

Mono 1 setup, by Mark Shipman for 2012 season.



Results :

2012

1st - UK NATS - Team Mono 1 with Jim and Aran Bond

Parts :

Hull - Asylum Hulls "Nutcase" Mono 1 - 615mm long 180mm wide

Motor - Leopard LPB 2860 4 Pole 3 Wind Delta - 3400kv

Cells - Victory Battery 3S 4500mAh LiPo

Prop - Tenshock CNC aluminium 36mm diameter 50mm pitch

ESC - Castle ICE Lite 100, timing low or auto

Servo - Futaba Digital S3150

Propshaft - ETTI 2mm wire with M4 thread

Rudder - ETTI 100mm standoff, 65 x 25mm blade with water pickup

Turn fin - 1.5mm Carbon fibre sheet 55 x 25mm (below waterline)

Safety Loop - Tenshock

Coupling - Home made solid brass 2-4mm with grub screws

Radio - Tx - Futaba 3GR Rx - Futaba FF603 or Fs603 or FrSky TFR8S

Setup :

C of G - 33% - 203mm from Transom

Cooling - Motor cooled from rudder pickup via Leopard jacket, ESC not cooled

Propshaft - 6mm offset to the right viewed from transom, end of shaft 70mm from transom, shaft set so there is a 1-2mm gap between the prop boss and a straight line between the peak of the step and transom, ie set the hull level on a flat surface. I've fitted ceramic bearings and replaced the inner ETTI plastic bearing with a ball bearing.

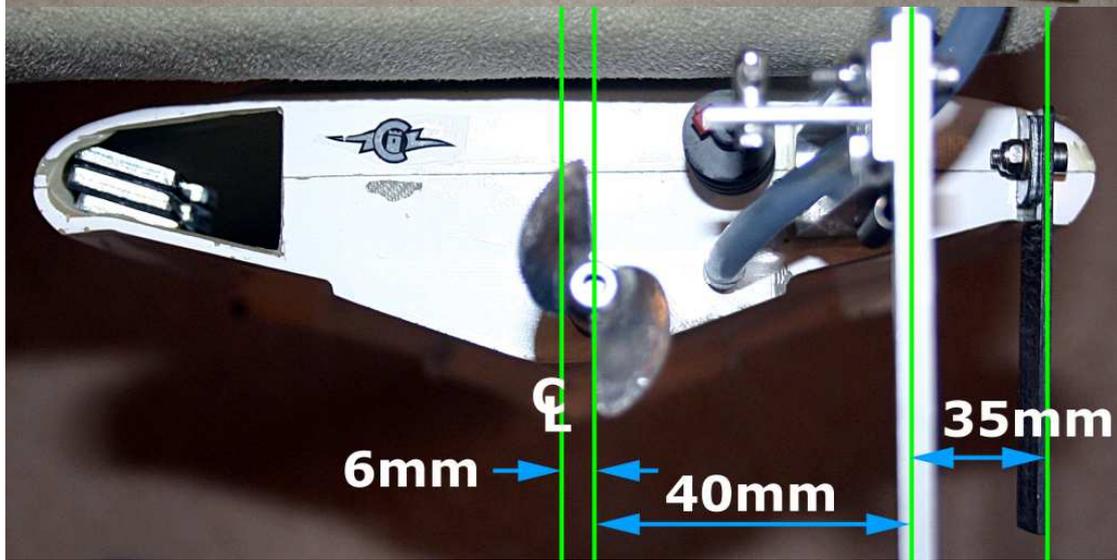
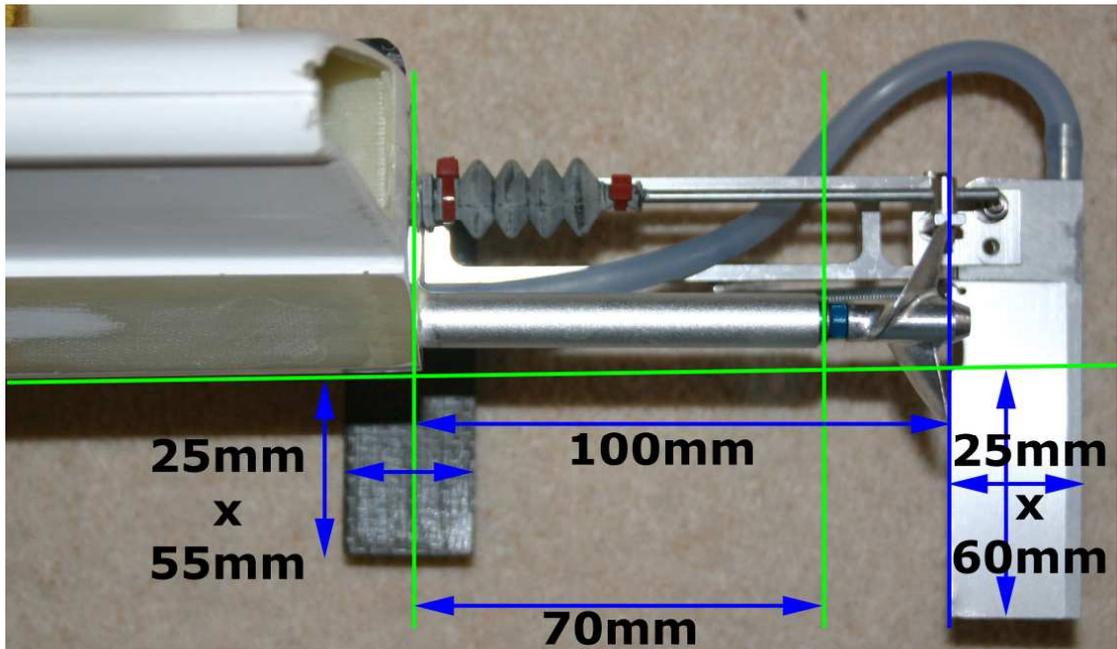
Rudder - 40mm to the right of propshaft

Turn fin - vertical - 35mm to the right of rudder

Motor mount - 2mm CF sheet, 280mm from transom, drilled for 19mm motor mounting holes, extends to support deck on right side where the safety loop is installed.

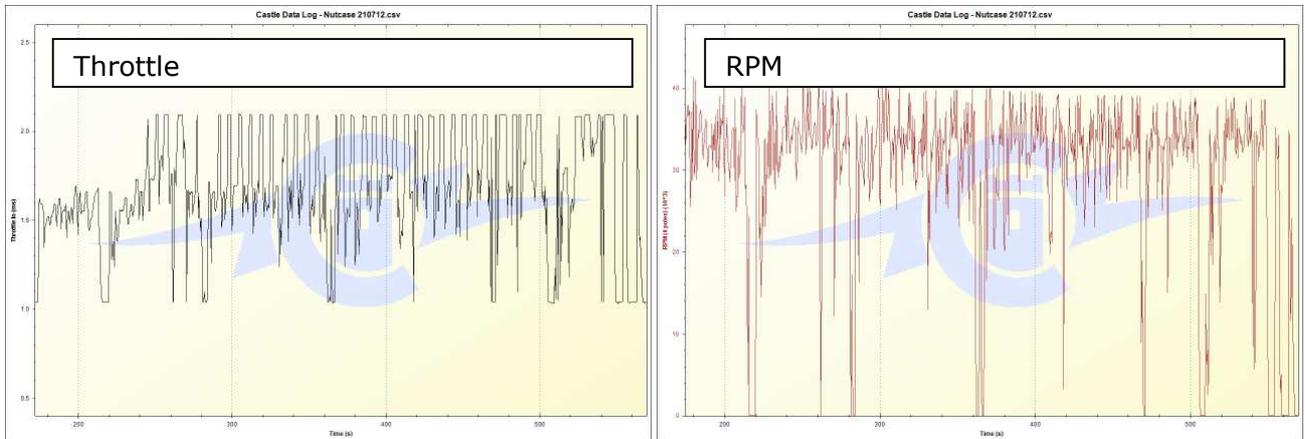
Hull mods - Make sure the 4in ahead of the step are dead flat, I superglued a 3mm wide strip of 1.5mm ABS sheet to the back edge of the step so it slightly overhangs the step, then back filled with bumper filler which is very easy to sand, and used a block to get it very flat, I also sanded the last 4in before the transom so its also dead flat.



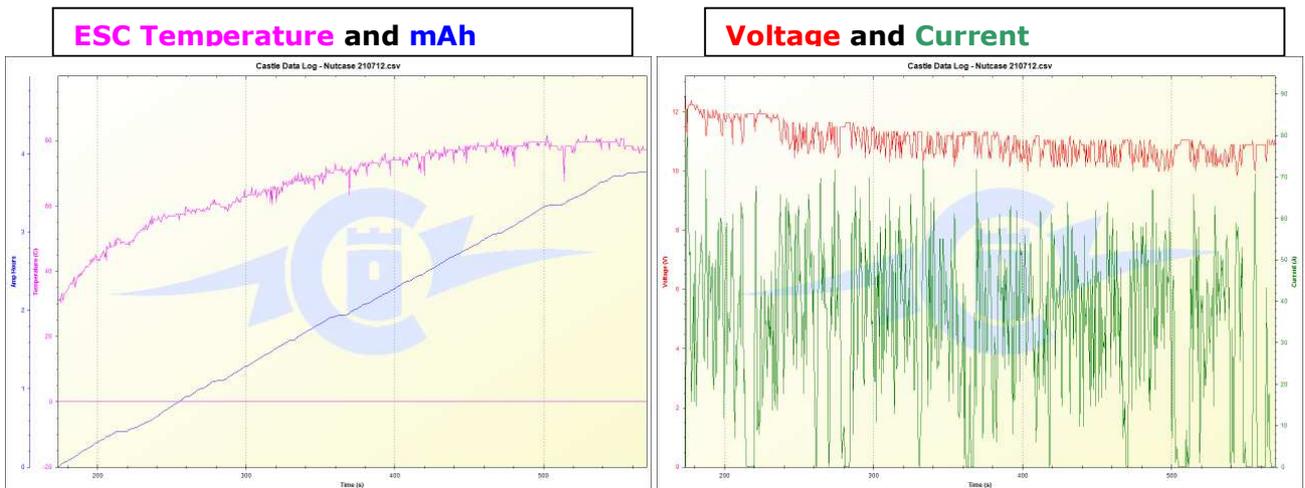


Data Logging:

Output from winning run in Team Mono 1 at 2012 Nationals, Aran driving this boat for the very first time (no pressure then), after a cautious start he soon got in the swing of it, towards the end he managed one 5sec run at full throttle.



Throttle trace shows two peaks per lap, one for each straight of the Naviga oval
Revs peaked at 41,330, and averaged 29,790 for the race, at full throttle revs average 34,764.



ESC temperature peaked at 82°C from 30°C pre race.
3.77 mAh used (3770 from a possible 4500).
Voltage averaged 11.0 for the race duration, dropping to a min of 9.8V.
Current averaged 34.3A for the race duration, peaking at 86.4A on recovery from a flip or spin.