

# The Trinity Revolver 12P 1/12 Car

## Winner of the 1993 ROAR National Championships

**Having won the 1992 1/10 World's with Joel 'Magic' Johnson driving the prototype Evolution 10 car, Trinity have now entered the 1/12 market with this unique design.**

The American firm of Trinity have recently entered the on road kit market with their World's winning Evolution 10, so it seemed only a matter of time before a new 1/12 design would hit the market. The established on road kit manufacturers have already had to sit up and take notice of Trinity's latest release, because in the first few months since its introduction, the Revolver 12P has won the American ROAR National Championships in both the On Road and Super Speedway (oval) classes. This is the first time that a new manufacturer has won the On Road class since the late 1970's, so it looks like Jim Dieter, Trinity's designer, has come up with a car which can obviously take on the best and beat them at their own game.

### *The Suspension*

The suspension system used in the Revolver's design is very adjustable both front and rear, which for experienced drivers will prove useful when setting the car up for large meetings. For the average club driver, I should imagine that the settings will rarely be changed once a good average set up has been arrived at. The front end is based on the Evolution 10's design, already proven at the '92 1/10 On Road World's, and is adjustable for castor and camber by the use of turnbuckles, these forming the mid sections of the two upper links. The top links are pivoted on ball joints, with the rear links pivoted nearer to the centre of the car. This allows the top of the kingpin to move forward slightly during suspension depression to reduce the castor angle. The degree of negative camber also increases at the same time. The amount of castor change when cornering hard can be increased by packing up the rearmost ball joint. This allows the use of 4° or more of static castor, to keep the car stable at all times.

The rear end traction can be tuned by the thickness of the silicone grease used in the cross damper tube. This style of damper has been used on some American kits for a while now, and I must say is very effective, but the Revolver is the first car that I have built that uses one. The

kingpin damping for the front end is also supplied by silicone grease (this will also tend to lubricate the kingpin's movement through the suspension plate).

The rear pod is mounted to a conventional flexing GRP T piece, this pivoting on ball/socket joints, complete with tweak screws, damped fore and aft by a Delta style oil filled shock absorber.

### *The kit.....*

The box was ripped open with gleeful anticipation upon its arrival at RRC's offices, and it immediately became obvious that this wouldn't be the quickest kit to build that has ever come our way. There are quite a number of parts to this car, so Joel's recommendation in the instruction book that 6 Big Macs and gallons of Coke will be needed to get you through the construction sequence isn't really that far out! Personally, I substituted AC/DC and Saxon for the suggested Guns and Roses and Hendrix soundtrack, but at least it seems we have the same taste in music! (doesn't make me drive like Joel though!). All of the components were found in heat sealed, numbered plastic bags, to coincide with the stages numbered in the instruction book. A pictorial booklet is supplied to refer to during

construction, the idea being to tick off the box in each illustration on completion of each stage. I would have liked the photographs to have been a little clearer, but they don't actually steer the builder in the wrong direction, so are adequate.

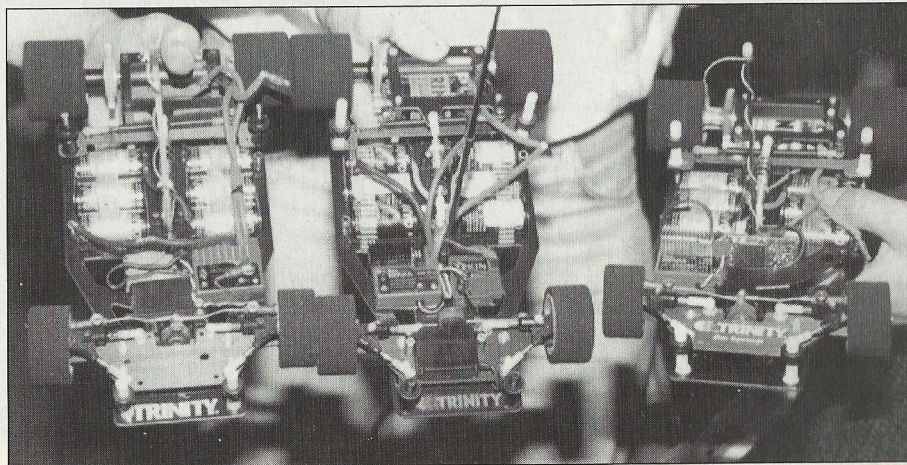
The Revolver kit is quite complete, but it would have been nice for it to have been supplied with a servo saver, plus a recommendation for a suitable bodyshell. I ordered a custom sprayed Associated Nissan from BBJ Racing, only to be told by Mark Jewitt himself that it wouldn't fit, due to the cross damper retaining nut, on the left front corner of the rear pod, fouling the underside of the shell when the suspension moves, hence the use of the RaceCraft Nissan for this review.

### *Preparing the Weapon!*

The first operation was the usual rounding off of the chassis components, followed by the black felt pen and super glue treatment to make it look smart and strong. The graphite parts were well routed out, but the dimensions of the rear pod's base next to the left tyre suggest that this area might be a little weak in the case of a really heavy smash. The chassis is the thickest that I have ever seen used for a 1/12 car, being .094" thick. This graphite is the stiffest this reviewer has seen, so the suspension should be able to do its job without any undue chassis flex affecting matters.

The front end was started, but it soon became apparent that the written text in the booklet was incorrect, and that a few glances at the pictorial booklet gave more useful information. Progress

**Three variations on a theme - The Team Trinity cars seen at Darlington.**



was made at a leisurely pace, because this design calls for some care during the construction, especially when fitting the kingpins through the graphite plate. Three methods of mounting the steering servo are suggested, one of them being to use Associated angled blocks from the 12LS. I couldn't see any way of using these, as the chassis lightening holes occupied the places where the screws would go, so opted for mounting the servo flat on the front plate with servo tape. The other method suggested is to mount the servo flat on the chassis with servo tape, and then to bend the track rods until the smallest amount of bump steer possible with this arrangement has been found. This is the method adopted by Jim

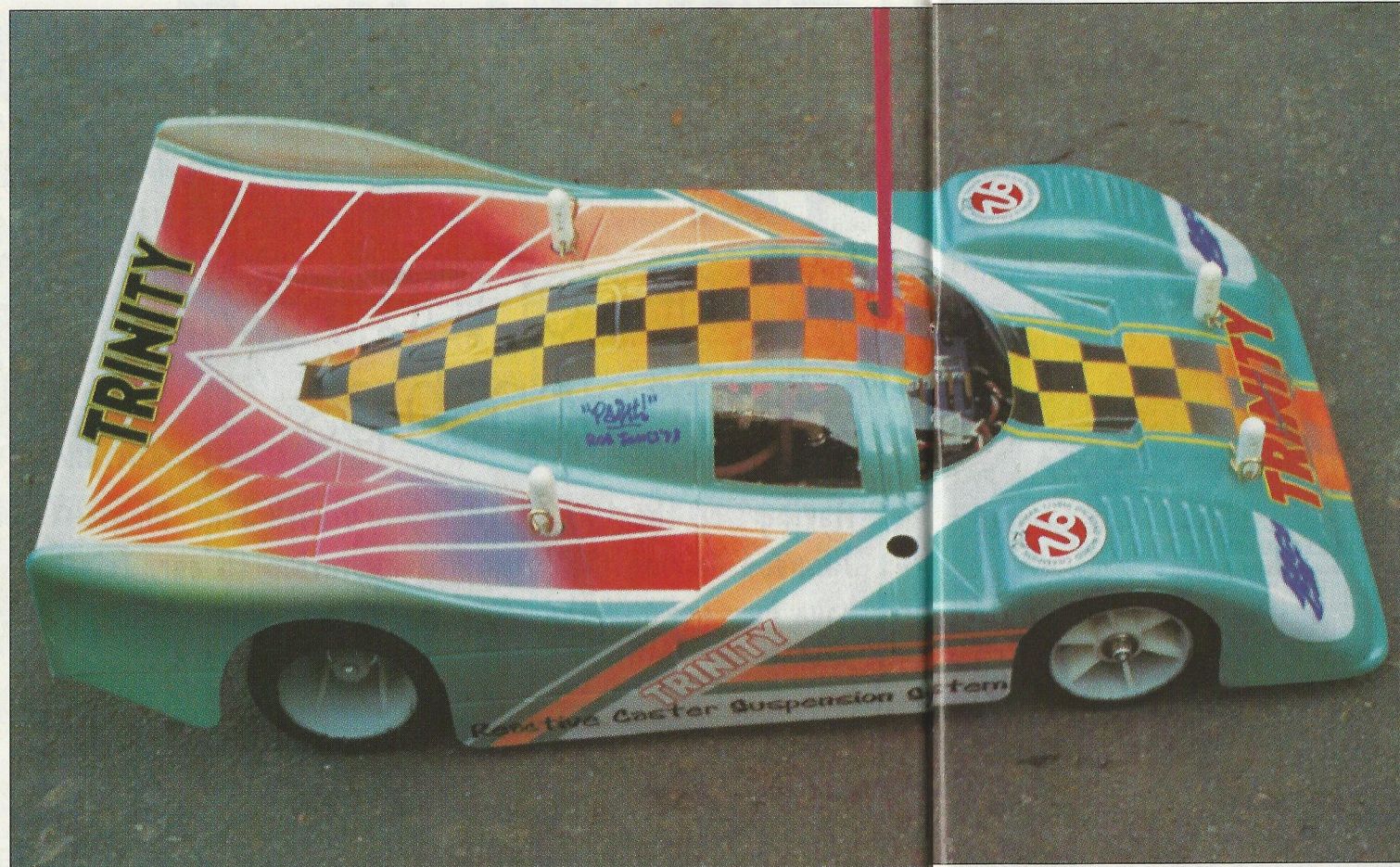


The rear pod is so designed to allow the maximum access to the motor and wires.

Spencer with his Revolver. The cut out provided for the servo saver didn't allow enough lock, so I enlarged it by approximately 3mm at either side.

The plastic mouldings that form the top bearings for the kingpins were filed slightly to clear the inside of the front wheels to give more lock, but this is unnecessary when using Kawada front tyres, as the wheel can be reduced in its width to match the tyre.

The rear pod and T piece assembly was trouble free, as was the shock absorber, whilst the



differential and back axle build resulted in a superb, smooth action to the diff. The diff rings supplied are the 'Magic Motorsports' notched variety, basically for use with a pinned diff assembly. This is not the case with the kit, superglue being used to stick the drive rings to the hub and axle, so as the supplied 'Magic' 100

tooth 64 d.p. spur gear (nice touch) retains the drive rings with a small shoulder, it meant the removal of the shoulder from both sides to allow the removal of the gear for cleaning etc. The alternative is to 'pin' the differential parts, then the rings and spur gear can be used as supplied. The spur gear features a ball race in the centre, and this was of very high quality, as were all the bearings supplied with the kit.

The layout of the Revolver allows a neat and uncluttered radio installation.



**The new Trinity EX TECH modified motor and the substantial alloy sideplates used for the rear pod.**

The only real modification that I made to the kit was to the graphite cross brace that also serves as the body mounting pillar and cross damper mounting. The lugs that projected forward from this brace just happened to end up right over the top of the rearmost cells, preventing the use of my favourite connectors, so I cut them off and redrilled the holes for the body mounting pillar screws, this mod also gives better access around the brace for the cells and motor wires.

**Loading the Weapon!**

The speed controller used for the review was a Nosram Dominator, which really comes into its own in Standard Class 1/12 racing where its bottom end and mid range punch is useful. The steering servo was the usual 1/12 wear, a Sanwa 141HS (an Airtronics 94143 for our Stateside

The 'Reactive Castor' front end is very adjustable, thanks to the use of turnbuckles in the top links.

The rear damper is very effective, and tuneable by the thickness of the silicone grease used for the damping medium. The cross brace is modified to allow the use of connectors on the cells.



readers) and a Futaba 40mhz receiver. As the servo was placed at the very front of the car, space was obviously no problem, so I should imagine that virtually any speed control and receiver combination will fit into the car easily.

If the servo is placed behind the front plate, and mounted on the chassis, then all the usual combinations will still go on the chassis plate.

A new Trinity EX Tech modified motor filled the space in the rear pod very nicely, whilst Trinity Team Pushed SCRC-SP Sanyo cells nestled in the chassis slots like they were born there.....

**A most effective Weapon.....**

As the Revolver has already won the ROAR Championships in the States, it is obviously a very competitive car when set up correctly and with a driver of the quality of Joel Johnson on the wheel (He doesn't use sticks).

My experience of the car to date has been limited to three very quick heats, so I haven't really come to a conclusion yet, other than that the grease in the rear damper tube should be changed for some that is much thinner. I removed the damper altogether after experiencing drastic oversteer, and the handling changed to mild understeer, so thinner grease is a definite recommendation. Set up with approximately 1.5° negative camber and 4° castor on the front, the tyres wore very flat, so this looks like a good starting point when experimenting with settings for the front end.

The Team of Jewitt, Spencer and Sawyer certainly showed the Revolver's competitiveness at the first National of the season at Darlington, with two of the new cars in the Standard Class A Final and one in the Modified A. Andy Sawyer is particularly happy with his car, and reckons that the steering 'feel' is very good. This could well be attributed to the fact the cells are further to the front of the car than on some designs, and with the servo at the front as well, there is more weight on the Revolver's front wheels than that found with other cars.

The kit built up fairly well, but expect to do a little more fettling when building this car than you might be used to. Having said that, you will have built a very adjustable car that should be very good on small and tight club tracks, so expect to see some gunslinging action when the Revolver hits the clubs!

Manufactured in the USA by: Trinity Products Inc, 1901 East Linden Avenue, #8, Linden, New Jersey. (908) 862-1705.

