

Kyosho

Fast Electric speedboat

Built by Pete Dickinson



Built from a commercial kit this fast electric model has been run for many years at Gloucester docks. However, needing a large area of water it hasn't been run for a while.

The original kit had a standard 'can' style motor which while working well did not give any real impression of speed. I tried several upgraded motors which improved the performance but got extremely hot after a single run. In the end I decided to water-cool the ESC and motor by fitting a water scoop onto the directional drive unit and feeding the coolant via the ESC and through a copper tube wrapped around the can of the motor.

As this modification resulted in the motor running cooler I decided to increase the battery voltage to enhance the performance. In the end over-running the motor eventually burnt the brushes out and as the motor had been fairly expensive I looked around for a cheap replacement.

At that time many shows had at least one stall selling, what we came to know as, 'Proops motors' which were surplus ones from the production of battery screwdrivers. These were rated as 6volt motors but as they were available for only £1:50p were bought in quantity and would survive for a few runs before the brushes burnt out.

The propeller in the kit was sadly lacking in performance and so was replaced with a surface piercing X style carbon fibre propeller which increased the performance even further.

The impressive increase in speed created another problem as the boat would sit very bow high at speed, using much of the extra power to keep the bow artificially raised. After a similar problem with another of my models I decided to add some trim tabs across the transom and used a spare channel on the transmitter to alter the angle of the tabs. The craft could now be trimmed until it sat correctly on the water and the increase in speed was very obvious.

As the cost of brushless motors and their associated electronic speed controllers has dropped I have now replaced the can motor with a water-cooled brushless one and a 60 Amp ESC which I hope will give the boat an even faster performance.

The motor purchased from RCEHO has an output at least three times that of a standard can motor and is to be run from a 3s 5Ah Li-Po battery. The combination has yet to be tried but I'm hoping that the performance will be scintillating.

