



Kyosho Monster Truck

By Mark Christopher



Front suspension with two shocks per corner.

Truck review

Just Crushing

When the editor rang me and said he was sending a little something for me to review. He told me it was a Kyosho I.C. Monster Truck. I was expecting a 10th scale buggy with big wheels. Big mistake.

Mr Parcel Force arrived, I signed on the line and was handed a very large, heavy box. Excitedly I ripped-off the outer wrapping and came face to face with the 'little something' I had to review, 'U.S.A. 1 - Nitro Crusher'. Based on the Everett Jasmers U.S.A. 1. Monster truck, quoted as being, "the most powerful in the world". The picture on the box leaves you with no doubt, this will be big. Also listed on the box are the many features of the USA 1 and the numerous fetes it can achieve.

There is also a box with Kyosho's own GS 21 I.C. engine with pull-start. This engine is .21 cubic inch or 3.5cc giving it plenty of pulling power just what it needs for car crushing. Last of the parts are the wheels. They are moulded from plastic to look just like a genuine alloy wheel and are finished off with a chrome surface so good it even fooled some of the Ford mechanics I work with.

Also included, are some really amazing decals which replicates the full-size vehicle.

Drawn-In

On opening the box you are drawn straight-away to the huge 6.5 inch (165mm for those complying with the EEC.) tyres with tractor-like tread patterns. The width of these tyres is a staggering 4 1/4 inches (111mm). Next comes a large red box containing all the chassis parts and the body-shell.

Build Time

After- reading the instruction manual and making a note of the sections which needed replacing by the supplement I was ready to start. The manual is quite easy to follow if you refer to the pictures as well.

How Many?

This being a heavy-weight truck you have 8 shock absorbers to build. These have plastic bodies with small seals fitted, where the piston rods

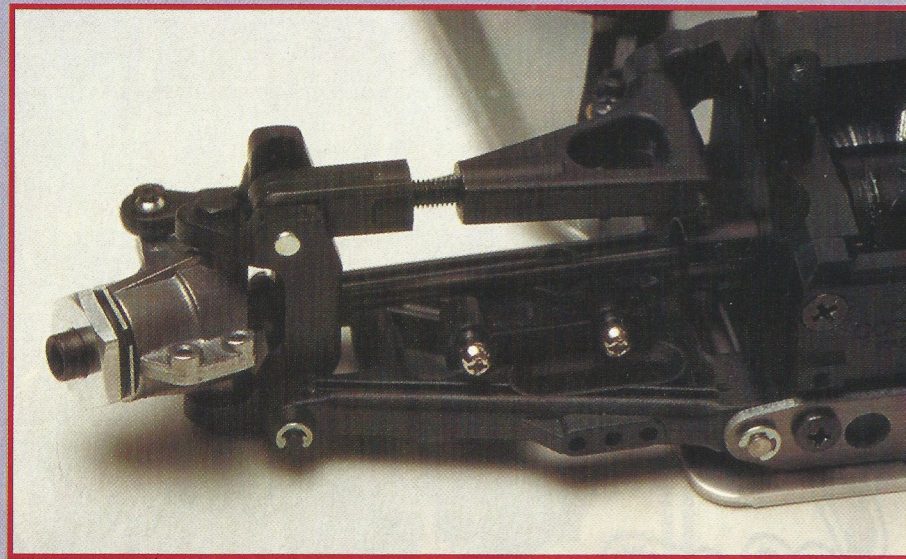
go. Using the oil supplied in the kit you will need to bleed-out all the air and fit the diaphragm and shock absorber top. The spring stop has a brilliant feature. It has a lug on the shock body that locks into a stepped ride height adjuster- so no spacers are needed. Turning the adjuster to the required position is all you do. Having built the shock they were very smooth and leak-free.

Rolling Chassis

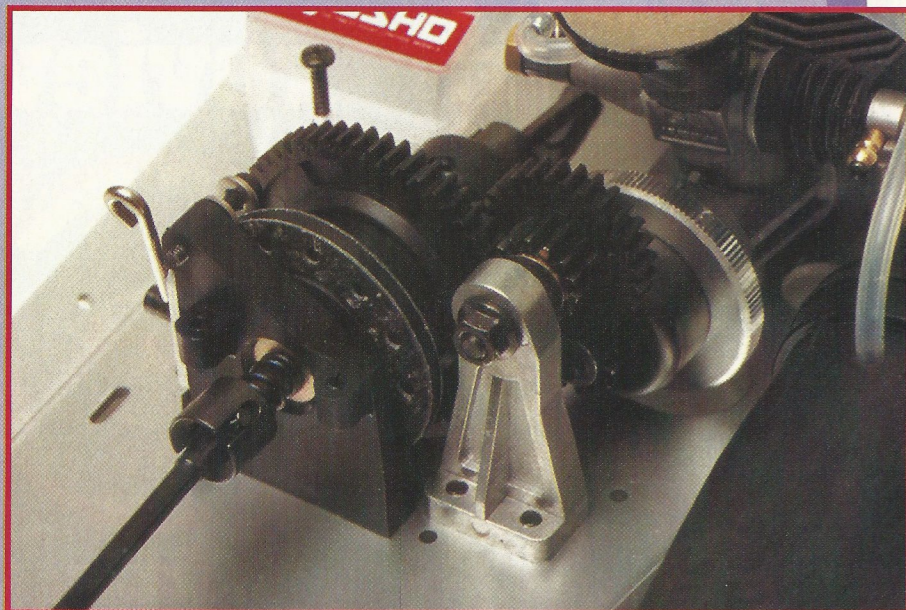
The differentials are factory built and are of the gear type, I believe they come from the Turbo Burns rallycross car, so they should be very reliable. I stripped the rear diff and inside found bevel gears made of alloy which should give many hours of maintenance free use. The centre gearbox is also pre-built with



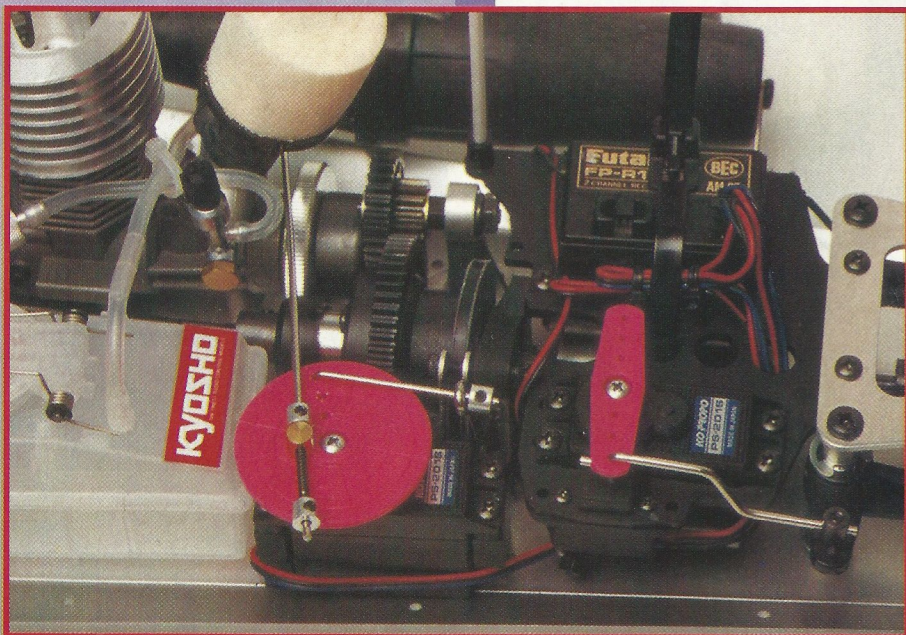
Those large wheels and tyres, AWESOME!!



Front hub detail.



The centre diff and disc brake.



Radio tray, showing the KO heavy Duty Servo horns.

the diffs supported by steel bushes. The gears and all the bushes need to be lubricated with the grease supplied.

There is a gear, cover made of lexan which goes as an inspection hatch. Assembly of the wishbones and top suspension arms are similar for front and rear. The shock-tower is made of a pressed alloy sheet which leaves a very solid mount. The rear driveshafts are the dogbone type and the front ones being the universal type. With a shaft diameter of 4mm they are the thickest I have seen. There was one assembly I did find awkward, and I would recommend that younger-builders ask for help.

This was the removal of material from the front and rear suspension hubs (this is required because the hubs come from another model). All the suspension components are made from a thick very stiff plastic, which makes the job quite difficult. After experimenting I found that the best way was to use some good quality wire cutters and then carefully finish off with a good modellers knife. This operation is necessary, as otherwise the wheels would jam on the uprights. With the suspension arms and shock-absorbers mounted to the gear-boxes you should have a complete front and rear end. The only other add-on is a large tie bar to mount the rear gear-box to the chassis. This stops any flex under-acceleration. At the front there are steering blocks cast from aluminium, which are located by plastic caster blocks.

With this being a four-wheel drive truck the centre diff is used to send power front to rear, via more dog-bone drive shafts. This diff has a main drive gear and a huge ventilated disc brake which has some sort of friction material stuck to it. This system has two pads which are operated by a cam and lever. Also mounted to the 3mm chassis is a counter or idler gear which needs to be adjusted to give the correct mesh between the clutch pinion and the main gear of the centre diff. Alternative gear ratios are also available. With the front and rear gear-boxes mounted you almost have a complete rolling chassis, which looks very strong.

Steering

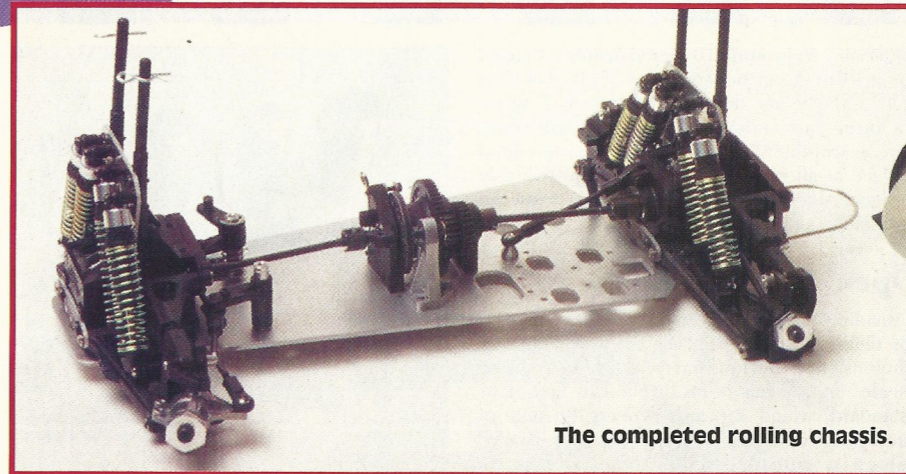
The steering system consists of two "posts" one with an idle lever the other- with a pre-built servo-saver, with a large heavy-duty spring. These are joined by a centre drag link. All the linkages need to be built to the given measurements, and the steering links need to be bent to clear the wheels. Once this is done it produces a smooth, slop-free steering system.

Engine

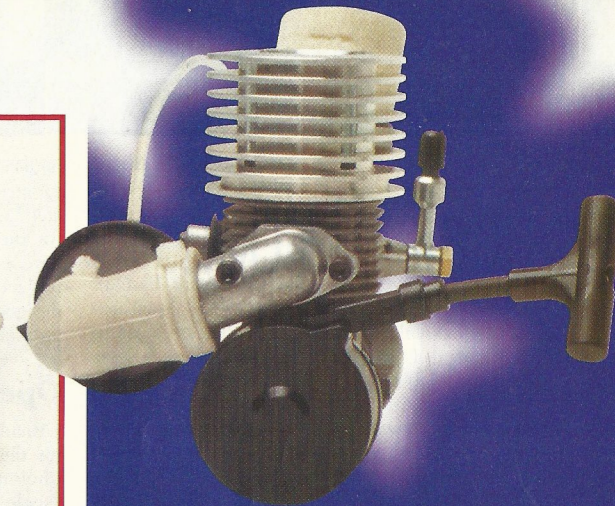
The engine is Kyosho's own .21 complete with pull-start. This has a two-shoe centrifugal clutch, aluminium flywheel, and a slide carburettor. A large plastic tuned-pipe exhaust is supplied in the kit, this has to be fitted to the manifold with a 90 deg silicon "joiner". The complete unit is then bolted to the chassis using threadlock, this is to reduce the chance of the engine vibrations "loosening" the mounting bolts.. Next to be is the fuel tank, a large quick-fill type, you will need to fit a fuel filter as none is supplied with the kit.

Radio Installation

The throttle servo bolts too servo mount placed just in front of the fuel tank. The steering servo, receiver and battery pack are mounted to a small radio plate, which can be removed by undoing 4 screws. I fitted two KO PS 201 servos, which are standard type servos. The receiver and battery pack are tie-wrapped to the plate. Then the



The completed rolling chassis.



The GS 21 motor. A very substantial pull-start mechanism.

QUICK SPEC

4wd. Shaft Drive. Triple Gear Diffs. Part Ball-raced Part Bushed. U/J And Dog Bone Driveshafts. Alloy Chassis With Tie-Bar Stiffeners. .21 Pullstart Engine. Centrifugal Clutch. Independent Suspension. Double Wishbone. 8 Oil Filled Dampers. Chrome Wheels And Paddle Tyres

receiver-switch bolts on, near the steering servo, but under the servo horn. Which does makes switching on and off a bit awkward. Next step is to set-up the linkages these are supplied but servo-horns are not. I chose to use the large KO ones. The round one can be drilled where required and used for the throttle/brake, the pre-formed links have to be fitted at 90 degrees to one another. A single pushrod from the steering servo goes forward to the right hand "bellerank". This completes the chassis build.

Finishing Off

The final touches to this kit are the ones which really make the truck stand out. This means the wheels and tyres and off course all the "chrome" bits, like the roll-hoop, bumpers, the dummy carbs etc. Painting the shell could not have been easier, the shell comes covered with a clear plastic film, which can be drawn on, which makes masking off a real doodle. Once painted and decalled, and all the chrome is added, you have a really "awesome" looking model. A real crowd puller.

Start-Up

After setting the jets as described in the engine manual, fuel was put in the tank. After a few pulls on the cord to prime the engine, I attached the glow-lead, one more pull and the engine burst into life, I was well impressed. For 3 tanks of fuel I gently ran the engine in with a rich mixture. By the end of this you could hear the engine was running much freer. I gradually weakened the mixture but the engine stopped. I checked it out and found the glow plug had blown - conclusion- mixture too weak. I put in a new glow plug set the mixture richer again and was now ready for- a "trash" test. Although I initially ran on 10% synthetic nitro fuel, I later tried 16% which gave a better tick-over and more power.

Rough Time

After being banned from using the garden rockery as a testing ground I set off to the local dis-used railway embankment. Although geared with a very low ratio (23 to1) the truck still had quite a quick top speed. To show it off at its best you need to demonstrate the pulling power. I look around and came up with a slope, which was nearly vertical, and about 50ft high, even V8 Landrovers have failed the climb. I set off upwards and could even stop the truck half way, hold it on its brake and then accelerate to full power. It just carried on climbing making short work of both the steep incline and the rough terrain. Absolutely Brilliant! I took it over- drops of about 3ft it landed on all four wheels and just carried

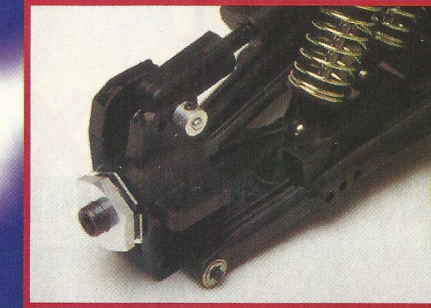
on. I tried without success to tip it over but its width made it very stable. Full speed braking, just dips the nose and the rear wheels just leave the ground, very spectacular!!!

Nothing stops this truck from performing, even my old Escort Cosworth, felt the weight.

Conclusion

Although aimed at a specific market the U.S.A. I is a realistic replica capable of taking a lot of punishment and providing lots and lots of fun for the driver. I did use a standard steering servo which did the job adequately but I suspect would not lasted very long. As recommended in the kit, a high torque servo would be a better bet. If your looking for a pure fun R/C vehicle, which will do just about anything then look no further.

Available from most good model shops. rrp £449.99



The cut down hub.

