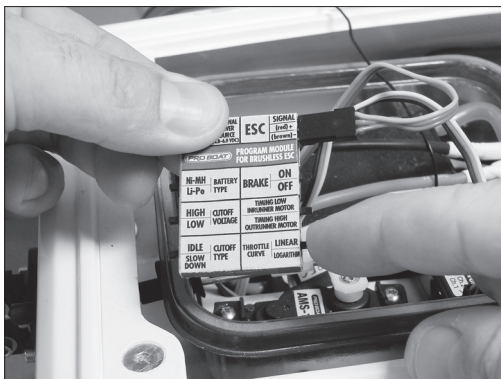


PRO BOAT™

Programming Module for Pro Boat Brushless ESC (PRB3309)



Introduction

The Pro Boat Programming Module allows quick programming for the Pro Boat Brushless electronic speed control (PRB3309). It allows you to personalize settings for battery type (Li-Po or Ni-MH), High or Low voltage cutoff, cutoff type, brake, timing and throttle curve. Just set the switches on the programming module to your preferences, connect it to the receiver and you are ready to run.

Features

Battery Type

The ESC can be programmed for use with either Ni-MH and Ni-Cd or Li-Po and Li-ion batteries. This setting changes the cut-off voltage so that the ESC will not unsafely discharge the batteries too low.

For Ni-MH use, Pro Boat recommends 2-PRB3313 7.2V 3600mAh Battery w/ Deans or 2-PRB3314 7.2V 4200mAh Battery w/ Deans.

For Li-Po use, Pro Boat recommends 2-THP33002SX 7.4V 3300mAh 2S. These batteries do not come with connectors. You must solder WSD1303 Dean's female connectors to the battery wires prior to use.

Caution: Never use Li-Po batteries unless the ESC has been programmed to accept them or permanent damage to the batteries may occur.

Cutoff Voltage

In High Cutoff mode, the cutoff voltage is automatically set to .9 volts per cell. Li-Po will cut off at 3.0 volts per cell.

In Low Cutoff mode, the cutoff voltage is automatically set to .7 volts per cell. Li-Po will cut off at 2.7 volts per cell.

The High Cutoff mode allows ample power in reserve for return to shore but may limit runtimes.

The Low Cutoff mode allows longer runtimes but leaves less battery power in reserve after cut off for returning the boat to shore.

Cutoff Type

In the Idle mode, the ESC will stop delivering power to the motor, indicating that the cutoff voltage has been reached.

In the Slow Down mode, the ESC will drop to 50% power at full throttle.

To reset, return the throttle to neutral.

Brake

The braking effect can be turned on or off to allow the boat to stop immediately when throttle is returned to idle, or coast to a stop if the brake is turned off.

Timing

The Low Timing mode allows the longest runtime and is suggested for 2, 4, and 6 pole inrunner motors.

You may use the High Timing mode for 6 or more pole inrunner motors and outrunner motors ONLY, and if temperatures of the electronic components do not exceed 130 degrees F in the Low Timing mode. Runtimes will significantly be reduced in the High Timing mode.

Throttle Curve

When set to the Linear mode, the throttle is at 60% power when the throttle control is halfway through its travel and allows 100% power at full throttle.

When set to Logarithm mode, the ESC delivers 45% power at half throttle and 80% power at full throttle. The Logarithm mode is suggested for first-time boaters.

Setup

Turn the on/off switch to the Off position.

Connect 2 fully charged batteries to the ESC.

Connect the ESC servo lead to the ESC plug on the Programming module with respect to polarity.

Set all switches in the positions you require.

Turn on the on/off switch. The ESC will beep, indicating that the new programming has been accepted. (The ESC will not accept a new program (beep again) unless you turn off the ESC power switch, disconnect one of the batteries for 5 seconds and change the settings of the programming card.)

Reconnect the throttle servo lead to the receiver.

NOTE: If you are not using the ESC to power the receiver (BEC), you must connect an external battery (4.8V–6.0V) to the External Power Source plug.

Warranty Information

Warranty Period

Horizon Hobby, Inc., (Horizon) warranties 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.