

Xcelorin 10th Sensored Brushless Motor Instructions

- ◇ **LOSB9400 3.5T** ◇ **LOSB9401 4.5T** ◇ **LOSB9402 6.5T** ◇
- ◇ **LOSB9403 8.5T** ◇ **LOSB9404 10.5T** ◇ **LOSB9405 13.5T** ◇
- ◇ **LOSB9406 17.5T** ◇

Thank you for purchasing the Losi™ Xcelorin™ Sensorless Motor. This motor will provide you the benefit of the latest in brushless technology.

We believe it will be to your benefit to take the time and effort to read these instructions.

We are confident you will be satisfied with the performance of the Xcelorin Sensorless Motor.

Losi/Horizon Support

If you have any questions concerning operation of your Xcelorin Motor, please call Horizon customer support at 1 877 504 0233.

You are welcome to call us with any support issue or question you may have.

Safety Precautions and Warnings:

- Please read instructions before operating.
- Do Not use a Schottky Diode with this motor.
- Avoid over-gearing by monitoring temperature.
- Operating temperature should not exceed 165F – 175F (74C – 80C) degrees.
- Do Not over-tighten the motor mounting screws. Damaged threads are not covered under warranty.
- Ensure the motor screws do not go into the motor more than 0.180 in (4.5mm).

Specifications:

| | LOSB9400 | LOSB9401 | LOSB9402 | LOSB9403 | LOSB9404 | LOSB9405 | LOSB9406 |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|
| Sensorless Construction | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rotor Magnet | Sintered | Sintered | Sintered | Sintered | Sintered | Sintered | Sintered |
| RPM @ 7.2V | 65664 | 51408 | 35136 | 26208 | 22176 | 16992 | 13104 |
| RPM per Volt | 9120 | 7140 | 4880 | 3640 | 3080 | 2360 | 1820 |
| Power (W) | 650 | 530 | 380 | 270 | 225 | 190 | 150 |
| Efficiency | 89% | 90% | 91% | 92% | 92% | 93% | 94% |

Common Specifications:

Precision Ball Bearings

Compatible with both 2S and 3S LiPo batteries, and from 4 to 12 cells

Weight: 6.35 oz (180 g)

Installation and Maintenance:

- Make certain the 3mm motor screws being used do not extend into the motor more than 0.18 in (4.5mm). Otherwise, you can internally damage the stator windings.
- For the sensored motor the wiring must be in sequence or you will damage either the Electronic Speed Control (ESC) or the motor itself. Most popular ESCs use standard colors of wire to make the connection easier motor to motor. These colors are currently Blue, Yellow and Orange, when looking at the plastic end cover with the tabs to the top. The wires will connect from Left to Right in this sequence: Blue to the left, Yellow center, and Orange on the right.
- If the motor runs in the opposite direction desired and you're using an Xcelorin ESC LOSB9500, you can use the setup software to change the rotation.
- Do not over-tighten the motor screws.
- Brush off dirt and dust frequently from the bearings. Place a drop of oil on each bearing at the same time.

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Gearing Suggestions:

All ratios in the table below are Final Drive Ratios (FDR)

FDR is calculated using the following formula: (Spur/Pinion) * Vehicles Internal Ratio

For example if you used a Losi Type-R with internal ratio of 1.83, and used an 118T Spur and 44T pinion the formula would be: $(118/44) * 1.83 = 4.91$

| | 5 Cell | 6 Cell | 2WD | 2WD | 4WD |
|-------|---------|---------|------------|------------|------------|
| Motor | 10th TC | 10th TC | 10th Buggy | 10th Truck | 10th Buggy |
| 17.5T | N/R | 3.8 | 6.0 | 7.6 | 6.3 |
| 13.5T | N/R | 4.6 | 7.2 | 8.8 | 7.4 |
| 10.5T | N/R | 5.4 | 8.3 | 9.8 | 8.2 |
| 8.5T | 5.8 | 7.0 | 9.6 | 10.7 | 9.3 |
| 6.5T | 6.6 | 7.3 | 10.8 | 11.7 | 10.4 |
| 4.5T | 7.6 | 8.4 | 12.5 | 13.2 | 13.7 |
| 3.5T | 8.4 | 9.8 | 13.4 | 14.1 | 14.8 |

N/R = Not Recommended

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Warranty Period:

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits:

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions:

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs:

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as **Horizon is not responsible for merchandise until it arrives and is accepted at our facility.** A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

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To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. **Please note: non-warranty repair is only available on electronics and model engines.**

Electronics and engines requiring inspection or repair should be shipped to the following address:

**Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822**

All other Products requiring warranty inspection or repair should be shipped to the following address:

**Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822**

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.