

WORDS RC CAR ACTION TEAM PHOTOS BY CARL HYNDMAN

The **Impakt 12B** is the latest addition to the Helion RTR lineup, and the first to be offered in 1/12 scale – Helion's other models are 1/10 and 1/18 scale. The Impakt splits the size difference nicely, and with an asking price of \$140, it's a very affordable entry to hobby-quality RC. Despite the low price, the Impakt is well-featured, and includes water-resistant electronics, a 2.4GHz radio system, and included LiPo battery with balance charger. The buggy styling includes a functional roll cage, and construction overall appears robust, which is ideal for first-time drivers. It all looks appealing, but the most important thing is the fun-to-drive factor. Let's take a look at the Impakt while we charge that included LiPo, then we'll take it for a spin.

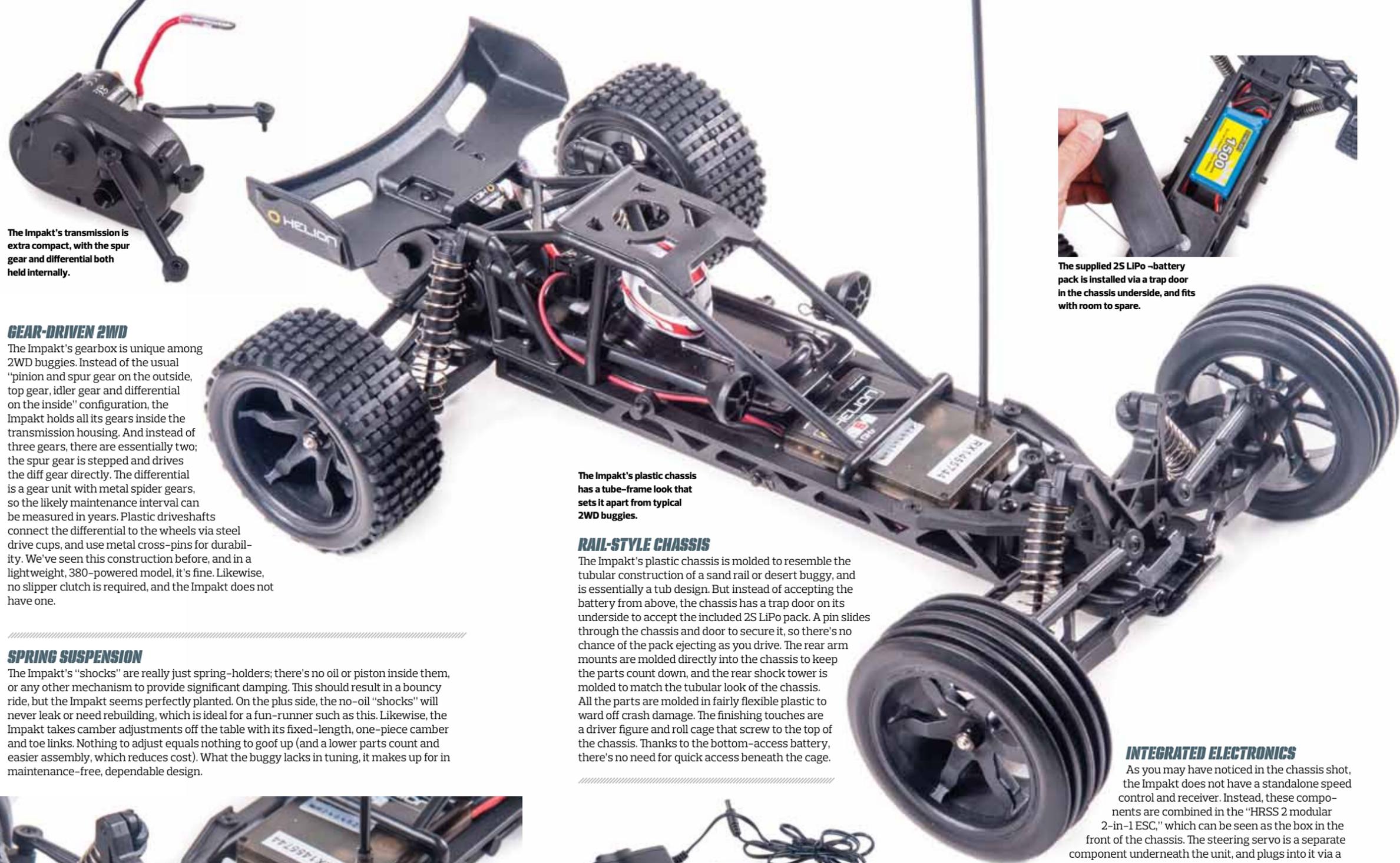
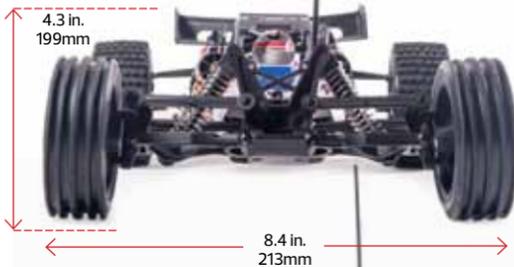
1/12-SCALE 2WD BUGGY | RTR

# HELION IMPAKT 12B

Helion goes 1/12 scale with a right-sized buggy for first-time drivers



## PERFORMANCE TEST



The Impakt's transmission is extra compact, with the spur gear and differential both held internally.

### GEAR-DRIVEN 2WD

The Impakt's gearbox is unique among 2WD buggies. Instead of the usual "pinion and spur gear on the outside, top gear, idler gear and differential on the inside" configuration, the Impakt holds all its gears inside the transmission housing. And instead of three gears, there are essentially two; the spur gear is stepped and drives the diff gear directly. The differential is a gear unit with metal spider gears, so the likely maintenance interval can be measured in years. Plastic driveshafts connect the differential to the wheels via steel drive cups, and use metal cross-pins for durability. We've seen this construction before, and in a lightweight, 380-powered model, it's fine. Likewise, no slipper clutch is required, and the Impakt does not have one.

### SPRING SUSPENSION

The Impakt's "shocks" are really just spring-holders; there's no oil or piston inside them, or any other mechanism to provide significant damping. This should result in a bouncy ride, but the Impakt seems perfectly planted. On the plus side, the no-oil "shocks" will never leak or need rebuilding, which is ideal for a fun-runner such as this. Likewise, the Impakt takes camber adjustments off the table with its fixed-length, one-piece camber and toe links. Nothing to adjust equals nothing to goof up (and a lower parts count and easier assembly, which reduces cost). What the buggy lacks in tuning, it makes up for in maintenance-free, dependable design.



The Impakt skips oil shocks and uses fixed-length camber and toe links for a goof-proof suspension system.

The Impakt's plastic chassis has a tube-frame look that sets it apart from typical 2WD buggies.

### RAIL-STYLE CHASSIS

The Impakt's plastic chassis is molded to resemble the tubular construction of a sand rail or desert buggy, and is essentially a tub design. But instead of accepting the battery from above, the chassis has a trap door on its underside to accept the included 2S LiPo pack. A pin slides through the chassis and door to secure it, so there's no chance of the pack ejecting as you drive. The rear arm mounts are molded directly into the chassis to keep the parts count down, and the rear shock tower is molded to match the tubular look of the chassis. All the parts are molded in fairly flexible plastic to ward off crash damage. The finishing touches are a driver figure and roll cage that screw to the top of the chassis. Thanks to the bottom-access battery, there's no need for quick access beneath the cage.



Included in the box is a LiPo wall charger with built-in balancing and a fire-retardant charging bag to help keep things safe.

### BALANCE CHARGER INCLUDED

Rather than leave it to the buyer to choose a charger for the supplied 2S 1500mAh LiPo battery, Helion supplies an AC-powered balancing charger with the car. The charger charges the battery through its balancing plug, so every charge is a balance charge. This is important, since care and maintenance are critical when dealing with LiPo technology. To add an extra level of safety, a charging bag is also included for use while storing and charging the battery. LiPo accidents are rare now that early-adoption phase of LiPo usage is over (most accidents were caused by using incorrect chargers or charger settings), but Helion's extra measure of safety is appreciated—a little extra caution is never a bad thing.



The supplied 2S LiPo battery pack is installed via a trap door in the chassis underside, and fits with room to spare.

### INTEGRATED ELECTRONICS

As you may have noticed in the chassis shot, the Impakt does not have a standalone speed control and receiver. Instead, these components are combined in the "HRSS 2 modular 2-in-1 ESC," which can be seen as the box in the front of the chassis. The steering servo is a separate component underneath the unit, and plugs into it via a 5-wire harness. Low-voltage detection is built in of course, since the car is LiPo equipped. A brushed 380 motor powers the car, and is well suited to the Impakt's size and weight, delivering top speeds right around 20mph.



The speed control and receiver are incorporated in a nice modular 2-in-1 ESC to help save on critical chassis space and to make things a bit simpler.

### VEHICLE SPECS

Item no.: HLNA0500  
 Scale: 1/12  
 Price: \$140  
 Weight: 1 lb., 11.2 oz. (770g)  
 Height: 4.3 in. (199mm)  
 Length: 13.5 in. (344mm)  
 Width: 8.4 in. (213mm)  
 Wheelbase: 9.8 in. (250mm)



### CHASSIS

Material: Plastic  
 Type: Plastic semi-tub

### SUSPENSION

Type: H-arm with plastic fixed camber links  
 Inboard camber link positions (F/R): 1/1  
 Outboard camber link positions (F/R): 1/1  
 Shock positions, towers (F/R): 1/1  
 Shock positions, arms (F/R): 2/2

### SHOCKS

Bodies: Plastic friction-style  
 Shafts: Plastic  
 Volume compensation: N/A

### DRIVETRAIN

Type: 2WD enclosed gearbox  
 Slipper Clutch: None  
 Differential: Sealed bevel steel gear  
 Driveshafts: plastic dogbones with steel pins  
 Bearings: Metal shielded ball and brass bushings

### WHEELS & TIRES

Wheels: Black 6-spoke plastic, 12mm Hex  
 Tires: All-terrain rubber  
 Inserts: none

### INCLUDED ELECTRONICS

Transmitter: Helion HRSS-2 2Ch 2.4GHz  
 Servo: Helion 5-wire  
 Speed control/Receiver: Helion Modular ERS Unit (Speed Control and Receiver combo unit)  
 Motor: Helion 380 size  
 Battery: 1500mAh 2S LiPo



## BEHIND THE WHEEL

I was excited to see what the Impakt was capable of and ventured out to my local spot with a mixture of different surfaces just a few houses down the road. Although the 1/12-scale size is a bit on the small side, it is designed to be a go-everywhere vehicle with typical 2WD buggy traits that give it nimble handling and quick reactions. Apart from the time it took to top off the included LiPo battery, it didn't take long to get the Impakt going. I just loaded the battery through the bottom trapdoor and set the trim on the radio for throttle and steering and I was driving. The buggy immediately took me by surprise with its quick speed and low center-of-gravity. The sealed can 380-sized motor is a solid powerplant for the vehicle and easily got the Impakt going pretty quick. But, the Impakt was having a bit of a time tracking straight.

The servo would swipe left and right a bit slower than I would have liked and did not center precisely. Considering I was zooming around in different directions, this really wasn't an issue. However, when I started driving in more confined areas this became a slight hindrance. On the other hand, the tires were something I was pleasantly surprised with. Even though they lack inserts and the rubber seems a bit firm, they still had ample traction in most places. It could claw in and out of spots in a neutral, predictable way. The chassis' narrow dimensions also helped it find its way around the terrain and even when I made erratic inputs, the Impakt would have good side clearance and maintain a low degree of roll while still maintaining ample traction. Even though the shocks only use springs and have no oil for damping, the buggy never really bounced or pogoed around like I had expected. It seemed appropriate for the style of driving I was doing and only in the most extreme cases did I feel like damping was needed. As I drove around more, I was impressed with the durability the roll cage and plastic parts were providing. It took some big hits, but just kept going. Watch out for hang-ups in rough terrain though; the Impakt has a low stance to help it achieve a low center-of-gravity, but that also results in it hanging up on rocks and small twigs. After many more roosts and flying around, I had to stop and take a look at the time. Wow, I was running the buggy for an astonishing 27 minutes and finally the fail safe kicked in and brought the buggy to a stop.



- Simple and durable design
- LiPo battery and charger included
- Lots of bang for your buck
- Long runtimes



- Underpowered steering servo
- Included charger requires 3 hours to charge battery



Helion's HRSS-2 2.4GHz radio offers trim adjustments only, via digital switches under a flip-up cover on top of the transmitter. The power button is under there as well, which helps to keep out dust and dirt that tends to find its way into small openings. The plastic wheel lacks foam for your fingers, but is well sized for control and grip. Range and feel are comparable to other RTR systems, the radio simply does its thing.



At 1/12 scale, the Impakt (left) is slightly smaller than a 1/10 scale buggy.

## FINAL WORD

For those looking for something fun and nimble with buggy styling at a low price, the Impakt may be your ticket. For \$140, it delivers solid performance that is usually reserved for buggies only seen on a groomed track and can handle a wide variety of terrain for its size. Its top speed of 20mph was impressive and it always felt in control and planted as it dove in and out of objects I thought would stop it in its tracks. When it did hit something hard, the Impakt bounced back and was ready for more. And how about that runtime? It just kept going and going and ... well you get my point. That's refreshing and overall, the Impakt lived up to and beyond my expectations.

**SOURCES**  
Helion HelionRC.com