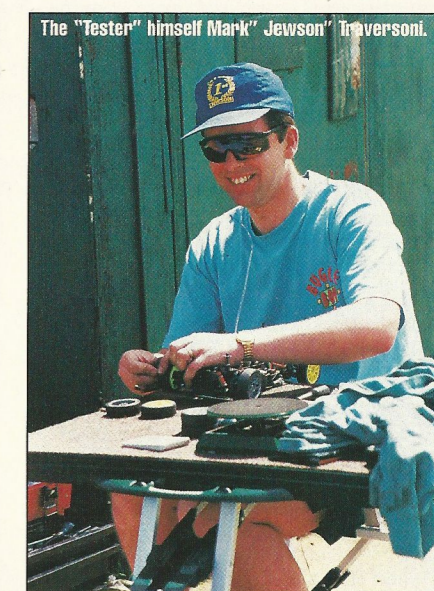


Protoform Audi A4 body shell. Paint by Ken Huxtable.



The "Tester" himself Mark "Jewson" Traversoni.

The Best Things Come In Small Packages!

Yokomo YR4-2 Special Review

Over the years I have been racing I have never driven a Yokomo, so this review was of great interest to me. I have always been impressed by the build and design, but drivers seemed to be spending a fortune on them which put me off. The specification of this kit is very high, with very little that I can see that obviously needs upgrading. As usual I always run a car box standard then buy any hop ups I feel are needed.

And the next please

The first car of this design was reviewed about 8 months ago, but this kit is nearly all new from what I can see, and has the added appeal of being carbon fibre and fully ball-raced.

When first being presented with the box the first shock is how small it is. A lot of cars come in large boxes which give the impression you are getting lots for your money. When you open the box it is crammed full of plastic bags all numbered.

My initial impression of the kit was very good. The quality of the parts is exceptional, the carbon fibre chassis, shock mounts etc are excellent.

The instructions call for each numbered bag at a time. They are very lucid in diagram and written form. I found myself in places following the clear pictures, and at times made slight errors. I found it was better to read the written instructions first, then follow the pictures.

Chassis

The very nice piece of carbon fibre is well machined, and has more cell positions than I have ever seen on any other car. With this car it's designed to run the cells down the one side, and the electric on the other, which is to keep the car balanced. Also you can run them any way you want, forwards or backwards, stick or saddle pack in the same car! Most cars run saddle packs with three cells each side, but the car can be unbalanced by the motor which is normally off set. So you also end up with lots room for speed control and receiver on the other side.

I took some time to sand the edges all round, and sealed them with super glue. This gives a nice smooth feel to the edges, and reduces the chance of the chassis splitting or delaminating. I also filed all the cell positions so each cell will sit in the slot securely. The car can also be run on stick packs with a conversion kit included, saddle packs can also be run in this way as shown. The battery brace is also carbon, a very nice touch.

Differentials

There were no surprises here being very similar to most I have seen. The diffs are the same as the "normal" YR4, not the YZ10 type fitted to the M2. Be aware that the front and rear are different so be sure to use the right parts. The kit comes with Associated black grease for the thrust race, and clear Stealth grease for the diff. I have always rated these greases, and they come in neat tubes that makes application very easy.

They went together very well, and setting them was very easy with a single allen key.

Their operation is very smooth and free. The front and rear bulk heads screw to the chassis, and have carbon plates to hold the diff's in place, which look very neat, the screws that hold these down are very small and if done up too tight could easily strip, cutting some bolts down and screwing them in and using nuts may be in order if this happens. When putting the diff's in the housings they should drop in. If they do not you may find that one or more sides may need the edge trimming from the top of the housing to let it drop in without pinching the bearing.

Layshaft and Motor Mount

The mounting is alloy, so it will be a good heat-sink, which is a plus, some kits do not include this as standard. The best feature of this kit now is the dual purpose layshaft that lets you run fixed or one way drive.

To do this you use an allen key to loosen the collet next to the drive pulley. This is then pushed to one side, and the pulley moved over which reveals a hole in the layshaft. Insert the pin provided into this hole

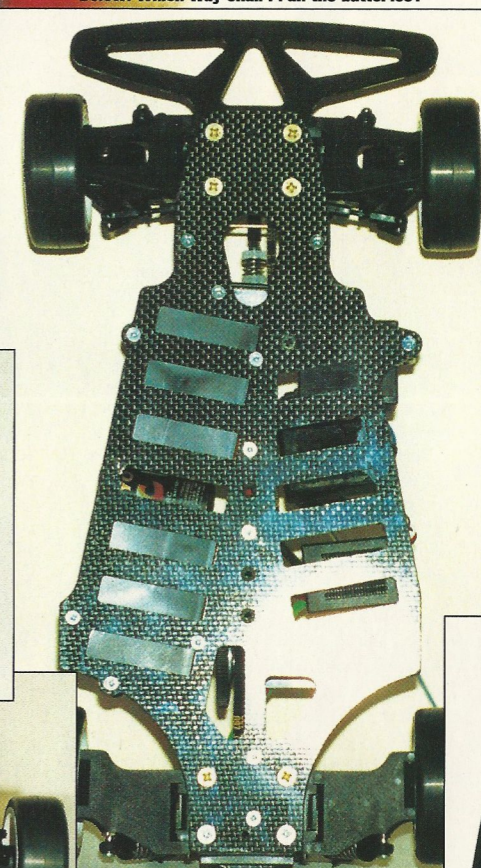
and push the pulley and collet back into position and tighten up. The whole thing takes about a minute, which is far quicker than changing layshafts. This is a brilliant feature which all should follow.

Suspension

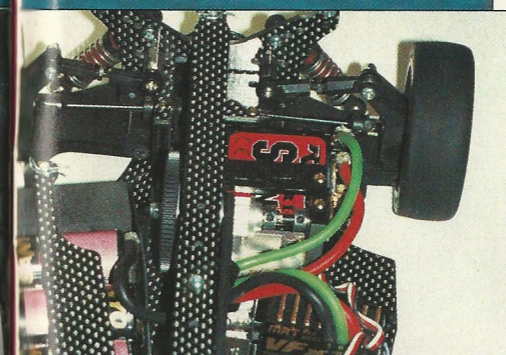
The front comprises of a lower wishbone, top turn buckle, hub carrier and hub. The wish bones and hubs are all

Below: Move the collet and pulley to the right, remove or add pin. Move back. Job done.

Below: Which way shall I run the batteries?

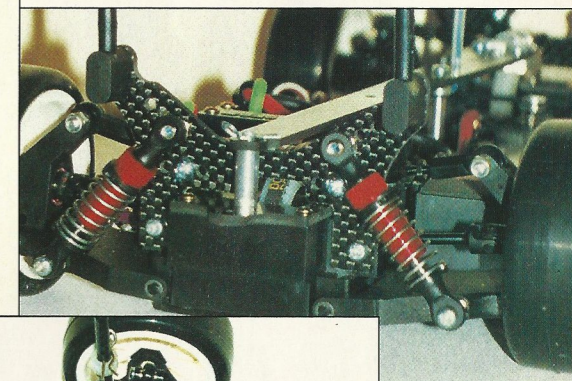


Below: Ready to go. 50 grams was needed to bring the car up to weight.

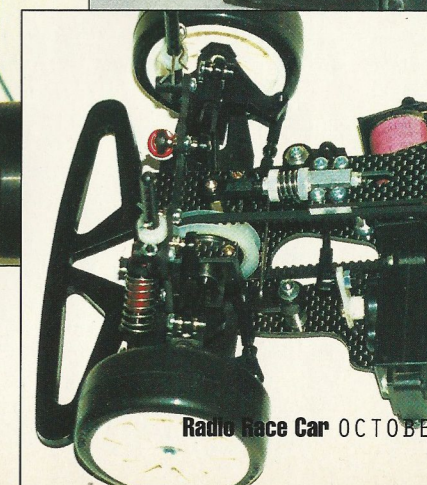


Above: Front end. Smart shocks and carbon mounts.

Right: Front diff, and top deck shock. The front ball joint alters the belt tension.



Above: Rear end. Quick release top deck pin.



The shocks are alloy and very small, they are simple to build, with the main shaft "o" rings pre-fitted. They were a little awkward to get the air out of but I soon got the hang of it. I put a 2 mm spring spacer in the rear and 3 mm in the front. I put the kit 30wt oil in the front and 40wt in the back.

Top Deck

This is quite an unusual part, it is very long and thin and has a spring shock on one end, and a small hole at the other that fits over a post fixed to the chassis, secured by a body pin for quick release. Along its length are a series of holes which are for the two alloy posts, which fix between the top deck and chassis, the holes provide different fixing positions that alter chassis stiffness.

When assembled the belts are very tight, adjusting the front is very easy. In front of the spring shock is a ball joint, by screwing this in the chassis is pulled and the belt loosened. Simple!

With the belt at the correct tension the drive train was very free, requiring no extra work.



A good balance is hard to find at Bedworth, you need both "high speed" steering and "Slow speed" as well, a good chassis test, the YR4-2 did the job.

Drive shafts

These I was told do tend to bend so I heated the ends up to cherry red, and dropped them in water. This hardens them, but may mean they snap rather than bend. I would suggest investing in a set of hardened ones and may save any problems in this area.

The rear end of the car can be altered in the width. This is done with two bushes on each stub axle. The instructions show both behind the wheel split pin, if you move one inboard the car width is narrowed.

Wheels and Tyres

These are the new 24 mm wheels and look very good. The rubber tyres are not belted and come with foam inserts. It will be interesting to see how these work.

The wheels fit onto hex wheel adaptors which fit most scale saloons. This is good to see that all the manufacturers are now using the same fitting.

Final Installation

The car took about seven hours to build including the radio installation. There is enough room to run the biggest of speed controllers and receivers, which most scale saloons can't suffering with a lack of space. As you can see from the pictures the MRT VFX has plenty of room either side.

The servo goes on this side too, the kit did not come with a servo horn or aerial mount which I thought was a bit poor, but other than that rest of the car was excellent. For a bodyshell I put the Protoform Audi A4 on the car, painted by Ken Huxtable. This is a good fit and the front "spoiler" should generate a lot of downforce, also you get a choice of two sizes for the rear wing.

Off To Bedworth

The first run was at Bedworth's Wednesday night series, three heats of rubber scale booked in so the pressure was on! The car handled well on the kit tyres at low speed but would not handle at speed through the corners, this was thought to be due to the tyres ballooning as speed builds up.

I then put on some Neo Slick tyres which are not B.R.C.A. legal because they have no side wall writing, but were the only rubber tyres I had because I usually run in the foam class. These tyres are belted which means they balloon less at speed, and handled much better.

The meeting consisted of three rounds of

qualifying, with six heats that night it did not leave any time to play with the set up so I ran the car as it was.

For more grip I put additive full width on the rear tyres and quarter on the front, because the tyres were quite hard.

The final result was 18 laps in 320 due to dumping on the last lap, which was encouraging and fast enough for a National "A" final place. Remember this kit is standard!

The kit gearing is quite low (22/81), the biggest pinion I have is 28 but even with this my 13 turn motor would not give the speed required. I changed to a 12 turn which gave the speed, but I dumped on the last lap. I would probably advise a smaller 75 spur with the same pinion on a 13 turn motor, providing you have the batteries and speed control to last.

I tried the cells to the front and rear. I found the car was giving more rear end grip when the cells were forward, move them back and the rear did seem a little loose.

A Day Testing

I was so impressed with the cars performance out of the box I decided to upgrade it. When I got the car home one drive shaft had bent.

I replaced the drive shafts with chrome plated hardened ones, and changed the diff's to lightweight parts, which involves changing the drive cups, but retaining all the other parts. The new parts are not metal so they come with a small locating lug for the diff rings so they do not slip. This means you have to file a notch in the diff ring or super glue the diff rings to the cups. I also bought some copper springs which are harder than standard, the car having lots of steering.

On the test day I met up with Chris Deakin at Ashby to play with the set up, it was very hot, so conditions were ideal.

The first move was the shocks, these were moved to the outer hole at the rear, I found this gave the car even more steering/ less rear end grip, it felt better on the inside so I moved it back.

The track width was then changed to narrow, which produced more grip. It seems the wider the car the more stable it is but less grip is given in the bends.

I then moved the chassis posts back which should give more flex, but could not really notice any difference.

I still wanted more rear end grip so I moved the rear pick up of the top link to the outer hole end, and closed the turn buckle right up, this gave the same static camber, but more "roll" induced camber, this did give a little more rear end.

The cars was handling well so now we decided to go to Bedworth, but before we left I put on some blue foam tyres. The car handled fine even though it has been designed to run on rubber.

Bedworth

The car was put down with the "Ashby" set up, it handled alright, but with some under steer on Bedworth's tight corners. To sort this I cut the arms that restrict steering travel at 45 degrees, this gave the required amount of steering. Nothing else was needed to get the car to handle.

I did play with tyre choice a lot at both tracks. All of the compounds worked at both to differing degrees. At Ashby Kawada orange came out on top. At Bedworth Take off QH.

I then changed bodies to a BMW, this gave

less front end which made the car easier to drive.

In conclusion I found the car very easy to drive and tyres were the main thing that altered the handling once I had found the require set up. Fine adjustments can be made with track width and rear shock positions.

Wednesday at Bedworth Again!

The first week I came 3rd on 18 320. When I put the car down this time it went much better than the previous week. I put Ride GS tyres on and they worked straight away without having to adjust anything.

The result this time was 18 laps in 310 only a few seconds off the last National FTD.

The only problem I had when testing this car was driving on moulded rubber tyres. I have never done so before, and a different driving style is needed which I am getting used to.

The new drive shafts were great and did not bend. The new diff parts gave more punch due to less rotating mass, they also allow you to gear higher.

The car is very good out of the box and should enable anyone to perform well with the standard set up. Adjustments you need to make are minimal so you can't really do much wrong!

Yokomo now have two excellent kits in the YR4-2 and YR4M2, which you buy will have to be down to personal choice. The M2 is the more conventional design, the 2 is virtually the same apart from chassis design and the lower ratio diff's. The choice is yours.

Testers Kit

Speedo -MRT VFX speed control

Servo - K01012 servo

Radio - Futaba FP3 Radio 40 mhz

Motor - Reedy Tri Sonic 12x5

Nicads - GM Racing 1700 ViS (370 secs)

Protoform Audi A4, paint by Ken Huxtable

Tyres - Kit, Yokomo. Hot Laps Beltec. Kawada Orange Take Off QH. Ride GS

Quick Spec

4WD. Fully Ballraced. Dual Drive System. Adjustable Ball Diffs. U/J Driveshafts. Carbon Chassis. Carbon Chassis Stiffener. Carbon Shock Towers. In-Line "Side Saddle" Nicads. Fullt Adjustable Independant Suspension. Top Link & Bottom Wishbone All Round. Alloy Mini Coil Over Oil Filled Shock Absorbers. 10 Spoke Wheels. 24mm Slick Tyres.

Likes

Quality
Instructions
Chassis
Layshaft
Socks

Dislikes

Driveshafts
No Aerial mount
Diff top plate screws **MRC**