SERPENT COBRA-Be RTR

AT A GLANCE

WHO MAKES IT: Serpent

WHO IT'S FOR: Intermediate to experienced

HOW MUCH: $525

BUILD TYPE: RTR

Every time I hear the manufacturer, Serpent's, name pop up, I automatically think about high-end, nitro 1/8-scale on-road cars with the design, quality and ability to compete for world championships. For years, many racers thought the same and Serpent has been quite successful in this segment; however, we're talking about the new Serpent today. The new Serpent is on a mission, one that includes all of the attributes that have made them so successful on the racing scene. Serpent has expanded its offerings into the 1/8-scale off-road world, 1/10-scale and 1/12-scale on-road. They're just not stopping, the expansion seems endless. That growth, however, didn't just stop with high-end race kits. The offerings have expanded into the sport and RTR worlds and we got a hold of the new Serpent Cobra-Be RTR electric 1/8-scale off-road buggy to see if the elements that put Serpent at the top of the leader boards at the track could give someone who wants to pick up an RTR and hit the track the potential to take home a win. It looks like it's race time!

A ready-to-run with all the race-ready durability!

★★★★★ REVIEWER'S OPINION

If you are looking for a ready-to-race buggy without having to build something up yourself or hunt down the right electronics, you're in luck. Serpent, a long-standing race car builder, offers their popular Cobra-Be in a ready-to-run package that can easily be taken out of the box and put into the A main on the same day. The quality is there, the handling is top notch and it simply looks the part of a race machine.

Behind the Wheel

When people think RTR, they often think that the vehicle the acronym is attached to is just a machine for play. Although the ESC is advertised as waterproof which also suggests a fun-oriented vehicle, I know that Serpent machines don't play around on the track. They may be fun to drive, but the performance is all business. Our testing took place at one of our standard locations, Wolcott Hobby and Raceway in Wolcott, Connecticut.

STEERING Understeer **Neutral** Oversteer
When I hit the track, I was instantly surprised by the excellent bite of the stock tires which added traction to the front end for excellent steering characteristics. Entering the corner at speed, I'd let off to let the weight transfer forward, resulting in a nice, smooth turn-in attitude. Then I was able to roll out of the corner while grabbing some throttle and the diff would unload power just a little to pull the buggy out of the corners and rip down the straights. Off power, the buggy can turn very tight and this was great for those single-pipe, 180-degree corners.

ACCELERATION/BRAKING Poor Fair Good Very Good **Excellent**
This buggy is amped out on power and spins the wheels looking for traction when you grab a handful of throttle. The rear end squats a bit and the front tires grow to pull the buggy along. As the acceleration progresses, the chassis levels out and the buggy flat-out flies; the 1850Kv motor is perfectly suited for fun or racing. The brakes, too, are excellent and with a push of the trigger, you can hear the electronic whine of the ESC slowing the buggy down smoothly and without checking the car up.

SUSPENSION/JUMPING Poor Fair Good Very Good **Excellent**
Over the bumps, I could instantly tell that this was a true, race bred 1/8 off-road buggy. The suspension did all the work and the chassis remained level driving in a straight line. I was able to blip over the smaller jumps at full rip or with a small drop-off of the throttle but then I grabbed the trigger quickly as the buggy settled in fast. On the big jumps, this buggy cleared some serious gaps, even with a short run-up. The suspension setup and power are spot-on, allowing the C-Be to pop over jumps and land on flats or landing jumps without bottoming out or getting squirrelly. Another great trait was its sensitivity to corrective inputs. Whether it was tapping the throttle and brakes or tweaking the steering in mid-air to correct a possible bad landing, the buggy didn't spend much time on its lid.

DURABILITY Poor Fair Good **Very Good** Excellent
This RTR was purely track tested as this is probably where the majority of these kits will spend their life. Although it would make a killer fun buggy, the track is where it shines. In the durability department, it received some pretty high scores. The C-Be was tumbled and tossed in the air off of big jumps with no breakage. Pipes in the corners were hit at speed and no ball ends popped off or broke, nor did any arms rip out. Our one issue with the buggy was on the workbench, the wheel nuts were secured with red locktite and difficult to remove. Our kit was an early production kit and Serpent assures us that changes have been made and it will surely not be an issue by the time this magazine hits shelves.

Facts

◆ The Cobra-Be doesn't have your typical e-buggy wide chassis layout with battery cells stacked on one side, the motor on the opposite side and electronics placed well with room to spare. No, the C-Be has a narrow chassis layout with a 3mm thick, gray, anodized aluminum plate serving as the chassis. What appears to start off as mudguards bolted to each side of the chassis are actually one-piece plates that also form battery boxes for each 7.4V ROAR legal LiPo pack to sit in. Hinged battery doors secure the packs with two clips each. A mounting boss between the two boxes is where the rear center chassis brace is attached while the front chassis brace mates up with the steering crank composite upper plate.

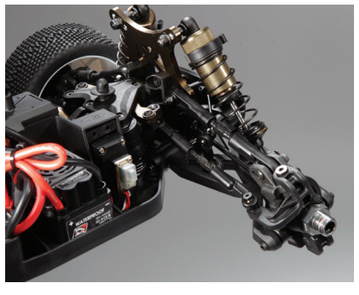
◆ The suspension on the C-Be RTR is shared with Serpent's other 1/8-scale buggy offerings. The chunky, composite nylon arms have two holes for shock tuning and the swaybars attach via a pivot ball. It struck me as odd that the droop screws were not included, so I picked up four screws for under a buck for the extra tuning potential. At the end of the arms up front are 10-degree caster blocks and stout, composite steering knuckles that pivot on stepped screw pins. The inner hinge pins are retained by E-clips in fixed position composite plastic pivot blocks. Deep bronze, 3mm thick, 7075 shock towers have a number of holes for the large bore oil-filled coil over shocks to bolt to. Yes, clips are used to adjust preload on these shocks—clips. Didn't these go out with frequency clips years ago?

◆ Now we step into another important topic, the drivetrain. The drive system here is pretty standard issue: center diff, front and rear diff and steel driveshafts, complimented with an assortment of bearings. One cool feature here is that the front driveshafts are CV-type universals complete with the Serpent logo and size etched on the bone. The center and rear dogbones, too, are etched for easy identification. The differentials are made up of composite cases, machined gears and steel outdrives. They are sealed units filled with oil from the factory instead of grease; again, another identifier of how this buggy can be raced right out of the box. Finally, the center diff is fitted with a steel spur.

◆ The steering assembly is raked back to match the angle of the caster on the caster blocks. This reduces the amount of Ackerman change to the steering as the suspension cycles over bumps. The thick cranks are tied together with an aluminum drag link and a spring loaded servo saver reduces the shock to the servo. One thing that stands out is the stand-up servo. Instead of sitting on its base or lying on its side, Serpent stood up the servo to push it farther to the front and make room for an ESC behind it. It mounts to a unique base mount that doubles as the ESC plate. A short link and unique servo arm connect the servo to the crank.

◆ The electronics package here is pretty impressive. The Dragon RC radio system is a 2.4GHz digital radio with a blue, back-lit, LCD screen, four-channel operation and an assortment of easy-to-use buttons to alter programming. A high-torque servo has plenty of power to swing the front wheels, even at a standstill. The Dragon RC labeled 120-amp speedo can handle up to 4S and delivers power to the Dragon RC 1850Kv sensorless brushless motor, a perfect size motor for many outdoor tracks. All you need to do is supply "AA" batteries and two 7.4V LiPo's with Deans connectors. We selected two Thunder Power 5300mAh 65C Pro Race packs to power our test subject.

◆ The finishing touches on the C-Be RTR are pretty impressive. Micro pin tires are supported with closed-cell, molded inserts and glued up to white dish rims. In the style department, a low-slung, chassis hugging body is pre-painted from the factory with a wild race-like paint scheme that includes the eye-catching Serpent orange. Serpent gets high scores for these graphics. A white nylon wing is bolted to a wing standoff with adjustable positioning.



Up front, the camber and toe can be adjusted via the thick steel tie-rods that screw into the large rod ends. This is what we like to see used for a durable race set-up. The huge bore shocks are great for handling consistency over long runs, but they don't come with dust boots and that can mean more frequent rebuilds.

PROS

- Build quality is excellent
- Impressive race features built into an RTR
- Handles like a top-dollar race buggy
- Compact layout is actually easy to work on
- Great electronics package for race or play
- Body graphics are awesome

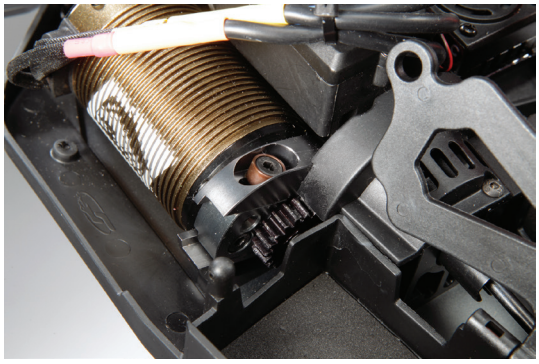
CONS

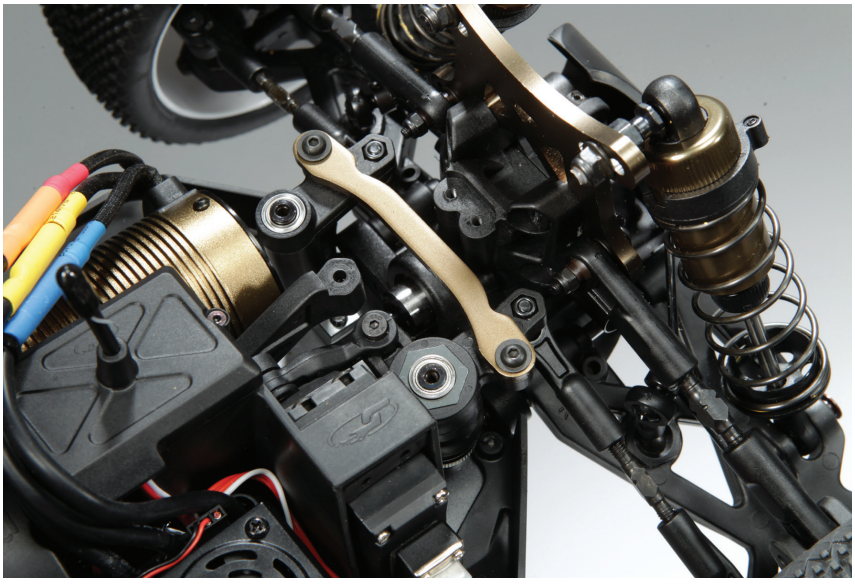
- No droop screws. Luckily it only costs a buck for the four screws

ITEMS USED

- Thunder Power TP1430C Charger
- Thunder Power 5300mAh 65C Pro Race LiPo

Right: The machined aluminum motor mount is two pieces, the channel that extends to support the center diff and the motor slide plate. The motor is secured with a single large screw, making gear mesh adjustments or motor removal super easy. Below: Dual steering cranks are ball bearing supported and feature a spring loaded servo saver. An aluminum drag link connects the two and it's great to see nyloc-nuts to help keep the hardware secure. Check out the unique stand-up servo.





THE LAST WORD

It appears that the electric segment is growing in the 1/8-scale racing scene. Racers and potential racers are looking at the electric buggies as a class to add to their entry forms or as a class they've set a goal to join. The Serpent Cobra-Be RTR is a buggy that will fit the needs of racers all the way from entry level to experienced. It's a complete package with fast, race-worthy electronics, tunable suspension and excellent handling characteristics that will make it easy for drivers to run successfully and even take the podium.

Links
Serpent serpent-usa.com
Thunder Power thunderpowerrc.com

For more information, please see our source guide on page 137.