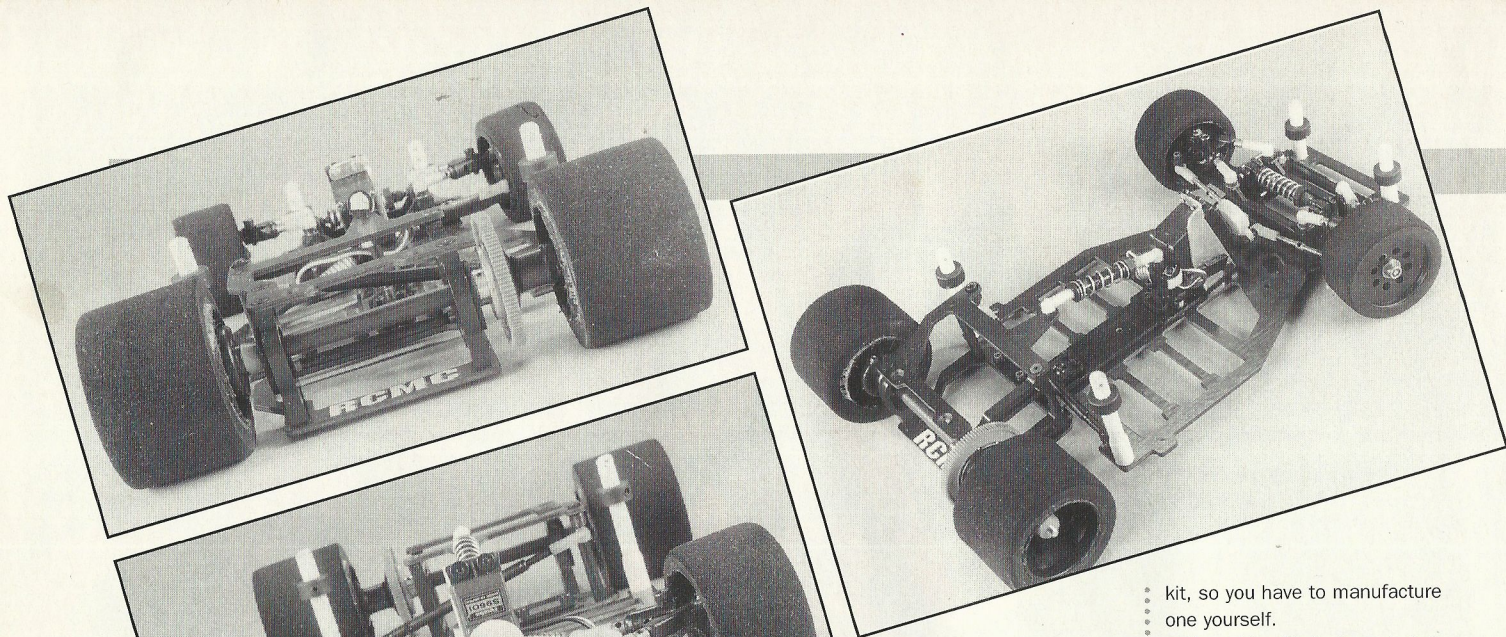
Over the last few years, Trinity have made quite a name for themselves in 1/10th on-road racing. Having stormed the 1992 IFMAR Worlds with their revolutionary Evolution-10 racer, they proceeded to dominate Britain's National championship scene, picking up a trio of BRCA Pro-10 titles. Breaking into 1/12th scale has proved to be more difficult though. The Revolver 12 was the design that should have set the world alight but, despite the valiant efforts of team driver Mark Jewitt, the car never really caught on in a big way in the UK. That could all change now though. For this time Trinity are set to take on the establishment in style with the latest incarnation of their Revolver 1/12th racer, the imaginatively titled Magic Carpet Ride.

So what is it that makes the new car so special? The front-end is the simple answer. While the rear of the car is essentially the same as last season's Revolver 12, the front-end features a completely new design of suspension. Out goes the tried and tested sliding kingpin arrangement and in comes a new mono-shock design, with pivoting suspension arms damped by a central oil-filled shock-absorber. The result is a super-smooth, fully independent front suspension that soaks up any bumps in the carpet with ease.

The incredible adjustability that hallmarked the original front-end design remains though. Trinity's proven Reactive Caster system allows you to control the angle through which the front caster changes during cornering. Set the caster to 1 or 2 degrees and it will change to zero degrees under cornering, enabling the car to 'hook' its way round the bends. Trinity's system of adjustable turnbuckles isn't the easiest of arrangements to set up, but once you have mastered the art of winding them in and out, you really can create whatever front suspension geometry you desire.

JANUARY 1996

39



The rear of the car features the traditional pivoting T-bar system, as pioneered eons ago by the likes of Associated. Tweak screws are used to ensure the T-bar is kept in perfect alignment with the chassis, and the whole unit is damped both fore and aft by a central shocker. The sideways movement is controlled by a neat damper tube

that holds a few drops of silicon lube. This gives a very smooth sideways damping action, while allowing the T-bar to flex readily and return to its central position.

While the Revolver 12 was always a true six cell racer, the Magic Carpet Ride version was originally designed with four cell racing in mind. Pictures of the car therefore often show the radio gear mounted in front of the cells, sitting firmly on the graphite chassis well away from the front

wheels. Use six cells though and space suddenly becomes extremely tight, so squeezing in the radio gear requires some ingenuity. Moving the steering servo to the very front of the car is not an option as the mono-shock takes up the space between the front wheels. The latest trend is therefore to mount the steering servo 'Tamiya' style, upright in the centre of the car. This gives more room either side for the receiver and speedcontroller, ensuring they don't hang out too far from the edge of the chassis. Unfortunately, a bracket for mounting the servo in this manner is not included in the

kit, so you have to manufacture one yourself.

One side-effect of running six cells in a chassis originally designed for four, is that there tends to be more weight at the front of the car than the creators originally intended. On the Magic Carpet Ride this manifests itself in the form of incredible front end traction. To reduce this, most drivers therefore drill two extra holes in the chassis for the front anti-roll bar mounts, moving the anti-roll bar closer to the front wishbones. This has the effect of stiffening the front end slightly, making the car less 'pointy'. Using a small 'helper' spring on the front shocker shaft also helps stiffen the shocker action, as does running with 60 weight oil.

When the kit is first built, the front wheels have a tendency to jam on the lower wishbones when full lock is applied. Resist the temptation to cut away some of the plastic from the wishbone moulding though. After a few laps round the track, the front wheels will carve their own groove in the wishbone and the problem will go away. Performing wishbone surgery with a modelling knife can weaken the design too much, leading to a breakage when you hit something solid.

One thing you will notice when you start 1/12th racing is that the top racers don't usually run the same set of tyres more than once a day. Successive application of tyre additive softens the rubber, making the tyres 'squirm' and 'bounce' out on the circuit. Wheels therefore have to be swapped after each race, with the used rubber being left to 'dry out' thoroughly before it is raced again. Changing the front wheels on the Magic Carpet Ride is no problem at all as these are secured by lock-nuts. Swapping the rear tyres is more painful than it should be though. The left-hand wheel is easy enough to detach, but removing the right-

hand side means having to unscrew the differential. You then have to hold the diff pieces in place with one hand while you gently remove the wheel with the other. Once you've done it a few times the task becomes less tricky, but the hassle of having to reset the diff every time you venture out onto the circuit is something it would have been nice to avoid.

The instruction booklet contains an excellent section on chassis set-up and tuning, written by the on-road master himself Joel 'Magic' Johnson. This covers the tricky task of setting the camber, caster and toe-in, and tells you exactly what adjustments you can make to get more steering, less steering and more rear-end traction.

Interestingly, Joel suggests that you should regularly change the rear T-bar on the Magic Carpet Ride, as continual flexing under race conditions slowly breaks up the fibreglass material, removing its 'internal memory'. When this happens, the T-bar still flexes, but it may not return to its original position, leading to a tweaked chassis and some strange handling. At National events in the USA, Joel apparently changes the T-bar after each day of racing.

With a new Protoform Nissan bodysell fitted it was time to take the Magic Carpet Ride to the track, and where better to test it out than at a BRCA 1/12th scale National?

### Elvis is alive and living in Wales!

Out on the track it was immediately obvious that this was an extremely quick car, even when it had a BRCA legal standard motor strapped in. The acceleration and top speed was very impressive and really kept you on your toes. On the handling side, the front-end bite was quite incredible. The car was extremely 'pointy' and would go anywhere you aimed it, while the rear-end showed no signs at all of ever breaking loose.

Unfortunately, the car did have a tendency to traction roll on a couple of the tighter corners; proof that it certainly generated a lot of grip, but not the way to set quick lap times. 1/12th star Andy Griffiths suggested that I drop the ride-height right down. "We normally

only run the chassis about the height of a pound coin above the carpet. Any higher and the cars can sometimes flip over."

Lower ride height blocks were inserted in the rear and the front shocker was wound in as far as it would go, bringing the front wishbones up and dropping the chassis down. The improvement was dramatic. Now the car could be driven with confidence. It was beautifully poised and negotiated corners with ease. I still made too many mistakes, but these were definitely my fault now and not due to any shortcomings of the car.

After a day of racing with standard motors, I was looking forward to a nice rest at the hotel before tackling the awesomely quick modified class. No such luck though. A Welsh Elvis Presley impersonator howled away on the hotel's karaoke machine until the early hours of the morning, leaving me rather lacking in sleep! So it was a somewhat bleary eyed driver who arrived at the track on Sunday morning, immediately strapping a 15x4 Euro-Kinwald Dirtinator motor into the car to find out what it was like fitted with real horsepower.

Seriously fast was the answer. In fact, I've never driven a car quite like it. The unbelievable acceleration was really rather scary, and the extra speed the car now carried into the corners meant that you had to be more alert than ever. The extra speed also created extra 'push' into the bends, but this was quickly compensated for by simply applying slightly more additive to the front tyres. Other than that, the car performed magnificently, the only problems coming when I tried to run the same set of tyres twice in the same day. The second application of additive caused the tyres to 'bounce' somewhat on entry to the corners, making the handling rather unpredictable.

I was impressed by the lack of maintenance required to keep the Magic Carpet Ride in tip-top form; a quick brush down after each race was all that was required. The front and rear dampers stayed in

perfect order for the entire weekend, the differential stayed silky smooth throughout and the bearings didn't need cleaning once. Nothing broke, only the bodysell showed any form of damage and the tyres showed very little signs of wear.

The Magic Carpet Ride is definitely a very neat little racing car and a lot of fun to drive. Whether it achieves Trinity's ambition of shaking up the established 1/12th competition remains to be seen. One thing's for sure though; it's going to be the driver on the sticks that makes the difference. There's not much wrong with the car.

### Stop press!

In a sensational move, 1/12th World Championship A-finalist Andy Griffiths has left Corally and signed for the Trinity team, along with fellow BRCA National star Darren Houghton. With these two on the sticks this Winter, the Magic Carpet Ride could soon become a winner!

