

blue ribbon racer

Kyosho EP Spider TF-3 Type - R '99



Smart Frewer S40 body

In the summer of '98 Radio Control touring car racing finally came of age, with the running of the first World Cup for Scale Tourers. This event was probably the highlight of an intensive two week programme of RC racing, the like of which may never be seen again I think. All the major players were there including some Spashett guy who seemed to wop the pants off the rest of the World. Teams came from nearly all the manufacturers involved with this class of racing except one Japanese constructor, the one that really got this class of racing started, velly strange. Well after the performance of their single largest World and Japanese competitor I should think they are kicking themselves now. Yes it wasn't a

Losi or a Yokomo that seem to get most peoples attention but a very low key effort from Kyosho, yes Kyosho.

Up until that point Kyosho hadn't really played with the big boys, yes they have produced some very high quality, but mainly 'sport' class cars. All have been a non-scale 200mm wide. Over the past years these have been slowly developed into the 'barn stormer' of a car that came to play in South Shields. The true performance of the car perhaps being masked by the lack of World class power and driving talent, but the writing was on the walls.

With thanks to Ripmax, Kyosho's UK importer, Ed' PeterE managed to acquire one of the very first cars into the UK for RRCi, Christmas came early for me.

Spider TF-3 Type - R '99

Having been responsible for the last TF3 review your Ed' deemed it apt that I should examine the latest offering. The last TF3 was a very reasonable piece of kit but was never going to set the tarmac on fire. Even just looking at the stunning gloss black and silver box that announced the arrival of the '99 it was clear this was a real tough guy. On opening the lid, I was greeted by my favourite ingredient for a model car, carbon, and lot's of it, and just about every option that I had recommended in the last review, 'magic our Grommet'. The '99 follows what has come to be an almost archetypal layout for this class of scale tourer; Twin Belt 4WD, Flat Chassis, Top Deck, Bottom Wishbone/Top Link etc.

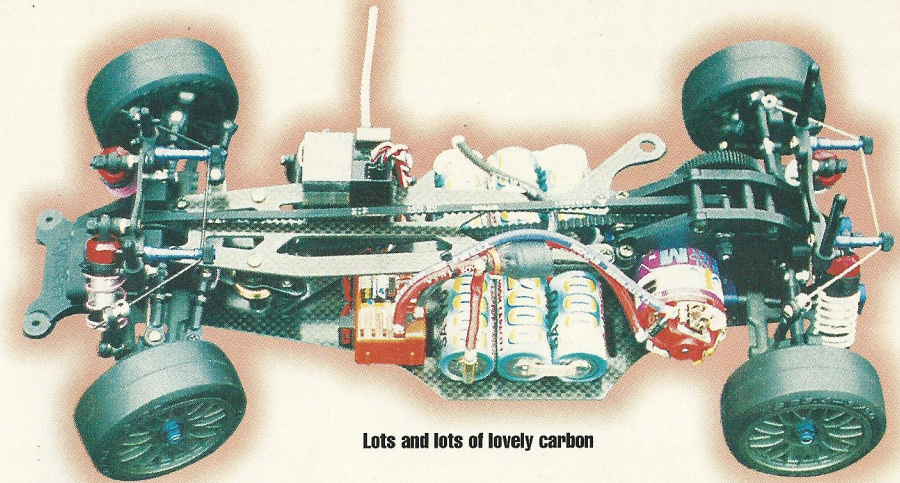
Every part though that is included in the kit is to the highest possible specification, many from Kyosho's option list. First we have a thick carbon fibre saddle pack chassis, stick pack nicads will also fit, most racers will go for the saddle pack layout as this will handle a great deal better. This is backed up by an equally strong carbon top plate. The top plate has transponder mount built in, positioned to balance up the side to side weighting. A monster bright blue ventilated alloy motor mount (the motor mounts as low as is possible on the car for improved handling). Carbon plates front and rear carry Kyosho's top line Teflon coated alloy shocks, and new colour coded springs. Mega stiff carbon impregnated moulded wishbones support new caster blocks/uprights, all fully ballraced. A ball diff at the rear drives dog bone drive shafts, at the front an alloy one-way drive unit puts power to u/j drive shafts. Steel turnbuckles direct the all new suspension geometry, toe-in at the rear as well, and it's all 190 mm wide. In fact the only part that appears not to have felt the weight of the designers pen is the steering linkage. As has become the norm with this type of competition kit there are no electrics, bodyshell and, with this car, no wheels or tyres. The tyres I can understand, but the wheels! On the subject of wheels, although not mentioned in the instructions, in 'kit' form to get a legal width you have to use Kyosho's own wheels. Although they are standard hex drive they have a negative offset, thus even zero offset wheels will give a 195 mm width. Adapters to use Tamiya type' offset wheels are available from Kyosho (pno SP-62). However, in testing I have found



Trinity Rear wing for mega down force

that the '99 handles best on the correct Kyosho wheels, no sales pitch. If you want to narrow the car further Kyosho Super Narrows are now available. (pno 92222673) It's more than plain that this TF3 has totally shrugged off its previous identity, it is a pure built racer ready to slug it out with the best, fully loaded and excellent value with an RRP of £199.00.

Build sheet. As ever with any Kyosho kit you get a very clear instruction manual, a 5 page additional manual that deals with the '99 modifications and a 10 page parts list. The main manual is from the '98 spec TF3 R but covers 90% of the build, the additional sheets filling in the gaps. I marked the pages on the main manual when the supplement was needed, there aren't many but all are very important. Because of the latest spec a few parts of the instruction are a little unclear, but I'll pick them out as we go. Kyosho do include a neat pack of hex wrenches and a nut driver, but you will still need a couple of sizes of Phillips screw driver, some needle nose pliers and a



Lots and lots of lovely carbon

sharp craft knife. Also some form of accurate measuring tool, I used a plastic vernier.

First job as ever is to prepare all the carbon parts, the chassis needs the edges radiusing with some medium 'wet and dry' and the Nicad slots need just the edges filing round. Don't put a large bevel on the slots as the nicads sit very low in kit form. Seal all the edges with thin super glue on a cotton bud, take special care with the Nicad slots, carbon is conductive and a 'shorting' pack can make a nice burning smell, dangerous and expensive.

Let's get going

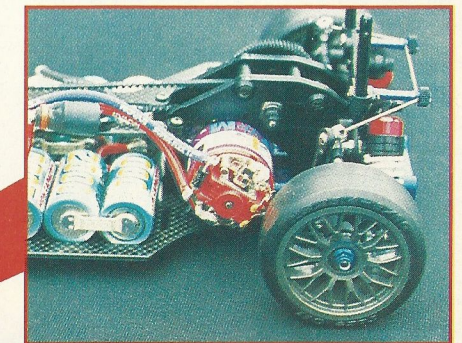
The build proper starts with the fitting of the alloy motor mount, the top plate supports and the first '99 part, the steering servo carbon extension plate. I did add a little thread lock to the machine screws in the alloy motor mount. Do take care when tightening the screw through the belt tensioner, the ballraces must be as free as possible but not slack. The top loading front and rear gearboxes are next, fit all the mounting screws in finger tight, but don't tighten them fully till the transmission has been fitted to them. This way you can make sure everything is aligned correctly for the best free running.

Following on we come to the transmission, the rear diff is a normal adjustable ball type first fitted to the Laser if memory serves me well. Using the supplied grease it was very smooth, the thrust bearing is a bit fiddly, you just have to be patient, I found a cocktail stick with the diff grease was the best way to locate the balls. I had spare balls with my kit so count them as you fit them. The front one-way unit is fitted into a standard gear diff housing, so the locating grub screws should be thread locked into the housing. It is possible to fit a ball diff to the front, and I would recommend that one is purchased from the options list. That way you will be covered for all grip and track conditions. With the top loading drive system it takes approx. 8 minutes to swap from one-way to ball diff.

Once the belts/diffs etc. are fitted tighten the gearbox mounting screws, check that the transmission stays free as you go. Adjust the housings if needed. Sections 7, 8, 9, 10, 11, require no comment and are clear. Sections 12, 13, 14, 15 need reference to the additional

manual. As these parts are fitted make sure they are free and move smoothly, without any play. The 'boss' shown on the rear wishbone does need trimming off, but on no account should the front wishbones be trimmed. Stay with the supplement for 17 and 18, just work on the fits 19, 20, and 21 followed on without a glitch. When you come to the steering in section 22 I found that if you added some thin 3 mm shims to the steering pins, just enough to take out any play, it made the steering very responsive when driven. But don't add enough to make it stiff. Thread lock the mounting screws that hold the steering pillars to the chassis, if you don't they will fall out, with the obvious result. The next reference to the supplement comes in sections 24, 25, with the fitting of the steering servo and the radio gear. Unfortunately although the layout for stick pack nicads, which the '99 will take, is dealt with in detail, no reference is made for a saddle pack radio layout. Also no hardware is supplied for fitting saddle packs to the chassis, which means using glass fibre sticky tape or some form of Velcro strap. As I dislike sticky tape I used some Yokomo velcro straps which I already had. With the space available I had to fit the receiver onto the top plate, level with the steering servo, thus keeping the aerial lead short. The speed controller was mounted on the left of the chassis just in front of the pack. Kyosho could usefully add this information to the supplement.

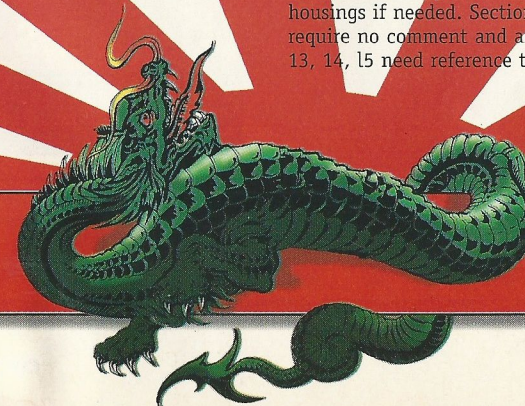
Next are the shock absorbers, these are just so good they build well and are amazingly smooth. I did use a known weight of shock oil, Trinity 60w, as the kit oil is very thin. It is important to set the shocks to the open length given in the instructions, especially the rears. I used the Kyosho Hop Up soft spring set (pno 927213, 3 pairs) Fit the white springs to the



The Kyosho wheels are the best choice



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wealth safety prosperity



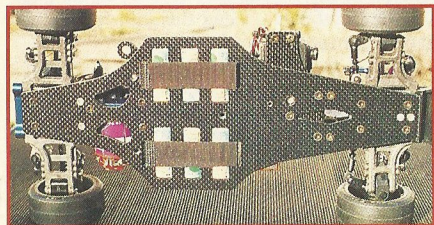
Let's go racing!

rear shocks. That's it for the build, once complete the car had a real feel of strength and quality. With any electric racer it's vital to have a friction free transmission, we don't want to waste any power do we? I'm pleased to say the '99 was pretty good without resorting to removing bearing shields etc. The front belt was a little tight but I suspect that it will stretch as it runs. The suspension moved well, the springing was a little soft but well damped, should give a lot of grip. Looked great as well.

Set & Tune

After the build it's imperative that you go through a full set-up with the car. Kyosho don't actually give any details for the set-up so this is my version, it seems to work. With your choice of tyres and Nicads fitted, adjust the ride high with the clip-in spacers to give a 7 mm front ride height and a 7 mm rear ride height. With the rear ride height if you go too high you can run out of 'droop', and thus traction under braking and out of a corner. Adjust the front track rods to give a slight amount of Toe-out. With a camber gauge and using the turnbuckles adjust the cambers to 1.5 degs neg front and rear. You may have to reset the front 'Toes' after setting the cambers. Once done I did find that as you moved through the front suspension travel the tracking changed, i.e. I had some bumpsteer. To dial this out I raised the in-board mounting point for the track rods in the steering beam till the tracking stayed constant. This is simply down to trial and error. Job done.

None, or very few, Race Cars are perfect straight



The wishbones are carbon composite, the cell straps non-standard

'Carbon plates front and rear carry Kyosho's top line Teflon coated alloy shocks'

from the box for every track or weather condition, so it's beneficial if the chassis has a good range of adjustments built in. With Kyosho's lack of tuning details you have to go looking for them. In fact the TF3 '99 has a great deal to offer:

Front

Caster - Front/Rear mounting beams, Camber Change - Out board top suspension pillow ball, Ride Height, Tracking, Roll Stiffness - Shock absorber position.

Rear

Camber, Anti-squat - Front/Rear mounting beams, Ride Height, Roll Stiffness - Shock absorber position, Camber Change - Rear hubs, Wheel base - Spacers on bottom wishbone.

Add to this the range of springs and roll bars in the Kyosho Hop-up range and you can see for a small outlay you have got all that is really needed to win, shame you cannot buy talent... ho hum.

What you need

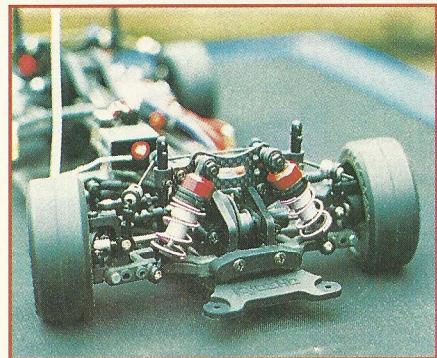
As this is a top spec kit you really need the best possible radio gear. I used a Futaba 9303, high speed/torque steering servo. A KO mini receiver, a mini receiver is a must and a Mk2 Novak Cyclone speed controller. Again due to the level of space a small speedo is needed. Yokomo Gold Star 2000 nicads powered both a Kyosho Atom Smasher 12D and one of the new LRP XT (11Q) motors. Regarding the motors, the kit gearing is a little on the high side (41 mpr on 64mm dia tyres), and as the kit comes with .45 module gears I had to change to a Kimbrough 48dp carbon pinion and Associated pattern spur. For wheels I used Kyosho mesh pattern pno 92445G and Fastrax JC Tourismo. Tyres were Schumacher Mini-pins (for carpet) and Take-Off HS 20, 25, (for outdoors). The last part of the puzzle being the bodyshell, the choice at present for scale shells is mind blowing. As Volvo won the '98 full-size BTCC I chose a Frewer Volvo S40, complete with rear wing, decals, and two types of window mask, all for £13.50, excellent value. As a little tuning aid I also purchased a Trinity High Down touring car wing. Everything was painted with some of the latest paint from Pactra. With the adjustable body mounts it was easy to get the shell down to the BRCA minimum height level, do leave yourself room to allow for ride height and tyre wear.

Tip

Do use some form of mouth and eye protection when sanding and gluing. Next it's wise to separate out all the different types and sizes of hardware that come in the kit, I used six small plastic ice-cream pots, this will speed the build up.

How does it run?

Well the simple answer is very well indeed but unfortunately the Ed' tells me that owing to a shortage of space you will have to wait a month to hear just - How Well! See you next month in 'Drive In'. **RRCI**



The Teflon shocks are ultra smooth

Quick Spec

1/10th Electric 4WD Scale Saloon. Belt Drive. Carbon Fibre Saddle Pack Chassis. Fully Ballraced. Rear Ball Differential. Front One-way Drive Unit. U/J & Dog Bone Overdriveshafts. Alloy Teflon Coated Oil Filled Coil Over Dampers. Bottom Wishbones & Top Links. Turnbuckles.

Tester Kit

Radio :- KO Vantage
Receiver :- KO 40meg Mini
Servo :- Futaba S9303
Speedo :- MK2 Novak Cyclone
Nicads :- Yokomo Gold Star
Motors :- Kyosho Atom Smasher (12D), LRP XT (11Q)
Charger :- Tekin Pro
Body :- Frewer Volvo S40 (Trinity Touring Car Wing)
Wheels :- Kyosho Mesh Pattern, Fastrax Tourismo
Tyres :- Schumacher Mini-pins (carpet), Take Off HS 20 & 25 (Outdoors)

Likes

Specification
Ball Diff
Quality
Clip in ride height spacers
Cost
Very adjustable
It's very quick

Dislikes

Lack of information
No hardware for mounting the cells



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