

20A TRENCH HEXFET BRIDGE ESC/BOW THRUSTER MODULE



Thank you for purchasing one of our RC Modules. We hope it will give you many years of trouble free service. If you have any problems with your module, please either email or contact our technical support helpline first on the number provided on the last page. We are sorry that it is a mobile number, but we work between three sites and find that our mobiles are far more versatile for our non –electronic communication needs. Before pressing your module into service, please carefully read through the installation drawings, notes and information below.

Please follow the wiring protocol as in the drawing. The Conductors are clearly marked 'Motor' and 'Batts' on the leads and in the Drawing Do not connect them to anything other than what is described. The 'Motor' is your Motor Connections. 'Batts' is your Battery Pack or Power Source.

Please be advised that this module is unsuitable for use with Johnson 540 & 60 type Drill/Screwdriver Motors as sold on auction websites (Please read the review 'Bad 540 Motors' on Model Boat Mayhem (<http://www.modelboatmayhem.co.uk/>) Electric Motors – Fast Motors – Bad 540 Motors)

Ensure that your wiring and Power ON/OFF Switch is capable of handling the load. As a rule of thumb your wiring should be about 14 -16AWG and kept as short as possible. Use a solder sweated joint to connect any Fuse/Switch terminals to the wiring.

Irreparable damage may occur to the internal components of the module if you:

Short Circuit The 'Load' Connections.

Cross Polarise The Supply (Batts) Connections (Positive on Negative, Negative on Positive)

Allow water or fluid to enter the module.

Always use Fuses in the 'Batt' (Supply). This will help protect the Module from a possible Short Circuit or overload. It will also prevent your precious model/project from going up in smoke if there is such an event.

Do not be tempted to increase the rating or omit the Fuse. DC Motors have a habit of proving almost short circuit to the supply as they age. This will sting your Controller into premature failure.

*** IMPORTANT ***

This Module incorporates Finger Safety Soft Start Technology (FiST) which means that the module will not initialise unless it sees a 'Centre Stick' (Dead Stick) signal for 5 Seconds. Before Powering the Receiver, a 'Best Practice' is to switch on the Transmitter with all Sticks/Rotary Knobs in Centre/Neutral Position **FIRST**. If by chance you power the receiver first with the Stick/Rotary Knob on your Control Channel in any other position other than Off, the Decoder will invalidate the signal for 5 seconds. **Your Motor emits a ½ Second arming Tone when all is ready.** You should then be able to control the speed and direction of your Motor by throwing the Stick/Rotary Knob slowly from Centre/Neutral Position to fully Forward or Reverse Positions. This Built in Safety Feature prevents you from accidentally running up your Propellers in full or partial power when you may have fingers or other parts of your anatomy in the way.

Should you need technical support for your purchase, please call +4475 9998183 (075 99998183) between 9am and 5pm Monday to Friday. Please remember, we are a Micro-Business, **We DO NOT HAVE** a dedicated sales desk or enquiries/support staff consequently it may take a few attempts to speak with us. If you find this frustrating, please drop us an email with your name and a phone number and we will return your call as promptly as possible.

Email support@mr-rcworld.co.uk



JUMPER ON = BEC SELECTED
 JUMPER OFF = BEC DISCONNECTED

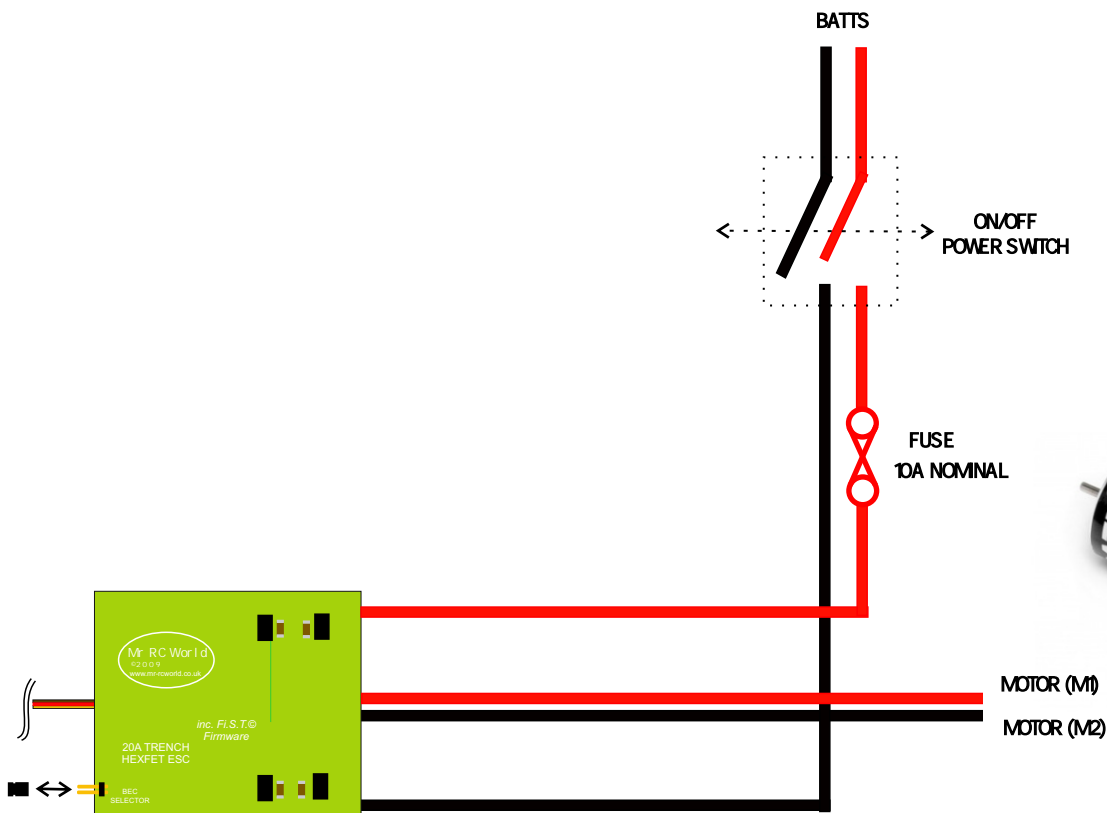
Battery Voltage Cutoff Table

BATTERY VOLTS	CUTOFF	BATTERY TYPE
6.0V	5.5V	6V SLA (Sealed Lead Acid)
6.5V	5.5V	6V SLA
7.0V	6.0V	7.2V Nicad (6 cells)
7.4V	6.1V	7.4V LiPo (2 cells)
7.5V	6.0V	7.2V NiMH (6 cells)
8.0V	6.0V	7.2V Nicad (6 cells)
8.5V	7.0V	8.4V NiMH (7 cells)
9.0V	7.0V	8.4V Nicad (7 cells)
9.5V	7.0V	8.4V NiMH (7 cells)
10.0V	8.0V	9.6V Nicad (8 cells)
10.5V	8.0V	9.6V Nicad (8 cells)
11.0V	8.0V	9.6V NiMH (8 cells)
11.1V	8.9V	11.1V Li-Po (3 Cells)
11.5V	11.0V	12V SLA (Sealed Lead Acid)

BEC = BATTERY ELIMINATION CIRCUIT
 PROVIDES 5v TO POWER THE RECEIVER
 CIRCUIT AND ANCILLARY EQUIPMENT

The 'CUTOFF' Voltage is Battery Terminal Voltage that the 'ESC' will shutdown to prevent damaging the battery cells. i.e. a 12v Sealed Lead Acid has a spent life terminal voltage of 11v.

Rev No	Mr RC WORLD
AUG 2016	20A SOLID STATE TRENCH HEXFET BRIDGE ELECTRONIC SPEED CONTROLLER (ESC)
	Eng.
Scale 1:1	Drawing No 1 of 1



Rev No	Mr RC WORLD
AUG 2016	20A SOLID STATE TRENCH HEXFET BRIDGE ESC
	BASIC WIRING DETAILS
	Eng.
Scale 1:1	Drawing No 2 of 2