N20 "red" ESC

An integrated speed controller for
N20 motors
* Works with most N20 or N10 gear motors
* Runs like a continuous servo - accepts servo pulses
* Centre braking stops the motor when control stick is centred

Specifications

Input voltage: 3.6v - 9v
Maximum current: 1.8A
Signal input: Servo pulses 1000us - 2000us
Centre braking enabled approximately 1450-1550us
Connector: "Dupont" 2.54mm 3-position female (servo connector)
PCB dimensions: 11x20mm; Lead length: 80mm

Notes

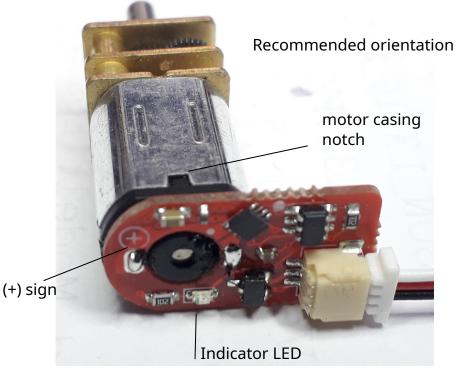* Centre position must be selected after power on (1500 us / centre stick) for auto centre calibration.
* Failsafe (disable motor) if signal is lost
* Indicator LED - blinking= power but no signal, constant= power and signal

White = servo pulses signal
Red = Power +
Black = Power –

Assembly

The controller board should be soldered to the terminals on the back of a motor as shown below.
It is useful to orient the motors consistently in a batch, e.g. when making kits
If the motor is reversed, it will still work, just run the opposite way.

⊕ sign closest to the case notch
Indicator LED opposite case notch
⊕ sign aligned with a ⊕ sign on the back of the motor

Recommended orientation

motor casing notch

(+) sign

Indicator LED

Based on an idea by Joe Brown, design by Mark Robson. Thanks to all beta testers. May 2021