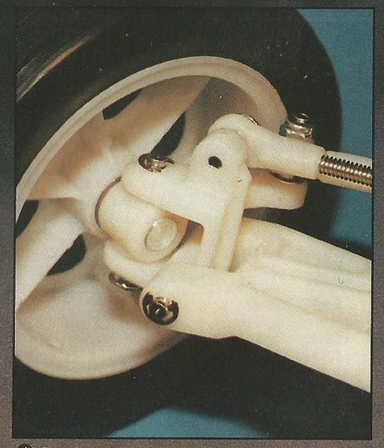
TRAXXAS TRX 1



Steering block/carrier detail.

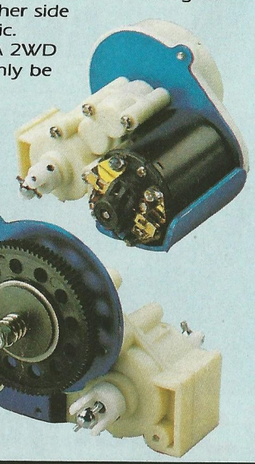
RRC looks at the 'newest kit on the block', the Traxxas TRX-1 2WD Competition Racer

Ever since the introduction of two separate 2WD and 4WD classes back in 1987, 2WD cars have always taken second place to 4WD, in relation to numbers raced at national meetings. This is a complete reversal to what goes on on the other side of the Atlantic.

In the USA 2WD racing can only be described as phenomenal, with virtually all clubs running just 2WD and monster truck classes, with 4WD not even being mentioned. In fact the only times when 4WD cars come out to play is at the big weekend events, like the ROAR and Regional Nationals. Originally it was Associated that paved the way with the revolutionary RC10, which swept all before it. In recent years though, the Team Losi JRX has become an equally tough car to beat, especially in the USA.

Now the American manufacturing duo have some new competition — Traxxas. Unknown here in the UK Traxxas have been manufacturing monster trucks for some time, and have been involved in the current truck explosion in the States. With new found knowledge and racing experience, they have now turned their hand to the 2WD competition class. With 2WD as big as it is in the States, and growing fast here in the UK (we at RRC envisage that it will be as big as 4WD soon), 2WD is certainly the class to attack with a new car, as it carries so much potential.

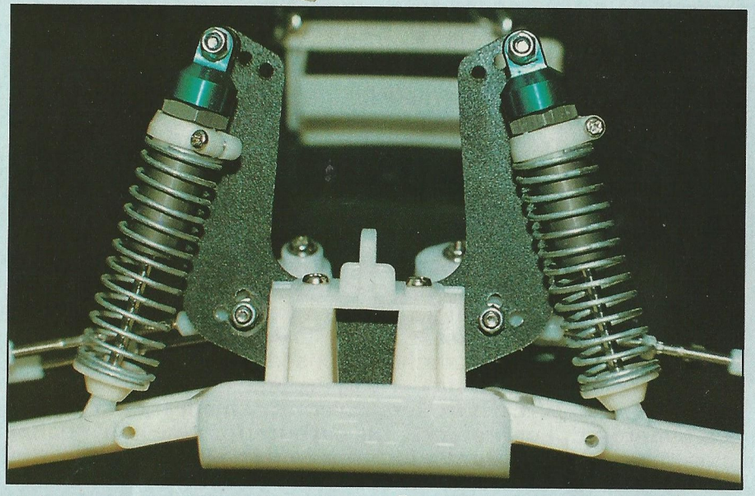
The car that was sent to RRC is the same version as the one which Scott Montgomery drove to fourth qualifier place on the grid at this year's World Championships in Detroit. Judging by the other manufacturers present at the event this was some achievement, as most of the others ran highly modified prototype cars, many of which are currently unavailable over the counter.



Slipper detail.

Construction

Before we start with the building of the car, we would like to complement Traxxas on how excellent their instruction manual is. In fact it is the best we have yet seen, with detailed clear photos on each stage of construction, accompanied by a detailed description. Each page has a rule printed at the bottom, and the necessary screws/nuts for that stage. At the back there are seven (yes seven) pages of tuning tips and car set ups, explaining all the various adjustments the user can make to his TRX-1.

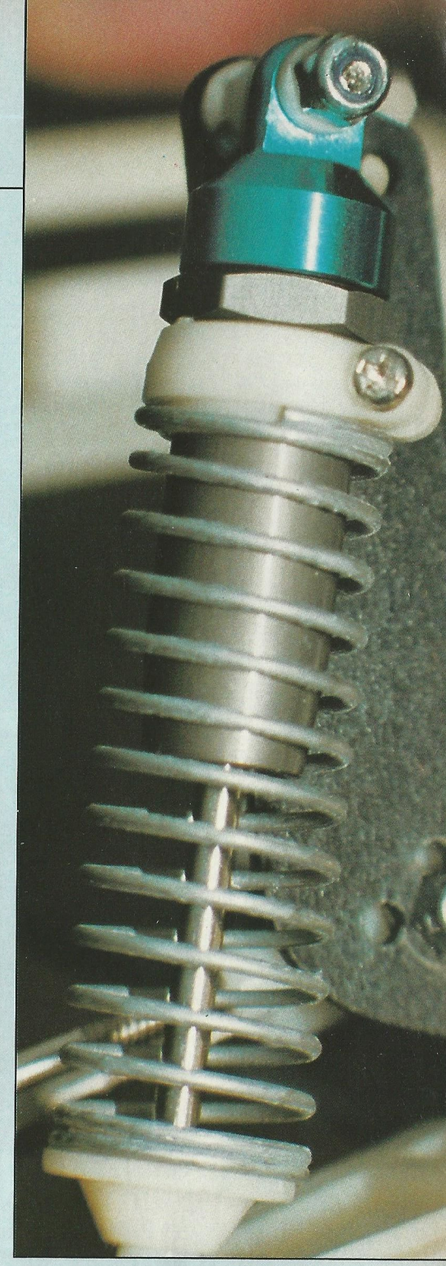


Front suspension geometry detail.

Construction starts with the differential. This is the now universally used ball type differential. It utilises a nylon centre gear which has a ball bearing in the middle to reduce play and friction, and 12 hard 3/32in. balls to provide trouble-free diff use.

Thrust washer retainer shafts go either side of the diff. gear, and a bearing is placed inside the output shaft, which supports the shaft that runs through the centre of the diff from the thrust washer retainer. The other output shaft then bolts onto the thrust washer retainer thus enclosing the thrust washer from dirt. The finished unit is a very lightweight and compact piece of work, which forms the basis of the very small gearbox.

One thing that may need looking at is the thrust bearing, as it did look rather small and weak for the rigors of off road racing. No doubt time will tell on the race track! The diff is mounted at the bottom of the gearbox, with an idler gear and top gear above.



Long front shock absorber.

The top gear is fixed to a top shaft via a pin. The gearbox uses 48DP gears throughout and is supported by six bearings. The motor plate is then bolted to the gearbox and finally the two ball diff. yokes are mounted to the output shafts. These are very securely fitted with a centre screw and two outer grub screws making sure they won't come loose.

Next stage is the slipper assembly. This is a very simple design, but should still be very effective and reliable during operation. It basically consists of two slipper plates and slip rings. The plates

and rings have little notches in them to locate on corresponding notches on the slipper plates, which eliminate any unwanted slip. Six pegs are inserted inside the spur gear (two being supplied) with a plate and ring mounted either side, and a spring and nut following for adjustment.

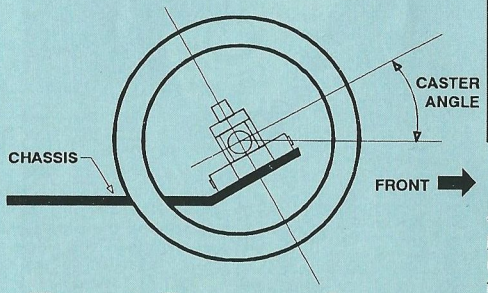
Assembly continues with the driveshafts, which are the slider/spline design shafts as used on the Losi and Schumacher cars, and are coupled to the gearbox outputs via metal U-joint pins.

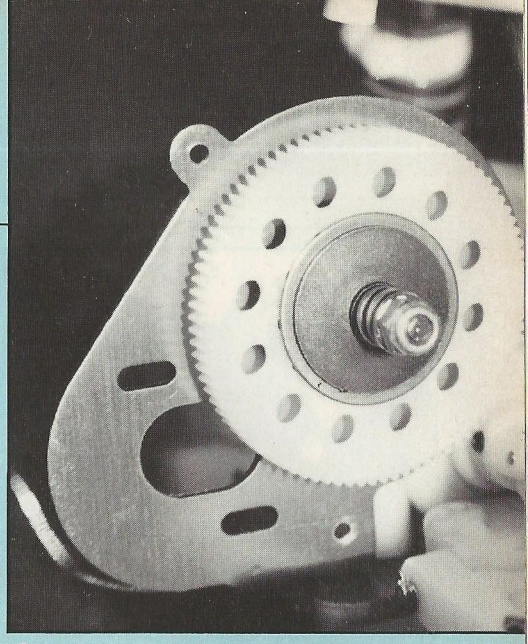
The rear bulkhead is bolted to the gearbox and the upper links and shock tower follows suit. The upper links use left and right threaded turnbuckles with adjusting nuts and heavy duty rod ends that appear to be nice and substantial for off road racing.

The rear suspension is next to be assembled. Two pairs of mounting blocks are supplied, giving the user the option of two toe-in angles. Anti-squat can also be adjusted by using the two pairs of castor wedges supplied. One being one and a half degrees, the other three degrees, with the advantages of each being explained in the tuning guide. The blocks are then screwed to the chassis. The long suspension arms are mounted via stainless steel pivot pins as are the rear stub axle housings. Two 5 x 11mm bearings support the stub axles. The rear suspension is completed with the attachment of the upper link.

Shock Absorbers

These come in two different lengths, the longer of the two on the back. Be careful when building the shocks as the size difference is only small and they can be confused. The design is the often used double o-ring style with a rubber diaphragm at the top. A selection of pistons are provided, which have different notches in them to allow for adjustable damping. Upon completion, the shock absorbers appear to be very smooth and no leakage was discovered. The rear shocks are then mounted to the suspension via the centre hole of the three provided on the shock tower, and again the same on the suspension arm.





Slipper detail.

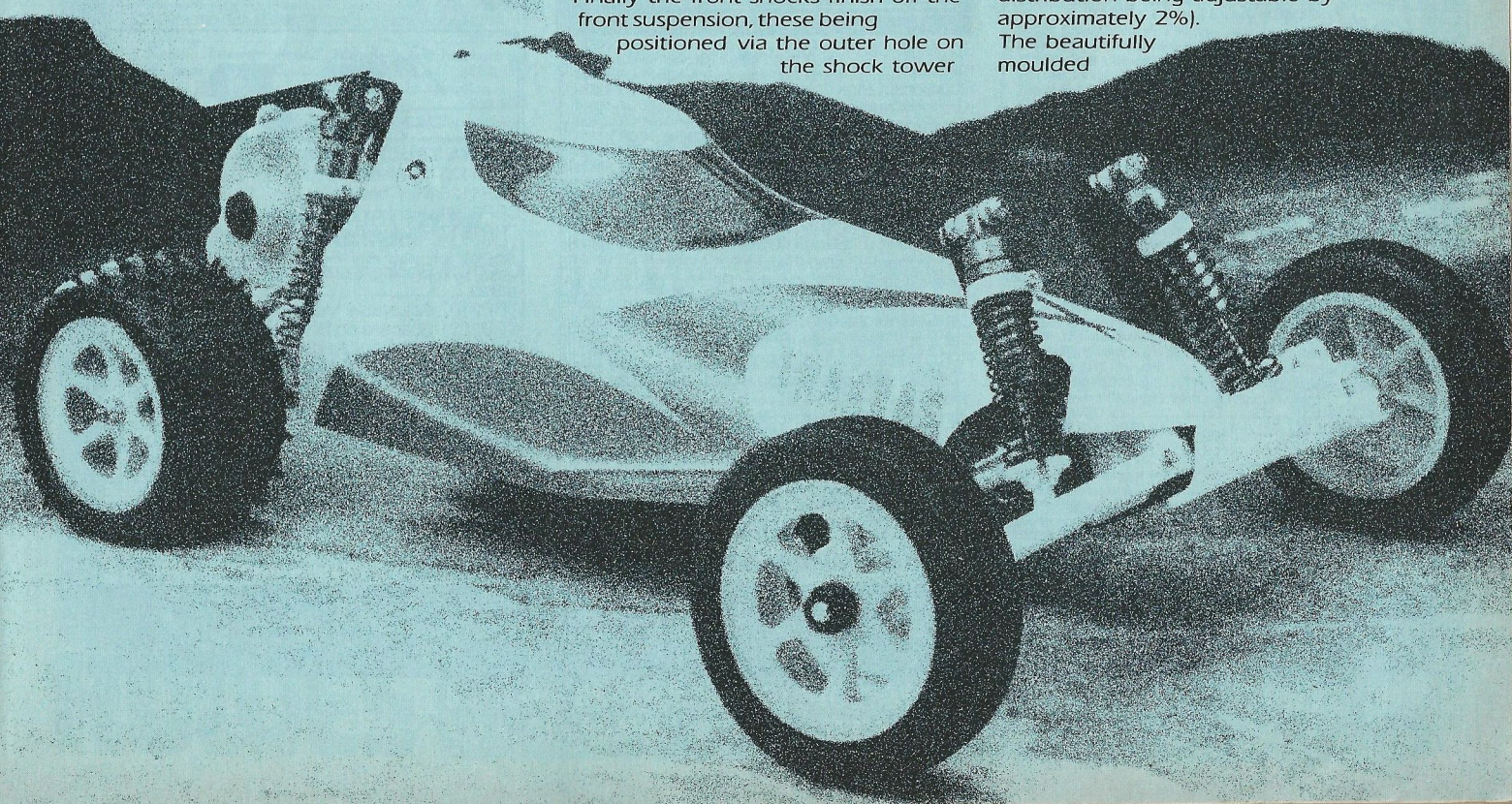
Front Suspension

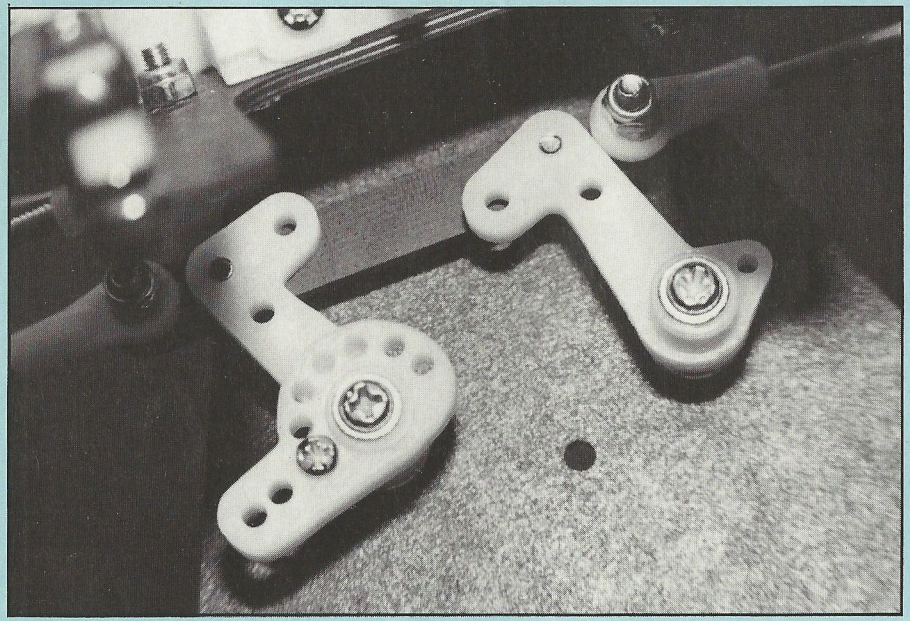
This begins with two suspension arm brackets being bolted to the graphite shock tower. The tower has both three shock and upper link holes to choose from. The suspension arms are then mounted to the brackets. These are the swept style design and are very strong and 'chunky', with three positioning holes being provided for the lower shock. The castor blocks then follow, these again look nice and substantial for the job required. They have no castor moulded into them, the castor on the front being the same as the kick-up on the chassis — 30°. This should be more than adequate anyway, as racers rarely drop below 25° castor on 2WD cars. The steering arms are then mounted to the castor blocks. These are the zero-offset type with the king pin running through the centre of the axle, thus providing accurate and responsive steering. The upper link is mounted in the usual fashion.

Finally the front shocks finish off the front suspension, these being positioned via the outer hole on the shock tower and the centre hole on the arm, providing a very upright shock angle. (This is probably done to produce a more forgiving car during cornering, as an increased angle produces a more responsive car.) One thing that does appear to be happening in the model car world is the increasing use of long suspension arms, and the TRX-1 is no exception. The front arms are certainly longer than most and this should provide a very stable car over rough ground and no doubt make it easier to drive due to increased stability. A slot and mounting point is provided for a roll bar although one isn't included in the kit.

The steering assembly is then mounted to the chassis on two alloy posts. The action being provided through two bellcranks and a centre track rod. This again provides the best steering action with all bumpsteer being eliminated. The front suspension is mounted to the chassis, completed by a mini bumper. The battery cups are screwed to the chassis, with a choice of holes provided in the chassis to allow for different battery configurations and weight distribution (the weight distribution being adjustable by approximately 2%).

The beautifully moulded





Robust steering mechanism.

gear cover is bolted to the motor plate and all that remains is the mounting of the wheels, tyres and bodyshell.

The wheels are a very attractive spoke design, which unfortunately are bound to clogg up with mud. The tyres are the natural rubber type, which has become so popular over the past season, with the rears being a short pin design that could prove very effective on our tracks. The body is certainly futuristic and aerodynamic, although it does leave a lot of area exposed between the chassis for dirt to get in.

Conclusion

Well the car certainly builds well, with all the parts coming together superbly. The mouldings are first class, with no flash at all and they have a sharp, smooth finish to them. The nylon used certainly appears strong and the wishbones are very sturdy in design. In fact all the mouldings have a sort of unbreakable appearance to them.

The graphite chassis is immensely strong for such a narrow chassis, with no flex at all. This can only be good for the car's performance as there will be no tweaking. The overall design of the car is nothing revolutionary, with many parts having a striking resemblance to those on other 2WD cars. However, we do feel the design will work, and should produce a car that will perform on most tracks with minimal adjustment and this should appeal to the intermediate driver as well as the pro. There certainly is ample adjustment for experts to dial the car in to any track, with a full guide on the adjustments in the manual.

In conclusion, the car is excellent with the only item worthy of criticism being the bodyshell. We feel this lets the car down, as the shape is personally, awful. It leaves a lot of open space beneath, and for our climate which can produce very muddy tracks, an undertray will be essential.

With some good drivers at the sticks the TRX-1 should quickly establish itself among the front runners.