

E-Flite Turbo Timber 1.5

Thanks for reaching out to us for a power system upgrade in your Turbo Timber. Unfortunately, E-Flite gives virtually no information about any of the motors that power their aircraft, and this one is no exception. Normally, you get a photo of the motor and a price and that is it!



To get any meaningful information about the motors, I typically have to rely on a review on RC Groups where someone actually took the time to weigh and measure the motor and published the specs. I managed to find a thread on RC Groups that talks about this motor at the following link.

<https://www.rcgroups.com/forums/showthread.php?4123663-E-Flite-BL10-Brushless-RC-Airplane-Motor-800KV-Turbo-Timber-EFLM17552>

In post #8 of that thread someone mentioned that the motor was physically the same size and weight as a SunnySky X2820-800 motor. In our Cobra motor line, we have the C-2820-14, 840Kv motor, which would be a good upgrade, depending on how much power increase you are looking for.

The stock prop on the plane is a 3-blade 11x7.5, and a lot of people also run a 12x6 prop on the stock motor. The Turbo Timber has a flying weight of 76 ounces (4.75 pounds) with a 4-cell 3200 pack according to the manual, so anything north of 80 ounces of thrust would give good performance. Looking at the performance of the C-2820/14 motor on 4 cells with an APC 12x6 prop you get the following full throttle numbers.

Volts – 14.8

Amps – 35.1

Watts – 520

RPM – 8960

Thrust – 85 ounces

Speed – 51 MPH

This motor would give you a moderate bump in performance, and would still let you use the stock speed controller. The power loading would be 109 watts per pound and the thrust to weight ratio is 1.12 to 1

The Tempest 2820-840 motor does make a bit more power than the Cobra motor does. With the same 12x6 prop and 4-cell battery you can get these full throttle performance numbers from that motor.

Volts – 14.8

Amps – 42.2

Watts – 625

RPM – 9219

Thrust – 91 ounces

Speed – 52 MPH

This setup gets you 20% more power than the Cobra motor does, providing a power loading of 132 watts per pound and a thrust to weight ratio of 1.2 to 1. Since this set-up pulls 42 amps, you could continue using the stock ESC with this motor as well.

If you wanted an even greater boost in power, then the BadAss 2820-910 motor would be a great option. Once again, running the same 12x6 prop on 4 cells will get you these full throttle performance numbers.

Volts – 14.8

Amps – 51.3

Watts – 759

RPM – 9894

Thrust – 105 ounces

Speed – 56 MPH

This motor gets you 46% more power than the Cobra motor, and 21% more power than the Tempest motor in the same size motor! This setup gets you 160 watts per pound and a thrust to weight ratio of 1.38 to 1 for totally unlimited vertical climb. Since this motor pulls a bit more current than your stock ESC can provide, you would need to upgrade to a minimum of a 60 amp ESC for this motor.

Here are the links to the items described above.

Cobra 2820/14 Motor: <https://rcdude.com/cobra-c-2820-14-840kv-brushless-motor.html>

Tempest 2820-840 Motor: <https://rcdude.com/tempest-2820-840kv-brushless-motor.html>

BadAss 2820-910 Motor: <https://rcdude.com/badass-2820-910kv-brushless-motor.html>

BadAss Rebel 60-amp ESC: <https://rcdude.com/badass-rebel-v2-series-brushless-esc-60a.html>

BadAss ESC Programming Card: <https://rcdude.com/badass-rebel-v2-series-brushless-esc-lcd-programmer-4-in-1-tester.html>

APC 12x6-E Prop: <https://rkdude.com/apc-thin-electric-12x6-prop.html>

BadAss 12x6 Prop: <https://rkdude.com/badass-wood-electric-propeller-12x6.html>

Our ESC's work out of the box in most applications, without having to set any of the ESC parameters. One cool feature that our new BadAss ESC's have is the ability to reverse the direction of the motor on the fly for reverse thrust after landing. This can greatly reduce the landing rollout of a plane after landing. In order to use this feature, you do need to enable it with the ESC programming card.

That should give you all the info you need to get a motor that gives you a 20%, 40% or 60% increase in performance over the stock motor. If you have any additional questions, please let me know.