# Edge 540 55” Glow Conversion

If you want a 3D level of power it’s all about that thrust and I usually shoot for up to a 2:1 thrust-to-weight ratio for top-end performance on a 3D airplane. The most efficient way to generate thrust is by using the longest length prop you can with a low pitch. I suspect you might be able to run props longer than 12” so if you can confirm your maximum prop length, while keeping enough ground clearance that may be helpful. I do have a recommendation for your consideration below using 13” and 14” props. Please take a look at this and let me know if this is what you are looking for or if you have something a bit different in mind. We can take the power level down a notch if you feel like this is overboard.

Aircraft: Edge 540 55”
Flying Weight: 6.5lbs (104oz)
Voltage: 6S LiPo
Maximum prop size: 14”
Desired Performance: 3D
Power Needed: Up to 300 watts/lb with a 2:1 Thrust Ratio
Calculated Power Needed: 1950 watts with 208oz Thrust

BadAss 4520-660Kv, 6S LiPo, APC 13x5.5E Prop
80A, 1762 watts, 65mph Pitch Speed, 194oz thrust
271 watts/lb, 1.87:1 Thrust Ratio

BadAss 4520-660Kv, 6S LiPo, APC 14x6E Prop
100A, 2210 watts, 70mph Pitch Speed, 229oz thrust
340 watts/lb, 2.2:1 Thrust Ratio

Motor – https://innov8tivedesigns.com/badass-4520-660kv-brushless-motor.html
Prop Chart - https://innov8tivedesigns.com/pub/propcharts/BA4520-660-Specs.htm
Recommended ESC BadAss Rebel V2 100A (if not going to run the 14x6 option) - https://innov8tivedesigns.com/badass-rebel-v2-series-brushless-esc-100a.html
Recommended ESC BadAss Renegade V2 125A if you want to use the 14x6 prop - https://innov8tivedesigns.com/badass-renegade-v2-series-brushless-esc-125a.html
BadAss 6S LiPos - https://innov8tivedesigns.com/products/batteriescharging/badass-lipos/6s-lipo-22-2v.html
APC E Props - https://innov8tivedesigns.com/products/propellers/apc/apceseriesprops.html
BadAss Wood Props - https://innov8tivedesigns.com/products/propellers/badass-wood-props.html

The BadAss Rebel V2 ESCs have nice low prices but the Renegade series is our premium ESCs line and those come with a much higher price so I can understand sticking to the setups below 100A. You might want to try the BadAss 13x6 wood prop as another good choice. That will give you a nice 189oz of thrust at only 75A so it seems to be one of the most efficient setups on this motor.

BadAss 13x6 Wood Prop - https://innov8tivedesigns.com/badass-wood-electric-propeller-13x6.html

One of our 3D printed motor mount can make motor mounting easier and get your prop out to the right location. Please check the drawings with dimensions for our motors in the product photos to help determine to length of 45mm series mount you would need. Here is a link to those mounts: https://innov8tivedesigns.com/badass-wood-electric-propeller-13x6.html