



LOSB9594 1/36th Brushless ESC and 8750Kv Motor Combination

Thank you for purchasing this Losi™ High Performance Brushless System!

This technically advanced system will offer maintenance free operation, extended run time, and possibly most important to you: faster speed.

Note: To use this ESC/Motor combination with your Losi Micro Vehicle, you must also purchase (or install) the following items since we will be replacing the single integrated ESC/Receiver/Servo Control Module:

- Receiver (Spektrum™ SR3500 recommended – must be small to fit under body)
- Servo (JR® SM22 recommended - must cut mounting ears off)
- Servo Saver (Losi LOSB0820)
- Optionally
 - 2-Cell LiPo Battery / Charger (Losi LOSB0862)

Note: Due to the Brushless Systems operation, some NiMH battery packs may not perform under the potential loads.

For a detailed overview of how to convert your Losi Micro Vehicle, please go to the following link. <http://www.losi.com>

Installation of LOSB9594:



An example of connection for LOSB9594 Brushless Combo with the motor and battery connected.

Shown above but not part of LOSB9594 is the following:

Servo	JR sub micro servo item number SM22
Receiver	Spektrum micro receiver item number SR3500
Servo Saver	Losi item number LOSB0820
LiPo Batt/Charger	Losi item number LOSB0862

The ESC and motor have connectors installed and ready for your use. The motor will connect to the ESC Motor wires by matching colors, Blue to Blue, White to White and Black to Black. Doing this the motor will run the proper direction for your Losi Micro Vehicle. Should you need the motor to operate in the opposite direction just disconnect any two of the connectors and reconnect in reverse fashion.

For a detailed overview of how to convert your Losi Micro Vehicle, please go to the following link. <http://www.losi.com>

Features:

- Quick Programming Card (QPC)
 - Voltage Cutoff (NiMH, 2S LiPo)
 - Brake Type (soft, normal)
 - Forward Only or Forward with Reverse
- Better run time and Seed Over the Standard system
- Sensorless Brushless Motors only
- Proportional Braking
- Support NiMH, or LiPo
- Optimized Automatic Motor Timing
- Forward and Reverse

Specifications:

1/36 8750Kv Brushless Motor

- Sensorless Design
- Input volt: 2-Cell LiPo, 4- to 6-Cell NiMH
- Shaft Length: 4.6mm
- Shaft Diameter: 0.06" (1.5mm) with splines
- Dimension: 0.47" X 0.87" (12 x 22mm) (L X D)
- Weight: 0.30 oz / 8.5 g
- Motor connectors: 2mm gold plated bullet

1/36 Electronic Speed Control (ESC)

- Sensorless Design
- Input voltage:
 - NiMH: 4- to 6-cells
 - LiPo: 2-Cell Li-Poly
- LVC cut-off:
 - NiMH: 60% of initial voltage
 - LiPo: 6V (3.0V/cell)
- BEC: 5V / 1A
- Operation frequency: 8KHz
- Operating current: 6A cont, 9A peak (3 Sec)
- Dimensions: 1.24" X 1.0" X 0.65" (31.6 X 25.5 X 16.5mm) (W, L, H)
- Weight: 0.25 oz / 7 g
- Standard Losi Micro Vehicle plug supplied for power connection
- 2mm gold bullet connectors supplied for motor

Warnings:

- Read all safety precautions prior to each use.
- Never leave this product unsupervised while it is switched on, in use or just connected to a power source. If there is a short or product defect, it could result in fire.
- This is a High Performance Brushless System
 - Please disconnect motor or remove the pinion gear during ESC calibration functions.
 - Keep loose clothing, hair, gloves and fingers away from the moving parts at all times
 - Rubber tires will expand to a large diameter when the vehicle is not on a running surface.

Warnings: Continued

- Rubber tires can cause severe injury if there is a failure while running the vehicle while on a stand or when being held. Ensure Rubber tires are securely mounted and if not re-glue them and check them often for potential failure.
- Disconnect the battery from the ESC after use.
- Electronic Speed Control (ESC) is not waterproof and should not be exposed to moisture.
- Do not attempt to use with more than 2-cell LiPo, or six cells NiMH; doing so will damage the ESC and could result in a fire.
- Mount ESC securely for use.
- Avoid over-tightening of the motor screws. Damaged threads are not covered under warranty.

Electronic Speed Control Setup:

1. Please read all safety precautions prior to use.
2. Ensure installation is complete and all connectors checked for polarity, ready for use.
3. Battery is charged and operational.
4. Set the Throttle and Brake throw on your transmitter to 100% (if they are adjustable).
5. Set the Trim to the centered position.
6. Ensure that the Throttle channel is in the "normal" position and not "reverse". If in reverse when you perform step 8, the LED will stay RED until you set to "normal".
7. Turn the ESC power switch ON, the Green LED is on solid.
8. Locate the SETUP button on the ESC, press until the RED LED is ON solid.
9. Pull throttle trigger to the full throttle position, the Red LED will be flashing and then Green LED turns ON solid.
10. Now push the throttle trigger to full brake, the Green LED is flashing, and then Green and Red LEDs both turn on solid.
11. Release throttle to neutral position. The Green and Red LEDs are flashing, and then will both be ON solid.
12. Turn off the ESC power switch; this saves the calibration to the ESC. You have calibrated the ESC for your transmitter.

Note: Should you change transmitters or receivers you must repeat the above steps to re-calibrate the ESC.

Quick Programming Card



The supplied Quick Programming Card (QPC) is used to setup the Electronic Speed Control to your operating requirements.

The following parameters can be set:

- Voltage Cut-off – select between NiMH or 2-cell LiPo battery setting.
Note: Selecting the NiMH setting for your LiPo battery will result in damage or fire.
- Brakes
 - Soft (wheels will not lock up).
 - Normal (strong enough to lock wheels under braking).
- Reverse
 - YES Provides forward braking action with the ability to reverse after pausing for 2 seconds after braking.
 - NO When selected allows forward and braking without ability to reverse.

Operating the Quick Programming Card (QPC)

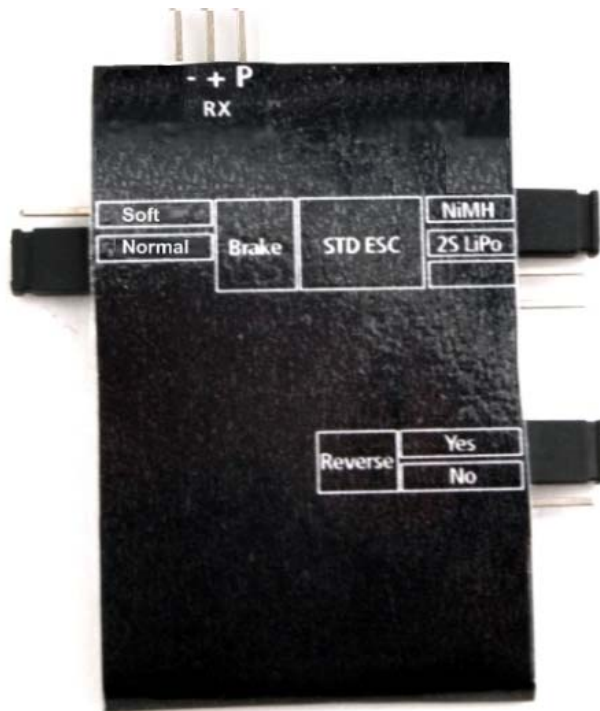
To program or reprogram the electronic speed control follow these steps:

1. Change the small jumpers on the QPC to the desired settings.
2. Connect the battery so that the ESC has power; leave the switch in the OFF position.
3. Disconnect the ESC radio lead from the receiver.
4. Connect the radio lead to the QPC top just left of center when looking at card from the backside.

Note: On this connection, it is important to verify you plug it in correctly.

See photo below and notice that the Negative (-) is on the left, in the center is Positive (+) and the pulse (or signal) is on the far right (P).

Note: On the ESC connector Brown is (-) and Red (+) and Orange (P)



5. Turn the power switch to ON. Notice the Red LED will flash and then become solid Red. Programming is complete.
6. If you wish to make another change at this time, turn off the power and make changes to jumpers, otherwise turn off the power switch before proceeding.
7. Disconnect the radio lead from the QPC and reconnect to the receiver.
8. You are now finished programming the ESC.

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

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.