**INSTALLING YOUR ESC**

**Positioning of your ESC in the model**
Mount the ESC as far away as possible from the receiver, using double sided tape or velcro. Keep the thick power wires away from the antenna and other thin wires to avoid interference problems. The antenna should come straight out of the receiver into the antenna tube and up out of the model. Do not attempt to use any part of the model as an antenna! Make sure your motor is fitted with two (2) motor capacitors for the best performance.

**Wiring up of your ESC in model**
The ESCs are supplied with Tamiya style plug and bullet connectors at the factory. Colour coding for the wires is as follows:
- **Black** = Batt -ve
- **Red** = Batt +ve
- **Blue** = Motor +ve
- **Yellow** = Motor -ve

**Repeater Lead Connections**
The receiver lead on the ESC is the JR type, see chart below. For some receivers you may need to swap the red and brown wires to avoid interference problems. The ESC should be positioned to allow cooling air to pass over the heatsink, this reduces the risk of over-temperature shutdown. Make sure your motor is fitted with two (2) motor capacitors (0.1uF) - one from the negative terminal to the can and one from the positive terminal to the can.

<table>
<thead>
<tr>
<th>RECEPTOR TYPE</th>
<th>SIGNAL 1</th>
<th>SIGNAL 2</th>
<th>-VE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Futaba, Sanwa, KO</td>
<td>White/Blue</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>Hitec</td>
<td>Yellow</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>Jo Gruen, Kyosho</td>
<td>White/Orange</td>
<td>Red</td>
<td>Brown</td>
</tr>
<tr>
<td>A.C.M.S</td>
<td>Yellow</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>GTRONICS</td>
<td>White/Orange</td>
<td>Black</td>
<td>Red</td>
</tr>
</tbody>
</table>

**CAUTION!** If using an external receiver battery, you must remove the red wire from the ESC's receiver lead first. If using more than one ESC in your model with an external receiver battery you must disconnect the red wire from ALL ESC's. If using more than one ESC in your model without an external receiver battery ensure that only one of the ESC's has the red wire connected.

**Electricals are fitted with 1.5A BEC unless otherwise stated.**

---

**SET-UP**

Before beginning set-up you need to connect up your ESC as in Fig.1. When plugging the ESC's receiver lead into the receiver make sure that the signal wire (orange) is facing inwards.

**Calibrating the ESC to your transmitter**
1. Switch on your transmitter ensuring the throttle control and throttle trim are in their neutral positions. **NOTE:** If you have removed the factory fitted battery connector, (see warranty) ensure polarity is correct.
2. Plug your ESC into your battery pack and turn the ESC on with the on/off switch. The red, green and blue LED's will flash for 2 seconds (This is the set-up window, if you press the button once whilst the LED's are flashing you enter set-up, if you let the LED's flash for 2 seconds then stop, the ESC will operate with previously set values)
3. With the LED's flashing, press the set button once, this will set your neutral position, the green LED will light.
4. Push the throttle control to the full forward position, then return to the neutral position, (This has set maximum forward speed point, the red LED will light). The ESC will light the LEDs to show it is in the neutral position.
5. With the red LED lit, pull the throttle control to the full reverse position, then return to the neutral position. (This has set the maximum reverse point). The ESC is now ready to use.

**Calibration is complete and the ESC will power the motor!**

**Failsafe mode**
In failsafe mode the controller returns to the neutral position, this is shown by the Red LED flashing. Failsafe mode is activated if there is a loss of signal due to being out of range or not receiving a correct receiver signal.

**What do the LED's mean?**
- **Blue & Green LED's cycling** - Battery type selection window.
- **Red LED cycling** - Reverse mode selection window.
- **Red & Green & Blue LED's flashing for 2 seconds** - Calibration window.
- **Red LED flashing** - Failsafe mode.

**Red & Green LED's on solid** - Neutral position in NiCAD/NiMH mode.
- **Green LED lit solid** - Full forwards position in NiCAD/NiMH mode.
- **Red LED lit solid** - Full brake/Reverse position in NiCAD/NiMH mode.

**Red, Green & Blue LED's on solid** - Neutral position in Lipo mode.
- **Green & Blue LED's lit solid** - Full forwards position in Lipo mode.
- **Red & Blue LED's lit solid** - Full brake/Reverse position in Lipo mode.

**LIMITED WARRANTY**
Mtroniks Ltd. guarantees the product to be free from factory defects for 30 days from purchase date, verified by receipt. This does not cover defects specific to specific applications, components even by use, tampering, incorrect connection, addition to original components, alteration or wire (apart from the fitting of the radio box), damage to batteries or other equipment through use, misuse or shipping damage. Our liability is limited to repairing or replacing the product to original specification. Our liability will not exceed the cost of the product. By using this ESC, the user accepts the limitations of the warranty. See Instruction Sheet and Warranty before use.