



Brandon Wright

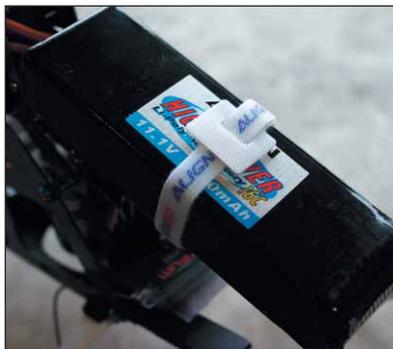
Flight Report

T-Rex 450SA

Here's a look at Align's proprietary upgraded heli for Horizon Hobby.

The mini helicopter market has exploded in the last year or so, and almost every manufacturer has jumped into it. One of the makers with a major impact on the market is Align, with their amazing T-Rex. Since its introduction, the T-Rex has been a leader in mini helicopter design and performance. The latest T-Rex is the 450SA, exclusively distributed by Horizon Hobby. This machine has, once again, raised the bar in quality components and great performance — even in assembly ease because the 450SA edition is a factory-assembled ARF.

The helicopter comes carefully packaged and nicely displayed in a window box that reveals all its high quality components for potential customers to see. The 450SA is similar to the SE version T-Rex, but comes with a bit less bling. It uses the same main frame and CCPM design, and has gun-metal aluminum frames and more plastic parts in the head and tail rotor assembly. This ARF kit is priced lower than many lesser performing helicopters, and the 450SA simply can't be beaten in a cost/performance equation.



Align's 3S 2100mAh LiPo Battery and 35A BL Electronic Speed Control with 5A BEC and Governor Mode were used in Brandon Wright's Align T-Rex 450SA.



The quality of the parts and fit is immediately apparent. The links are sized correctly and move freely, and the aluminum head block, head button, tail boom and frames are nice touches that greatly improve performance over plastic because of their greater rigidity. The T-Rex is slightly larger than most electric micro helicopters, which also helps it to fly a bit more smoothly and take the wind

a little better, characteristics you will notice and appreciate the very first time you fly it.

The manual offers clear instructions and illustrations that make things easy for first-time heli builders. It has directions for different servo and radio installations, along with the corresponding throttle and pitch

curves for each. Although the helicopter will sport fly just fine with E-flite S75 or Spektrum micro servos, I chose the new JR Mini Heli Servo Set. This set comes with three DS285 high speed sub-micro digital servos and one

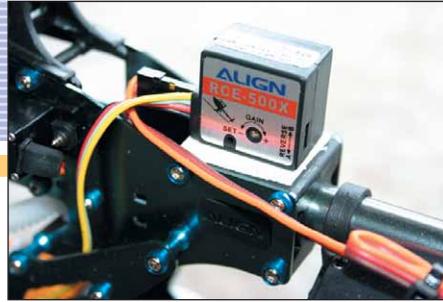


Specifications

- Length: 25.6 inches
- Height: 9 inches
- Main rotor diameter: 27.6 inches
- Flying weight: 22–24 ounces
- Main drive gear: 150T
- Pinions: 11T, 13T, 15T
- Ratios: 13.6:1, 11.5:1, 10.1:1
- Tail gear ratio: 4.2:1

Features

- 95 percent factory-assembled ARF
- Direct-to-swash CCPM linkages
- Aluminum and composite swashplate
- Aluminum motor and battery mounts
- Tail servo boom mount
- Belt-driven tail rotor
- Stainless steel tail rotor hub
- Aluminum head block, skids and boom



Top-shelf mechanics, aluminum head block and 325mm PO wooden blades assure top performance from Align's new T-Rex 450SA ARF. Align's RCE-500X Heading Lock Gyro features remote gain from extra transmitter channel. It's very effective, and holds the tail solidly.

DS3400G mini hi-speed digital servo for the tail. This servo package from JR and Horizon is one of the best micro helicopter servo setups on the market at the present time, and it's the one to choose for 3D or precision flying with the T-Rex 450SA. The servos fit perfectly into the frame with no modifications, and all the horns align with the links parallel when you use the recommended hole in each arm for the ball link.

The new DS3400G lets users adjust the potentiometer so they don't have to change gyro settings. The head lock gyro is super small and light, and has remote gain from the transmitter using a separate channel. The Align 4301 3550kv Brushless Motor and 35A BL ESC with Governor Mode and built-in 5A BEC deliver great performance for 3D, and the most available T-Rex power from Align. I

chose Align's 2100mAh 3S LiPo pack for its power and long run times, and completed my 450 with Spektrum's DX6, programmed according to the Align manual.

The 450SA is super stable and will hover hands off. The digital JR servos are very precise, and along with the awesome power from the Align battery, motor and ESC setup, performance is over the top. The SA takes full collective, no problem, and just goes. Gyro rate is very manageable, pitch and throttle curves work at their recommended settings, and head speed is right on with the pinion and throttle curve where the directions put them.

I am very impressed with the performance and quality of the new T-Rex 450SA. When it comes to small electric helicopters, this is the best I've flown to date, and another sure winner for both Horizon Hobby and Align. **HM**



T-Rex 450SA exhibits excellent flight characteristics, even in wintry conditions — extremely stable and a highly capable 3D performer.