



SHOCKWAVE 26

ShockWave 26 Brushless Electric-Powered Deep-V

Owners Manual



Specifications

Hull Length.....	22 in (558mm)
Beam.....	6.5 in (165mm)
Motor.....	Water-cooled High-performance 2900Kv
Radio System.....	Pro Boat 2.4GHz Spektrum Marine DSM Pistol-Grip
Steering System.....	Steerable Drive System
Speed Control.....	Water-cooled 30-Amp Brushless ESC with Reverse

Introduction

Thank you for purchasing the Pro Boat® ShockWave® 26 Brushless EP Ready-To-Run boat. Please read these instructions carefully before attempting to operate your boat.

The ShockWave 26 Brushless EP comes Ready-To-Run with the Pro Boat 2.4GHz Spektrum™ Marine DSM radio system and electronic speed controller already installed. All assembly and building is done at the factory, allowing you to quickly get your boat running.

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Age Recommendations

Age Recommendation: 14 years or over. This is not a toy. This product is not intended for use by children without direct adult supervision.

General Guidelines and Safety Precautions

It is important that you read and follow this instruction manual, along with the radio system manual before you run this exciting boat. Failure to read and understand the manual could result in personal injury, property damage or permanent damage to your boat. It is also important to run your boat responsibly. With proper care and maintenance, you will be able to proudly enjoy your ShockWave 26 Brushless Deep-V for many years to come.

When operating the boat, stay clear of people, full-scale boats, stationary objects and wildlife. It is preferable to operate the ShockWave 26 Brushless Deep-V in low wake, low wind conditions and in areas free of people, wildlife and objects.

With 2.4GHz Spektrum marine technology, there is no need to be concerned with any other boats operating on the same frequency or RF interference. Check all of the hardware, and the propeller for damage and loose screws before and after each run.

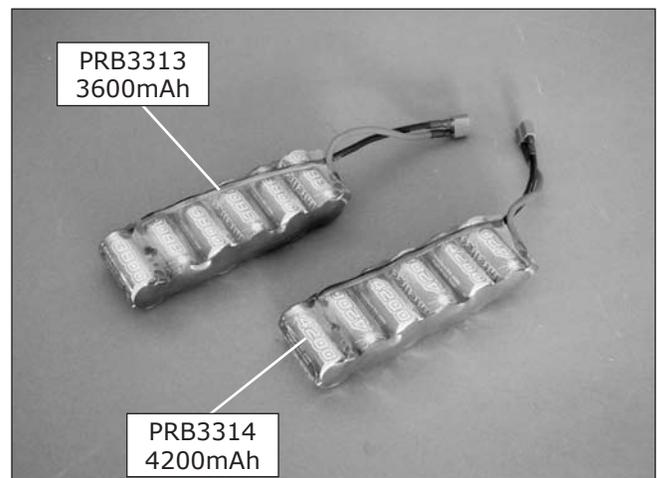
If at any time while operating your model you sense any abnormal function, end your operation immediately. Do not operate your boat again until you are certain the problem has been corrected. ***Always stay clear of the propeller.***

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.

Additional Required Items

You will need to purchase the following to get your boat on the water:

- 4 AA alkaline batteries for the radio transmitter
- 1-7.2V Ni-MH Battery Pack with Deans Connector (PRB3313 or PRB3314) or 1-7.4V Li-Po 25C Battery (DYN5360D)
- Prophet Plus AC/DC Charger (DYN4036) or for Li-Po batteries, the AC/DC LiPo Charger (DYN4066)
- Tamiya/Deans adapter (PRB3312)



Contents and Inspection



Carefully remove the boat and radio transmitter from the box. Inspect the boat to make sure no damage is present. If you notice damage is present, please contact the hobby shop where you purchased it.

Contents Include

- Assembled ShockWave 26 Brushless EP RTR
- Pro Boat radio transmitter
- Boat stand

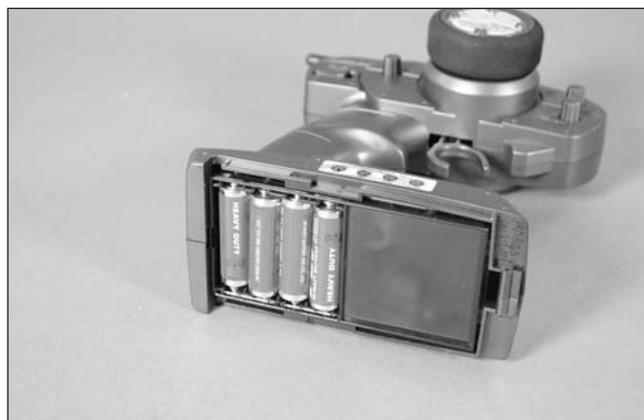
Receiver Antenna Installation

Ensure the antenna is properly placed through the antenna tube. It may be necessary to slightly pull the antenna tube out to make certain the radio range is sufficient.



Installing the Transmitter Batteries

Install 4 AA alkaline batteries into the transmitter, following the instructions provided for your radio system.

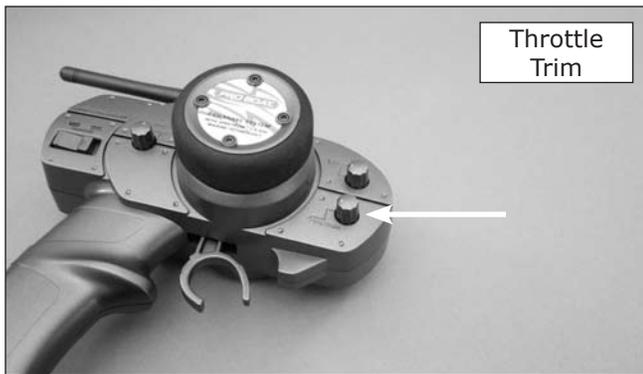


Adjusting the Transmitter

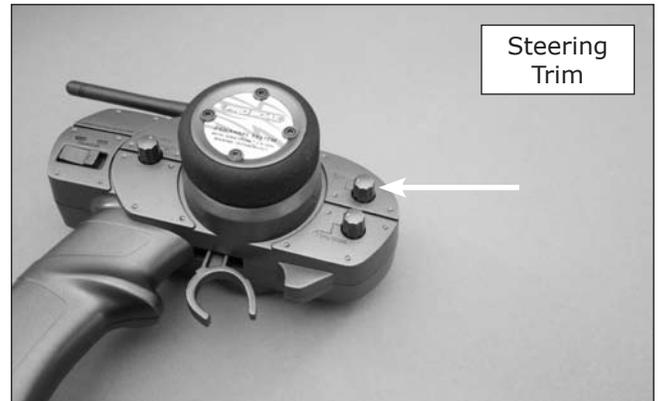
Note: Refer to the radio instructions for specific information on transmitter setup.

Adjust both the Throttle and Steering trims to the center position.

Turn on the transmitter, then connect the battery to the ESC. It may be necessary to adjust the throttle trim knob to stop the propeller from turning while the throttle trigger is in the neutral position.



Adjust the rudder trim knob so the rudder is centered prior to operation. You may adjust this control to make the boat run straight during operation.



Installing the Battery Pack

Carefully remove the hatch and radio box cover from the hull.



Installing the Battery Pack

The Pro Boat water-cooled ESC comes pre-wired with a Deans connector. Use a 6-cell battery pack listed below for optimum performance.

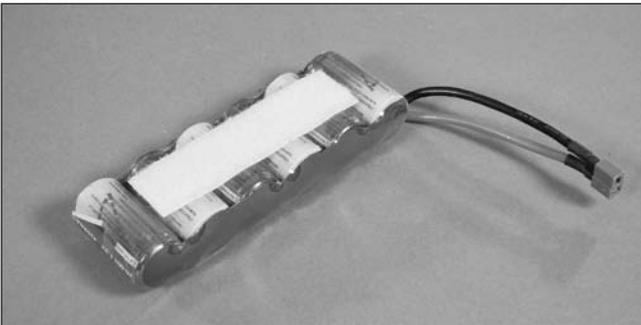
- PRB3313 7.2V 3600mAh
with Deans Connector
- PRB3314 7.2V 4200mAh
with Deans Connectors
- DYN5360D 7.4V 5300mAh 25C Li-Po
with Deans connector

Due to the high-current demands of a brushless powered boat, Pro Boat recommends only the batteries listed above or equivalent.

Pro Boat offers a charge adapter (PRB3312) to allow you to charge the PRB3313 and PRB3314 batteries with Deans connectors with conventional chargers that use Tamiya-style connectors.

Follow the instructions included with your fast charger to ensure a safe charge.

Attach the hook and loop material to the batteries and the battery boxes.



Install a fully charged battery pack into the hull.

Turn on the transmitter first, then connect the battery to the speed control.

Note: Be sure the Ni-MH/Li-Po switch matches the battery you are using or permanent damage to the battery and electronics may occur. See the section on Programming the Speed Control on Page 10 for more information.



Radio System Binding

The Pro Boat Radio System with Spektrum 2.4GHz DSM included in the ShockWave 26 Brushless operates on a frequency of 2.4GHz, and provides 79 different "channels" which are automatically selected when the transmitter and vehicle are turned on. The communication between the transmitter and receiver starts in the few seconds after the transmitter and vehicle are both turned on. This is called the binding process. The Pro Boat DSM radio system will not interfere with previous technology radio systems that operate on 27MHz or 75MHz frequencies and you will not receive any interference from them. Although set at the factory, below are the steps required to re-bind your transmitter to the receiver should the need arise. During the bind process there is a unique ID from the transmitter communicated to the receiver to ensure trouble-free radio operation.

Steps to Re-Bind

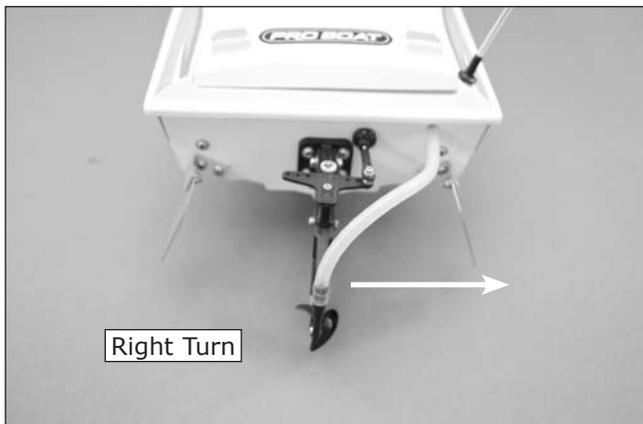
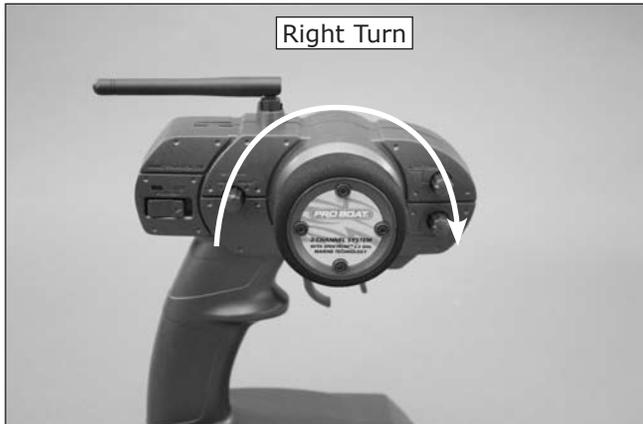
- 1. Ensure the transmitter and model are both turned off.
- 2. Using the supplied Bind plug (which looks like a standard receiver plug with a wire loop installed) insert or plug into the receiver slot labeled BIND. Looking down on the receiver this slot would be below the LED and is the furthest from the LED, or nearest to the corner of the receiver.
Note: You do not need to remove any of the other plugs to re-bind.
- 3. With the Bind plug installed, turn on the model. Notice a blinking Orange LED within the receiver.
- 4. Now you are ready to turn on the transmitter. You should notice on the back of the transmitter a similar blinking Orange LED under the translucent cover.
- 5. Both the receiver and transmitter blinking Orange LED will stop blinking and become solid indicating they have "bound" themselves together.

- 6. Please turn off both the model and transmitter to remove the Bind plug from the receiver. Failing to remove the Bind plug will cause the transmitter to attempt to rebind every time you turn on the vehicle and transmitter.
- 7. Turn on both the vehicle and transmitter to ensure operation. If the transmitter does not control the model, please repeat steps 1 to 6. Should this not correct the problem, please call Horizon Service/Repair for further assistance.
- 8. The Bind process is complete. Your model's radio system should be ready for use.

Note: In order for the system to connect (after the receiver is bound), the receiver must receive a large number of continuous uninterrupted perfect packets from the transmitter. This process is purposely critical of the environment ensuring that it's safe to fly when the system does connect. If the transmitter is too close to the receiver (less than 4 feet) or if the transmitter is located near metal objects (inside or around a pit trailer, metal transmitter case, the bed of a truck, the top of a metal work bench, etc.) connection will take longer. In some cases connection will not occur as the system is receiving reflected 2.4GHz energy from itself and is interpreting this as unfriendly noise. Moving the system away from metal objects or moving the transmitter away from the receiver and powering the system up again will cause a connection to occur. This only happens during the initial connection. Once connected the system is locked, and should a loss of signal occur (failsafe), the system connects immediately (4ms) when signal is regained.

Checking the Radio System

The control arm should move toward the back of the boat when right input is given. Conversely, when left input is given, the control arm should move toward the front of the boat.



The ESC will beep until you give full throttle input. Do not hold full throttle for more than a brief moment or damage to the drive system and electronics may occur from over-revving. Once the boat is in the water, full throttle may be held indefinitely. The auto sensing circuitry will select full throttle position when you hold full throttle during initial setup. Release the throttle trigger. With the propeller free from any objects, give some throttle input to ensure the motor is working. If everything appears to be functioning correctly, you are ready to run your boat.

Note: The auto sensing voltage cutoff will also cut off power to the motor when the ESC senses the batteries are nearing full discharge. To reset, return the throttle trigger to neutral.

Note: If you are transporting your boat, make sure you disconnect the battery from the speed controller and then turn your radio off until you are ready to run the boat. Once ready, simply turn the radio on and plug the battery into the speed controller, again making sure the boat is in neutral.

Testing Your Boat in the Water

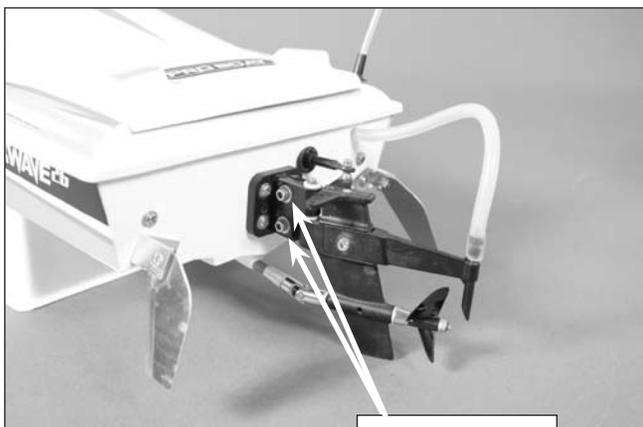
Make sure the radio is ON and the battery is plugged into the speed controller. Test the radio system for proper operation, then carefully place the boat in the water. Pilot the boat at slow speeds, staying close to the shoreline to ensure you have good control and the boat is functioning correctly. Be certain to avoid all objects in the water at all times.

Once you feel comfortable with the control of your boat, it is safe to go further away from the shoreline and at faster speeds. When you notice the boat beginning to lose speed, bring the boat back to shore. It will be necessary to allow the electronic components to cool down and to replace or recharge the battery before heading out again.

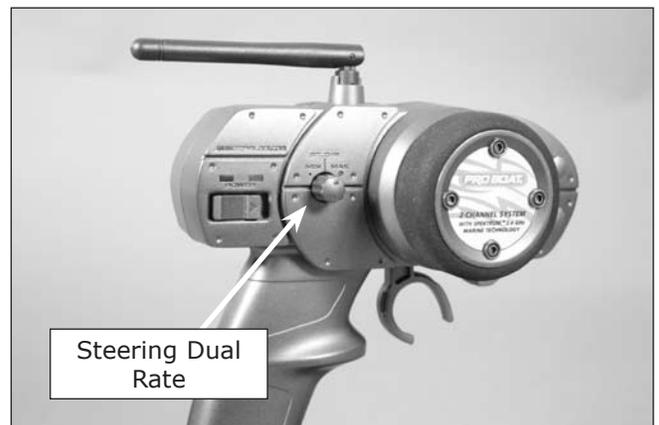
Handling Adjustment

Operate your ShockWave 26 Brushless EP in low to medium wake conditions to avoid having problems with the boat overturning. If the conditions are questionable, adjust the drive system down a bit to reduce the likelihood of having the boat overturn. The motor mount is slotted to allow you to move the motor slightly when adjusting the propeller strut. Loosen the motor mounting screws when adjusting the propeller angle and retighten after adjustment is complete.

You may also turn the dual rate dial down to reduce rudder travel in rough water conditions.



Loosen to
Adjust
Propeller Strut



Steering Dual
Rate

Maintenance

Before and at the end of each run, make sure all screws are tight and the propeller is free from any entanglement.

Speed Control Programming

The electronic speed control (ESC) features a Ni-MH/Li-Po switch to easily change the cutoff voltage for each battery type.

Caution: It is imperative that you do not attempt to use Li-Po batteries in the ShockWave 26 Brushless unless the cutoff switch is in the Li-Po position or serious damage to the batteries and electronics may occur.

Note: Do not turn off the transmitter first or the receiver may run out of control.



Lubricating the Drive Shaft

Lubricating the drive system is vital to the life of the drivetrain. The lubricant also acts as a water seal, keeping water from entering the hull through the stuffing box.

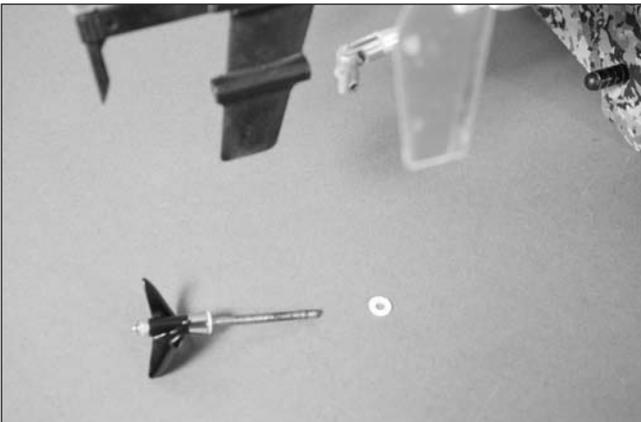
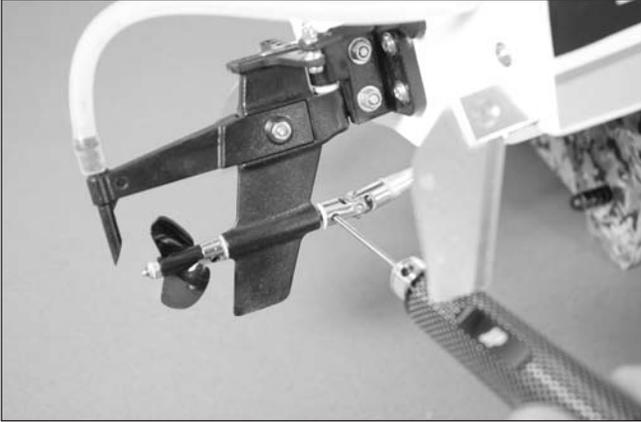
Lubricate the drive shaft, propeller shaft and all moving parts after every 2–3 hours of operation.

1. Use a 1.5mm hex wrench to loosen the setscrew connecting the flex shaft to the motor adapter.



Lubricating the Drive Shaft

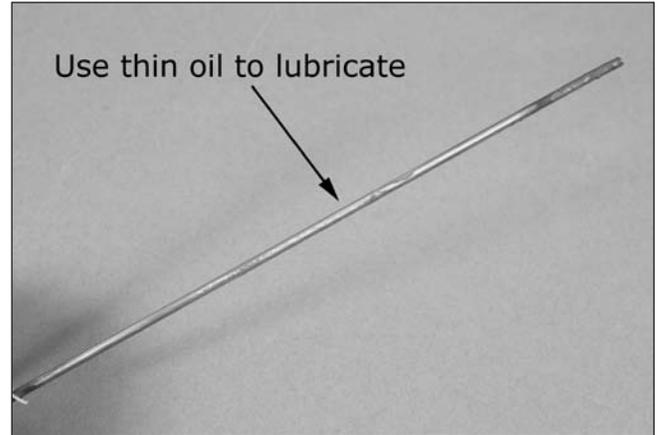
- 2. Use a 1.5mm hex wrench to loosen the setscrew connecting the propeller drive shaft to the universal joint. Remove the propeller shaft from the outdrive.



- 3. Move the outdrive to a full left or right turn and pull the drive shaft from the stuffing box.



- 4. Clean any debris and dirt from the flex shaft with a degreasing cleaner. Lubricate the drive shaft with thin oil. Reinstall the drive shaft in reverse order. Be sure to reinstall the nylon washer between the universal and the stuffing box.



Note: Running the ShockWave 26 Brushless EP RTR in salt water could cause some parts to corrode. If you run the boat in salt water, rinse it thoroughly in fresh water after each use and lubricate the drive system.

Because of its corrosive effects, running RC boats in salt water is at the discretion of the modeler.

Warranty and Repair Policy

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

Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(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.

(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).

Warranty Services

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.

United States

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

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
USA

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

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822
USA

Please call 877-504-0233 or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

Warranty Services

United Kingdom

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

Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex
CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or e-mail us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

Germany

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

Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
Germany

Please call +49 4121 46199 66 or e-mail us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

France

Horizon Hobby SAS
14 Rue Gustave Eiffel
Zone d'Activité du
Réveil Matin
91230 Montgeron

Please call +33 (0) 1 60 47 44 70 with any questions or concerns regarding this product or warranty.

FCC Information

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

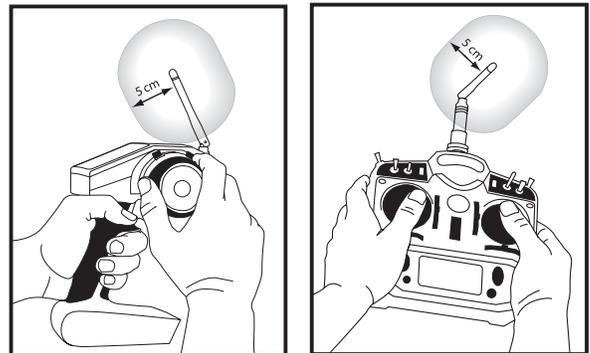
Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

Antenna Separation Distance

When operating your Spektrum transmitter, please be sure to maintain a separation distance of at least 5 cm between your body (excluding fingers, hands, wrists, ankles and feet) and the antenna to meet RF exposure safety requirements as determined by FCC regulations.

The illustrations below show the approximate 5 cm RF exposure area and typical hand placement when operating your Spektrum transmitter.



Compliance Information for the European Union



Warranty Services

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use.

AT	BG	CZ	CY	DE
DK	ES	FI	FR	GR
HU	IE	IT	LT	LU
LV	MT	NL	PL	PT
RO	SE	SI	SK	UK

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH20100219

Product(s): ShockWave 26 Brushless Electric Powered Deep-V

Item Number(s): PRB3150

Equipment class: 2

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

EN 300-328 Technical requirements for Radio equipment.

EN 301 489-1, 301 489-17 General EMC requirements

EN 60950 Safety

Signed for and on behalf of:

Horizon Hobby, Inc.
Champaign, IL USA
FEB 19, 2010

Steven A. Hall

Vice President
International Operations and Risk Management
Horizon Hobby, Inc.



Instructions for Disposal of WEEE by Users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



Replacement Parts

If you have any questions concerning the setup or running of your ShockWave 26 Brushless EP boat, please see page 13 to contact the appropriate Horizon service center.

PRB2507	Drive Dog and Prop Shaft	PRB2223	Pushrod Connector
PRB2226	Antenna Tube	PRB2224	Silicone Tubing
PRB2109	Battery Hook and Loop Tape	PRB2226	Antenna Tube
PRB2815	Steerable Drive System	PRB2228	Rubber Boot
PRB3151	Hull Only	PRB3307	Motor Mount
PRB3152	Driveshaft with U-joint	PRB3907	Turn Fin
PRB3153	Steering Pushrod	PRB3911	2900Kv Brushless motor
PRB3154	Decal	PRB3912	30-Amp 5.6-12.5V Brushless ESC with Reverse
PRB3155	Cockpit	PRB3312	Tamiya/Deans Charge Adapter
PRB3156	Motor Coupler	PRB3313	7.2V 3600mAh Battery with Deans Connector
PRB3157	Radio Box Cover	PRB3314	7.2V 4200mAh Battery with Deans Connector
PRB0150	1.34-inch x 2.06-inch Composite Propeller		
PRB2068	Water Outlet		
PRB2218	Prop Nut		
PRB2219	Nylon Washer		



The Spektrum trademark is used with permission of Bachmann Industries, Inc. US patent 7,391,320. Other patents pending.

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