Thank you for purchasing the ONYX® sensored brushless motor. Dry, brushed motors are high torque motors designed for launching and short sprint racing applications. These 1/10-scale sensored motors feature the same basic dimensions and mounting patterns as industry-standard, less motors feature the same basic dimensions and mounting patterns as industry-standard, 1/10-scale, 540-size brushed motors. These motors also offer high performance over a longer lifetime with little to no maintenance.

**FEATURES**
- Perfect upgrade for brushed 540 motors with the same diameter and industry standard 7 mm diameter industry standard 7 mm mounting holes.
- High torque
- Includes connectors
- High quality construction with ball bearings and hardened steel 1.8 mm shafts

**MOTOR SPECIFICATIONS**

<table>
<thead>
<tr>
<th>ONXS0500</th>
<th>ONXS0501</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPMV</td>
<td>3000v</td>
</tr>
<tr>
<td>No-load current 72v (A)</td>
<td>1.5 / 0.5</td>
</tr>
<tr>
<td>Diameter</td>
<td>37mm</td>
</tr>
<tr>
<td>Length</td>
<td>52mm</td>
</tr>
<tr>
<td>Weight</td>
<td>190 g</td>
</tr>
<tr>
<td>Efficiency</td>
<td>80%</td>
</tr>
<tr>
<td>Power</td>
<td>24kW</td>
</tr>
<tr>
<td>Shaft Length</td>
<td>19mm</td>
</tr>
<tr>
<td>Voltage</td>
<td>4.5-13.0v</td>
</tr>
</tbody>
</table>

**GEARING**

The larger spur gear allows excessive heat buildup in the motor and speed control. Use your vehicle's kit manual in order to find the manufacturer's recommended pinion size. It is best to monitor the motor's operating temperature when operating on new and different tracks and racing conditions. Every vehicle's operating temperature should never exceed 160°F (71°C). The best place to monitor the motor's temperature is at the center of the end bell. If the motor temperature is higher than 160°F (71°C) after a 5 minute run, the gearing should be lowered (change to a smaller pinion gear).

**INSTALLATION OF THE MOTOR**

Always assure the motor mounting screws are long enough to properly seat into the motor. However, assure the screws do not enter into the motor too far which could damage the motor.

**WARNING:**
- If the motor mesh is too tight, speed could be limited and the motor and ESC will overheat. Insert a small piece of paper or tissue in between the pinion and spur gears as you are installing them. Push the gears together tightly while the screws are turning to ensure the gears mesh properly.

- If the mesh is too tight, speed could be limited and the motor and ESC will overheat. Insert a small piece of paper or tissue in between the pinion and spur gears as you are installing them. Push the gears together tightly while the screws are turning to ensure the gears mesh properly.

- The maximum depth that the motor mounting screws can enter into the motor is approximately 1/8 (3mm). Use a screwdriver or a similar tool to remove all the excess length from the motor mounting screws, while providing a solid press to eliminate any play in the mounting screws.

- If desired, the ESC programming can be returned to default settings by powering on the ESC while holding down the SET button for 5 seconds. If you perform this operation, you must recalibrate the ESC to the transmitter.

**ESC LED STATUS**

- The red/green LED glows when there is no throttle input from the transmitter
- The red/green LED glows when there is an throttle input from the transmitter

**CONNECTING THE ESC**

1. Connect the ESC terminal A to the motor's terminal A.
2. Connect the ESC terminal B to the motor's terminal B.
3. Connect the ESC terminal C to the motor's terminal C.
4. Do not operate your ESC where it could come in contact with salt water (ocean water or water that should always remain below the vehicle frame), or constant splashing water, without the vehicle's kit manual in order to find the manufacturer's recommended pinion size. It is best to monitor the motor's operating temperature when operating on new and different tracks and racing conditions. Every vehicle's operating temperature should never exceed 160°F (71°C). The best place to monitor the motor's temperature is at the center of the end bell. If the motor temperature is higher than 160°F (71°C) after a 5 minute run, the gearing should be lowered (change to a smaller pinion gear).

**INSTALLATION OF THE MOTOR**

Always assure the motor mounting screws are long enough to properly seat into the motor. However, assure the screws do not enter into the motor too far which could damage the motor.

- If the gear mesh is too tight, speed could be limited and the motor and ESC will overheat. Insert a small piece of paper or tissue in between the pinion and spur gears as you are installing them. Push the gears together tightly while the screws are turning to ensure the gears mesh properly.

- The maximum depth that the motor mounting screws can enter into the motor is approximately 1/8 (3mm). Use a screwdriver or a similar tool to remove all the excess length from the motor mounting screws, while providing a solid press to eliminate any play in the mounting screws.

- If the mesh is too tight, speed could be limited and the motor and ESC will overheat. Insert a small piece of paper or tissue in between the pinion and spur gears as you are installing them. Push the gears together tightly while the screws are turning to ensure the gears mesh properly.
SOLUTION

ESC switch powered ON, but no motor function and no audible tone

- Repair or replace ESC switch or ESC
- Ensure ESC programming is correct for your battery

ESC switch powered ON, but no motor function and ESC continuously sounds 1 beep between 2 second pauses

- Repair or replace ESC switch or ESC
- Ensure ESC programming is correct for your battery

Motor stops

- Change connections of any 2 motor wires to the ESC and ensure motor turns in the correct direction
- Ensure no receiver antenna is not damaged

Motor in the wrong direction

- When red LED ESC flashes, replace or recharge battery
- When green LED flashes, let motor and ESC cool, changing set up or gearing to avoid overheating
- Replace ESC
- Replace damaged wiring
- Repair or replace gearing

Motor accelerates irregularly

- Replace with a high-power battery
- Repair battery
- Replace damaged wiring
- Adjust or replace gearing

Motor does not turn continuously in response to throttle

- Replace wiring or motor
- Ensure good reception between transmitter and receiver
- Replace ESC

Staunng veins operate but the motor does not run

- Ensure all ESC programming matches your installed systems requirements for safety
- Ensure all receiver connections are correct and secure
- Test the motor apart from the vehicle system and repair or replace motor as needed
- Replace or recharge batteries
- Ensure all motor connections are secure
- Adjust throttle travel or other throttle settings on the transmitter and the ESC

Staunng and motor do not function

- Refer to manufacturer’s instructions to repair or replace transmitter
- Replace or recharge batteries

Vehicle does not operate at full speed

- Replace or recharge batteries
- Ensure ESC programming is correct for voltage and battery
- Adjust transmitter settings, such as trim, throttle travel, etc.
- Ensure ESC settings are correct for system
- Calibrate throttle control to ESC

Motor slows but will not stop

- Repair or replace system antennas
- Repair or replace damaged motor, wiring and electrical parts

Deceased transmitter range

- Refer to receiver and transmitter manufacturer’s instructions to adjust reception or change to a free and open radio frequency