

HELION INVICTUS



WHILE the big wheel kits don't appeal to everyone we have a bit of a soft spot for them, especially when they have been done well with the end in mind.

Helion have, for us anyway, cut a couple of corners.

The lack of a slipper clutch could prove a long term issue, big power and big grip, something has to give eventually.

That aside we had a lot of fun with this fast tough machine and are happy to recommend checking it out if you like the idea of a grunty smaller scale EP Monster Truck.



Largely our experience of EP Monster Trucks has been disappointing, especially with 1:10 scale, so it's not really surprising that when a new EP10 Monster Truck arrives it's not greeted with very high expectations. So it was with the Helion Invictus ... 'here we go again' but maybe not as the pre-production unit came out of its plain box. The chassis design is different, the power plant is big so is the Invictus going to be the same as the crowd? **PETER JOYCE** has to revisit his previous experiences.

OUR Invictus was an very early arrival to the country and wasn't boxed and things like instructions, tools and some accessories were almost certainly missing but what we did get was the built M/T, a 2.4GHz wheel radio and a 9.6v 1800mah NiMh battery.

Right, we were straight into charging batteries and prepping for a run when we came across an issue.

The supplied 9.6v battery wouldn't charge correctly, it kept going over voltage.

For us this is usually only something that occurs to old cells.

Regardless, with a step down in voltage to 7.4v LiPo we collected a gaggle of batteries and headed out.

All right-power and with a chunky 'Reactor' 3500kv brushless motor sitting in the chassis there is some!

Acceleration on 7.4v is not stellar to be honest but the setup really has a weird kind of power band.

As the motor come up to speed it's a bit slow to start then it's like an exponential curve to a stratospheric top speed.

Somewhere up towards 60 km/h without too much trouble we would say.

While on paper the supplied 9.6v battery should provide both additional acceleration and a higher top speed, that wasn't the case with our 'anaemic' sample.

It was ultimately that quick on 7.4v that we didn't have the courage to try 11.1v of a 3S LiPo battery!

We popped the occasional wheel stand but would imagine on higher voltages the front might prove impossible to keep down and the Invictus all but unmanageable at top speed.

Impressively, the Reactor power package (motor and ESC) do a fantastic job of hauling the rig down to a manageable speed at a moments notice.

The brakes are strong and have great feeling, they hardly ever locked up, probably in part to the large tires having plenty of grip and you still had good steering control even under very hard braking.

Monster Trucks are not known for their great handling and the Invictus doesn't do





pitching the truck over in to what usually ended up being a drawn out tumble.

Obviously taking on sharp turns across rough ground had to be moderated by common sense otherwise the truck could be fairly easily encouraged to turn turtle.

Jumping is a cinch, with massive rubber and plenty of power you can adjust the flight path easily.

But that's not often required as the Invictus naturally flies pretty level and lands pretty much anything where a wheel contacts the ground first.

We had a fair bit of fun flying over a low jump at speed and due to its location we had to slam the brakes on as we landed, this would normally upset the vehicle but the Invictus was like a cat on carpet, pulling up as it hit the ground—poor gearbox, what kind of punishment should it be expected to cope with?

The big chevron patterned tires are certainly not cutting edge design but as always they are a surprisingly well rounded tire for a Monster Truck working well enough on most surfaces.

Certainly we feel that some of the present understeer is due to the lower side bite of the chevrons but hey it's a Monster Truck and they should have 'tractor' tires!

Problems?

Only one if you don't count the battery pack, which as a pre-production version we don't, quality control is often poorer with a pre-production run.

We popped a front dogbone on a big rollover, we popped it back in and put an extra turn on the front pivot balls and never saw the issue again.

This truck is tough, fast and ready for rough and tumble.



anything to challenge that assertion but in saying that with judicious use of the brake and throttle you can get some fairly tight turns out of it without washing off too much speed.

There is plenty of understeer, perhaps the hardest trait to remove from a Monster Truck.

On power and off power the front end would tend to plough on dirt.

On tar the '6kg' servo seemed to struggle to keep the big tires pointed under full power loads.

I suspect the issue is more likely to be a softly set servo saver.

Rough ground should not present a problem to any Monster Truck worth its salt and the Invictus is worth its salt in this regard.

The big single shocks do a very good job of keeping the huge unsprung mass (tires) in contact with the surface.

We were able to charge at heavily broken ground and scoot across the top at high speed, the occasional harsh outcrop upsetting the show and



CHASSIS O'CLOCK

OFTEN it's the case a manufacturer will take a kit and toss on a set of big rubber on it and called it a 'monster'.

Helion, however, have gone a few steps on from this simplistic and, often, poor performing, formula.

The composite tub chassis is complemented by alloy plates strengthening high 'abuse' areas.

What sets this tub arrangement apart is the steps in the chassis that in effect raise the centre of the chassis while lowering the diffs.

This then is a specific Monster Truck designed chassis and would account for some of its positive handling traits.

The tub connects composite bulkheads at each end that also support the suspension towers.

The alloy central drive shaft runs deep in the chassis tub, allowing the diff housings to sit very low, which is why the chassis steps down at each end.

The Reaktor 3500Kv brushless motor sits in the

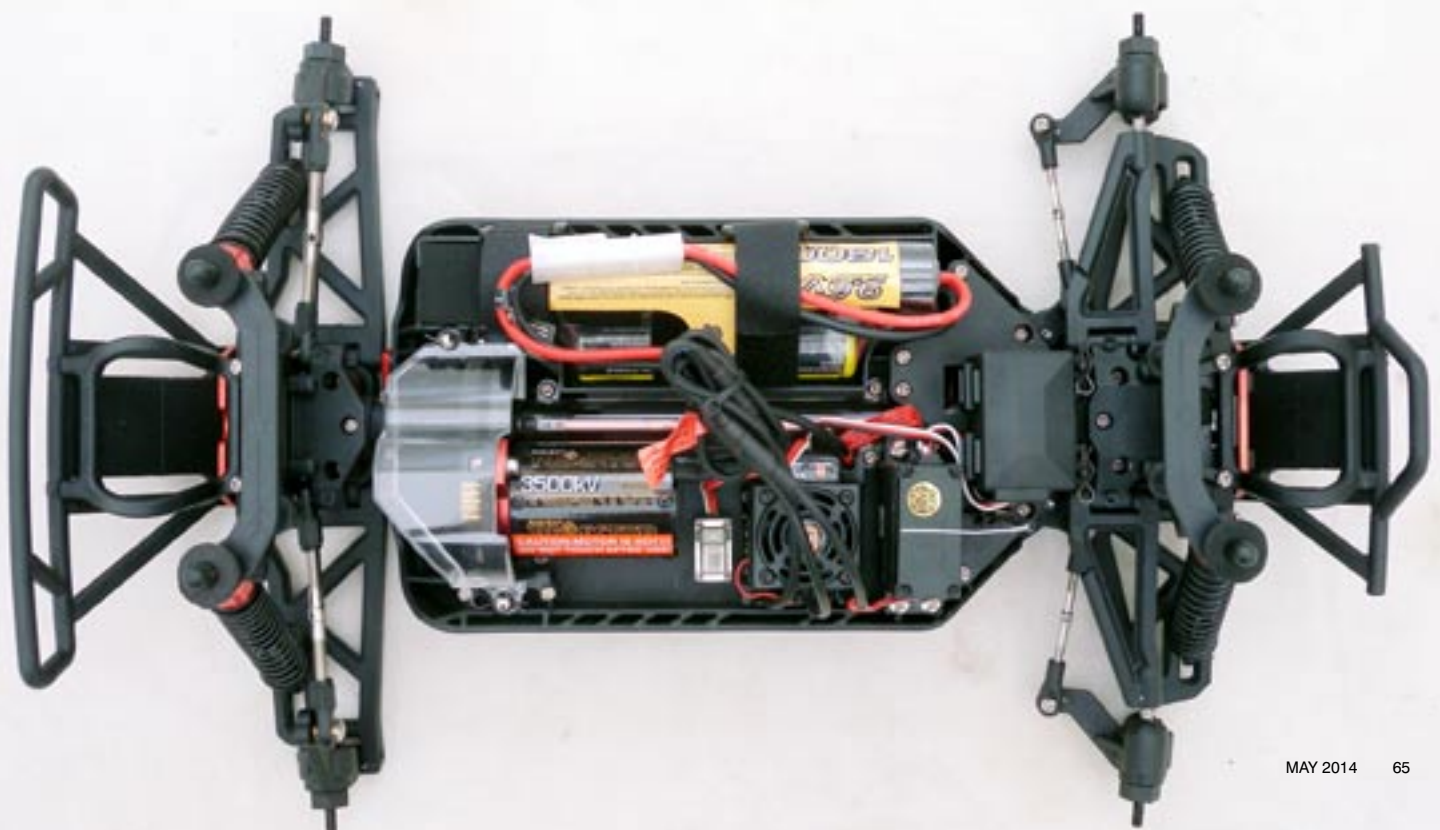


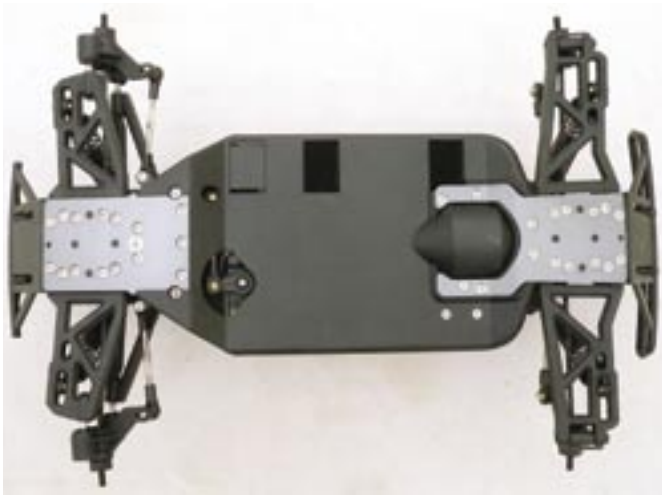
left of the chassis and feeds power into a spur gear which, worryingly, is not protected by a slipper clutch although the spur gear has the appropriate mouldings for a clutch setup.

Gear diffs transfer the power to steel dogbones then to 12mm composite drive hexes.

As with nearly all modern kits there are bearings everywhere in the drive line.

Suspension is a mixed arrangement with the front end featuring a pivot ball design while the rear has composite





uprights with a steel turnbuckle upper link.

These designs allow for plenty of suspension adjustment if desired.

What is similar at both ends are the composite oil filled coil over shocks linking to composite shock towers.

The shocks are large bore design and certainly assist the Invictus cross rough ground.

The 2.4GHz wheel radio is

comfortable and while it feels a little cheap it was effective.

The fan cooled 45amp electronic speed controller—like the steering servo—is watertight and the receiver resides in a sealed box towards the front of the chassis.

For our money the body looks a lot like a Ford 'F' series truck and doesn't look too bad in our opinion, although we don't really 'get' the little flags.



The Specs

Manufacturer

Helion

Model

Invictus

Importer

Model Engines

Type

EP10 4WD Monster Truck

Dimensions

LOA 435mm

Wheelbase 360mm

Track 330mm

Weight ~2500g

(RTR, w/battery)

Technical

Transmission

Direct drive to the spur gear, shaft drive, gear diffs front and rear.

Composite diff housings and cases, steel dogbones, full ball bearing package.

Chassis

Composite tub/alloy plate chassis, composite bulkheads.

Suspension

Composite shock towers, 4 x composite oil filled long stroke big bore shocks, composite upper and lower arms, front "pivot ball", rear composite uprights and steel turnbuckle equipped suspension, fully adjustable.

Gear supplied

- 3500Kv brushless motor
- 2.4GHz transmitter and receiver, 6kg heavy duty servo.
- Unnamed 45Amp ready fan cooled brushless electronic speed controller.
- 1800mAh 8 cell 9.6v NiMH battery pack.

Our thanks

Our thanks to Helion's Australian agent, Model Engines for the review Invictus.

You can purchase this and other Helion products from your local hobby shop or ask them to contact Model Engines for more information.

