Chris Deakin

From Hethel to Hong Kong

Kyosho EP Spider (TF3) Lotus GT1 Review

Lotus must be one of the most evocative names in motor racing. The late Colin Chapman brought some amazingly innovative cars to road and track. My own favourite being the Lotus 62. This was a sports racer based on the mid-engined Europa. It had a 2 litre Vauxhall based 16 valve twin cam engine, a five speed Hewland gearbox, 10" and 12" wheels. What it lacked in outright speed it made up for with truly awesome handling and brakes, doing many a 'David and Goliath' act with the bigger and faster Ferraris and Porsches. A trait of nearly all the Lotus road cars.

With the resurrection of GT racing worldwide, the men at Hethel got on their keyboard and composites, bringing out GT1 versions of the Esprit and then the stunning Elise. Taking the Elise's bonded alloy chassis, bolting a 6 litre twin turbo V8 in the back, they went a racing.

TF3 - GT1

The TF3 is Kyosho's latest 'Scale' car, billed as part of the 'Pure-Ten' range. Following on from the TF2 we reviewed in early '97 the TF3 is quoted as being in Kyosho's words 'an evolution of Kyosho's on-road competition chassis'. This is more than evident when you put the two cars together. Once more Kyosho have built a good quality scale model. All the parts fitted well, and are very strong. I have no doubt that in Japan the GT1 will sell like hot cakes with Lotus lovers, and providing your club is 'friendly' the TF would make a good starter car. It is of course totally legal for Kyosho's own race series, where it will be very competitive. The Kyosho series would make an excellent starter series so both the car and race series are probably tailor made for a new racer. For any other type of racing though it will need a little bit of upgrading as you will see.

Open the Box

The TF3 follows the same basic layout of the TF2. A full length FRP chassis and top 'deck' replaced the carbon fibre and alloy of the TF2. A high level layshaft (RS4 style) sends the drive front to rear using drive belts.

Both front and rear gear diffs are supported in open plan nylon frames, which also hang the suspension components. The 'frames' once assembled are very stiff, if a little heavy. A thin alloy plate mounts the motor low and on the chassis centre line. Dog bone drive shafts take the drive to the moulded hub carriers. A bottom wishbone and a single top link makes sure the wheels follow the correct path. Some really top drawer Teflon coated, alloy 'touring' shock absorbers handle the bumps. The total drive line is ballraced and is very smooth in operation. Lastly you have the choice of two superlative bodyshells, either the 'Long Tail' McLaren F1 or in our case, a stunning Lotus GT1.

Reflected glory.

The rear wing is adjustable and with the 'duck tail' gave a lot of downforce.

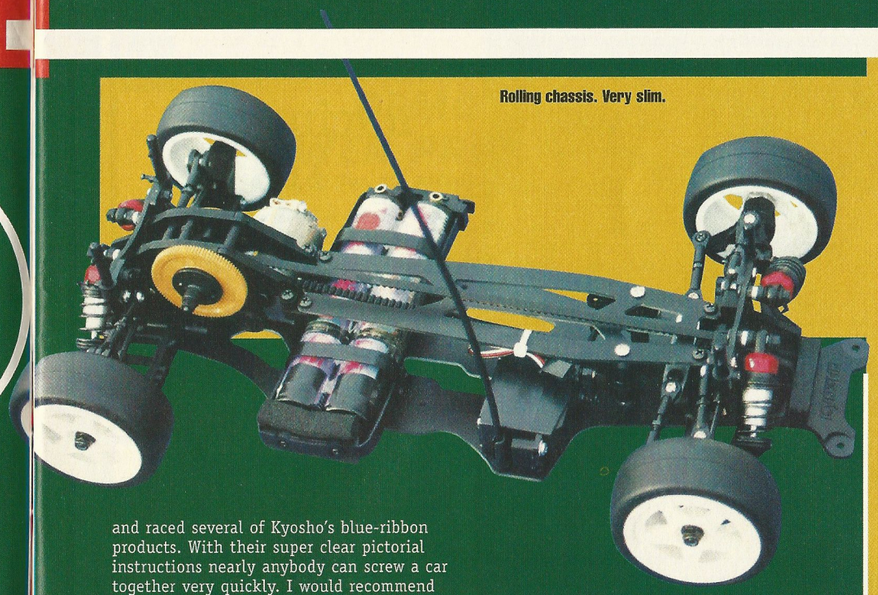
Building on Success

Over the past few months RRCi has built and raced several of Kyosho's blue-ribbon products. With their super clear pictorial instructions nearly anybody can screw a car together very quickly. I would recommend you acquire a new small 'Phillips' headed screwdriver, as the diffs have some very tiny screws with very fine heads.

Do read the instructions very carefully and use the exploded view sheet, a lot of the parts can only be identified this way, a great deal of the parts look very similar front to rear. Although not supplied in the kit you will need some form of liquid threadlock, several points will need fixing, noticeable the mounting pins for the twin steering bellcranks.

You should also be prepared to trim any 'flash' from the plastic mouldings. I'm not going to go through the build piecemeal, however I will detail the areas which I found could be improved on.

Designed in Norwich moulded in Japan.



Rolling chassis. Very slim.

Read On

The 'build' begins with the vertical plates which support the front and rear diff assemblies, do make sure they are all straight as you tighten them to the chassis plate. Also make sure the metal bushing used, as a belt guide runs free, although the instructions suggest this can be ballraced, mine was not, so add some lube. Following on from the supports we come to the two gear diffs. If your kit is like mine the diffs will need a bit of work. Both units were very notchy and in no way smooth in operation. I de-burred and polished all the gears with a craft knife and dremel, before they were packed with grease. In Kyosho's defence I will say that we have built a number of Kyosho cars here at Traplet Towers and this is not typical.

When attaching the diff outputs, I would recommend you fit the grub screws flat and add a little threadlock before you tighten them. Next you have the layshaft, do make certain that the yellow spur gear runs true when the mounting screws are tight. Mine was fine after a couple of attempts.

Tip

Remember to refer to the instruction manual as you build to check the type and length of all the screws, bolts, nuts and washers as Kyosho have bagged them together as is their practise. I separated out all the different types in small pots, this will aid the build, but do remember to check their lengths as you build.

Tip

When assembling the bellcranks for the steering don't overtighten the locking pins in the middle beam, just have the nuts tight but without locking up the steering, if you have any stiffness loosen the lock nut a flat at a time till it's smooth but slop free.

After the diffs and belts are mounted in the support plates check the alignment of the belts, a small shim may have to be added to the layshaft, when built the belts should run in the middle of the pulleys, but shouldn't be tight. Travelling along we come to the battery straps. Two plastic cages fix to the chassis with very small screws. I had some problems with the fit of the packs into these cages and eventually fitted Corally connectors and a sponge pad.(see picture).

Well that is about it I found that the rest of the car assembled well with no glitches. I must say at this point that the alloy 'touring shocks', that's what Kyosho call them, are the absolute dogs b.....ks, they really are the ultimate. As the kit supplied oil was a little on the thin side I built them using 80w oil, but the kit pistons, the result? They were really velvety.

Quick Spec

4WD. Fully ballraced. Double deck FRP chassis. Gear diffs. Twin belt drive. Stick pack nicads. Bellcrank steering with integral servo saver. Teflon coated oil filled coil over shocks. Top link bottom wishbones all round. Dog bone drive shafts. Hex drives. 5 spoke wheels. High grip moulded slicks. Lotus GT1 or McLaren 'Long Tail bodyshell.

Tyre Prep

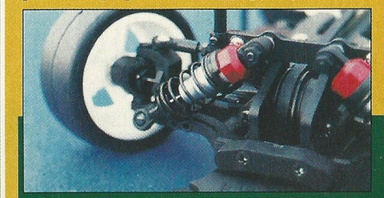
Included in the kit are some high grip moulded rubber slicks, these benefit from a little further work. Firstly wash the tyres in hot soapy water, this will remove the waxy release agent, this will give a good bond between tyre and wheel. The foam strips used to support the soft slicks have to be glued into ring, do use a good contact adhesive, and follow their instructions to the letter, on no account use super glue, it will leave a lump. Lastly you need to glue the tyre to the rim, thin super glue is the only way to go. Do be very careful, and use eye protection PLEASE.

Not a lot of space

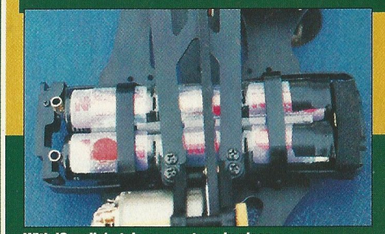
With the very slim chassis, there really isn't much room for the radio gear. A smallish speedo fits on the left of the plate. All the normal servos will fit on the extended side plate, but this does leave very little space for the receiver, only the newer 27 MHz and 40 MHz 'minis' will fit.

Long Distance Shell

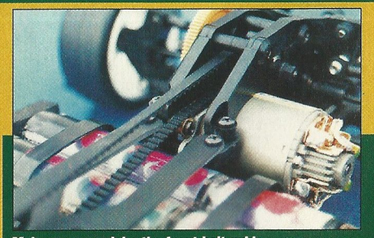
Once of the longest jobs in the build is the paint and prep of the stunning bodyshell,



Velvety 'touring car' shock absorbers.

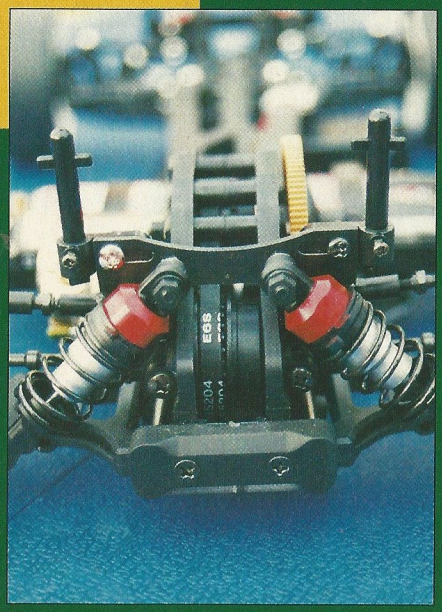


With 'Corally' style connectors in place.



Make sure you lube the front belt guide.

High level layshaft allows a low motor mounting.



By moving the rear bearer to a lower position gave more steering. Note the 'open' diffs.

and there's short cuts, just take your time. I stuck with the advised paint scheme of yellow and black, I used 'one coat' Custom Colour, which did speed the job up a little, two sets of livery are included. But as both left the car a little 'bare', I used both for a more busy look.

Tune-ability

If you set all the steel turnbuckles to Kyosho's lengths then the wheels will be pointing in the right direction. However a camber gauge will give better results, 1 1/2° neg being a good starting point (top of wheel points in).

Adjust the track rods so that the front wheels run parallel to the rears, use a straight edge to do this.

Other than the basic angles and ride heights the TF3 has few adjustments to offer. At the rear the anti squat can be altered by moving the wishbone pick-ups. Increasing the squat will give more 'steering' on the exit of a bend.

Testing Time

As the TF3 comes with .45 module gears and as I had not other alternative ratios, motor choice had to be quite 'soft' (a high ratio comes with the kit) so an Infinity 14 Quad was installed, along with my favourite FVX speedo and Orion/Reedy nicads (1700/2000). As most of you will know I'm more than spoilt for tracks locally for testing, so as ever the TF3 was dragged round the Midlands triangle.

Stop One - Ashby Woulds

The TF3s wide track (200 mm as opposed to the normal scale size of 190 mm) could be felt immediately, a great deal of grip being generated, most at the rear. In fact the car understeered everywhere. Now this level of understeer makes for a very stable car that is easy to drive for the novice. For more experienced drivers this can be a bit frustrating. I wanted to change the handling to match my driving style and this meant reducing the understeer and giving a slightly more nervous feel with plenty of 'steering'.

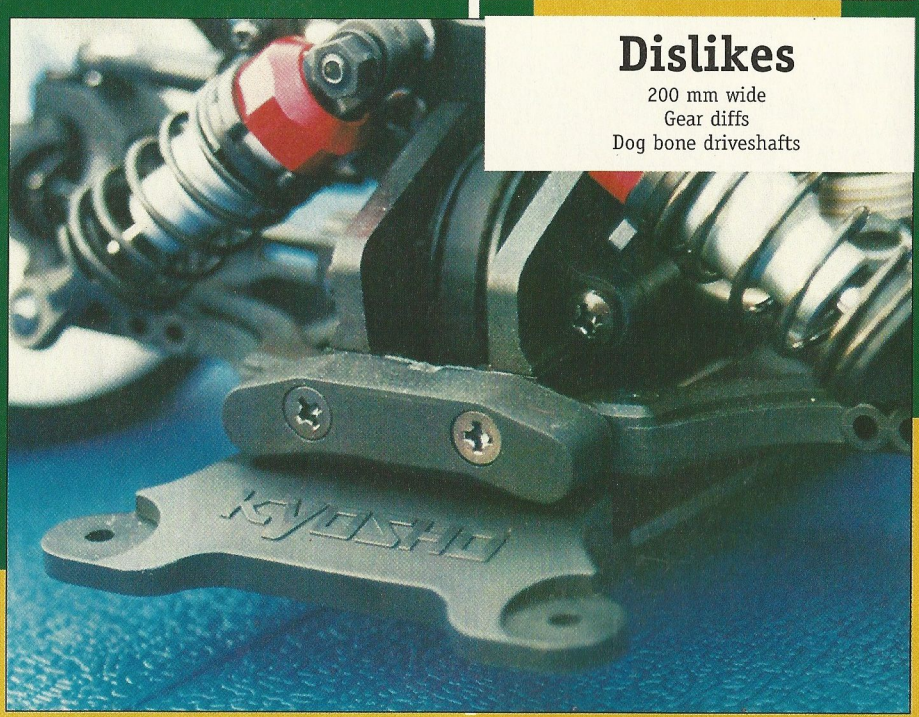
With the restricted level of adjustments I decided to add packers to the rear shocks, this raised the rear ride height and pushed weight to the front. This made an improvement, but perhaps not enough to make the car run at a competitive pace.

The tyres were gripping well, so I didn't want to change them for another make, Kyosho had fitted these tyres for a reason after all, hadn't they.

The level of understeer suggested a major change was required, in the end I stripped the rear suspension and changed the rear mounting beam to increase the rear squat angle (inner pick up point higher at the front), this effectively added caster at the rear. Also I increased the camber at front to 2° neg. This made the car 'driveable', but still some way from what I would class as a racing pace. It was obvious softer front tyres or stiffer rear springs would be needed, both of which are available in Kyosho's Hop-up list.

Stop Two - Bedworth

After a quick trip to Mikes Models Birmingham, a few Hop-ups were acquired; an SPW-19 roll bar set, 92721 spring set. I first ran the car in Ashby spec., the understeer was still present, making the tight hairpins difficult. The first change was the rear roll bar was added, now we are getting there, nice but not very quick. The new spring set moved us closer to our target. Now the weather played its cards, it rained. Strangely I was now lapping quicker than the dry, this proved it just generates too much rear end grip, probably the best total fix will be to fit the one-way front drive unit, or maybe a rigid rear axle.



A small bumper is included, but protects very little.

Racing the TF3

As a racer the only major drawback of the TF3 is the non 'scale' 200mm width, so the car is not BRCA, EFRA or RRCi legal. A conversion kit is available to bring the car down to the correct width. The addition of a few different bits are needed to make it truly competitive with the other 'Scale' cars. Firstly it needs to be a legal track width, straight from the box. The gear diffs should be replaced by ball diffs, and U/J driveshafts should replace the 'dog bones'.

Verdict

An excellent starter car, with a beautiful shell. If you are an experienced racer this may not be for you but if you want to buy a car and improve it gradually as your experience develops this could be a good choice. Follow our upgrade path and the car will be genuinely quick.

Options Fitted
SPW-19 roll bars
97221 Spring set

RRCi upgrade path for the TF3
1. SPW-19 Stabiliser set
2. 97221 Spring set
3. U/J driveshafts (190 mm length)
4. 190 mm bodyshell
5. One-way drive unit
6. Ball diffs x 2
7. Mini bumper

Likes

Ballraces
Shock absorbers
Bodyshell
Easy build

Dislikes

200 mm wide
Gear diffs
Dog bone driveshafts