



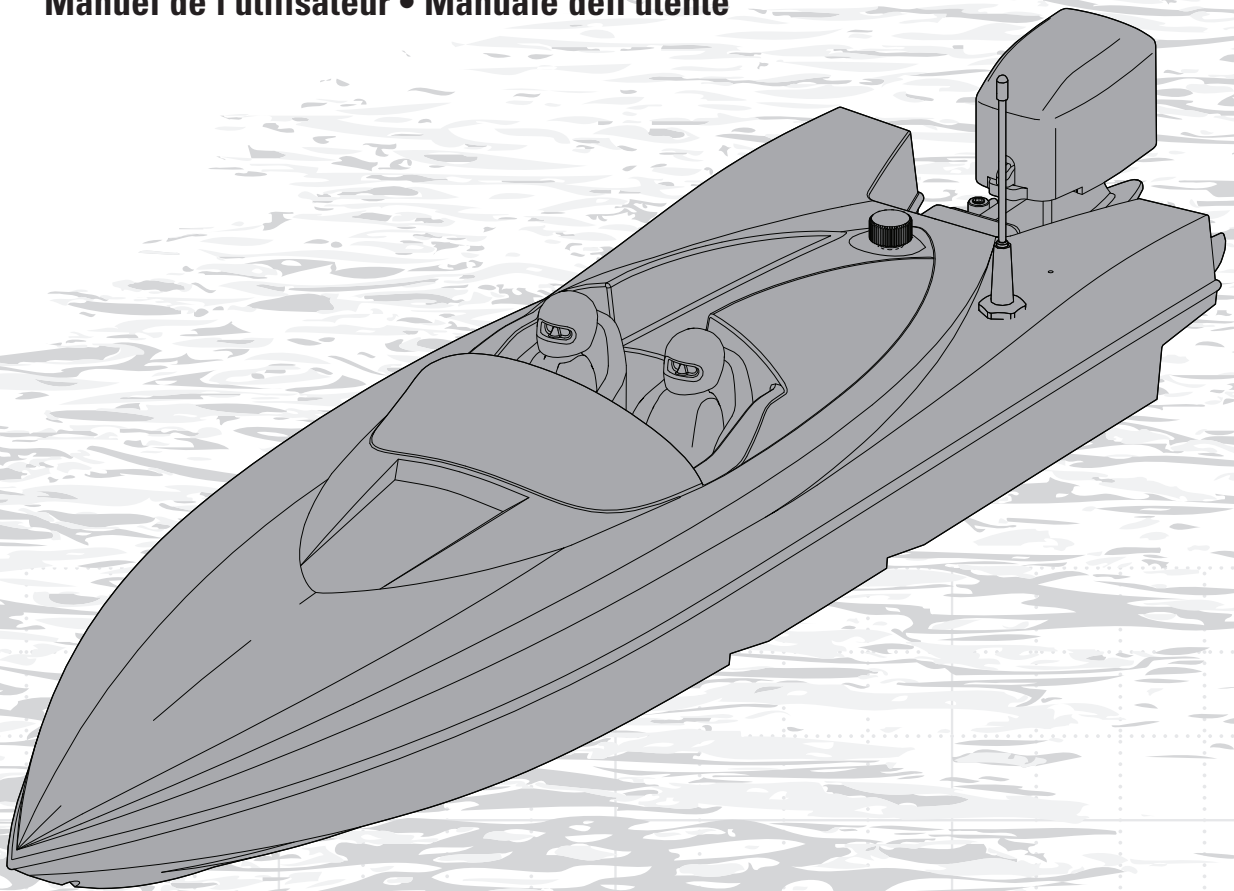
PROBOAT™
ProBoatModels.com

17 POWER BOAT RACER DEEP V

17-INCH READY-TO-RUN POWER BOAT RACER DEEP V WITH SPEKTRUM SMART CHARGER AND BATTERY

PRB08044

**Owners Manual • Bedienungsanleitung
Manuel de l'utilisateur • Manuale dell'utente**



HORIZON®
H O B B Y

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, LLC. For up-to-date product literature, visit www.horizonhobby.com or www.towerhobbies.com and click on the support or resources tab for this product.

MEANING OF SPECIAL LANGUAGE

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.



WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. 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. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. This 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 serious injury.



WARNING AGAINST COUNTERFEIT PRODUCTS: Always purchase from a Horizon Hobby, LLC authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, LLC disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum technology.

Age Recommendation: Not for children under 14 years. This is not a toy.

Safety Precautions and Warnings

As the product user, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

- When handling and/or transporting your boat, always pick up the boat from the front, keeping all moving parts pointed away from you.
- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.

- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to unprotected electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.

Water-Resistant Boat with Waterproof Electronics

Your new Horizon Hobby boat has been designed and built with a combination of waterproof and water-resistant components to allow you to operate the product in calm, fresh water conditions.

While the entire boat is highly water-resistant, it is not completely waterproof and your boat should NOT be treated like a submarine. The various electronic components used in the boat, such as the Electronic Speed Control (ESC), servo(s) and receiver are waterproof, however, most of the mechanical components are water-resistant and require additional maintenance after use.

Metal parts, including the bearings, pins, screws and nuts, propeller, rudder, rudder mounts, prop struts, as well as the contacts in the electrical cables, will be susceptible to corrosion if additional maintenance is not performed after running in wet conditions. To maximize the long-term performance of your boat and to keep the warranty intact, the procedures described in the "Wet Conditions Maintenance" section on next page must be performed regularly.



CAUTION: Failure to exercise caution while using this product and complying with the following precautions could result in product malfunction and/or void the warranty.

General Precautions

- Read through the wet conditions maintenance procedures and make sure that you have all the tools you will need to properly maintain your boat.
- Not all batteries can be used in wet conditions. Consult the battery manufacturer before use. Take caution when using Li-Po batteries in wet conditions.
- Most transmitters are not water-resistant. Consult your transmitter's manual or the manufacturer before operation.
- Never operate your transmitter or boat where lightning may be present.
- Salt water is very conductive and highly corrosive. If you choose to run your boat in salt water, immediately rinse the boat in fresh water after every use. Operating your boat in salt water is at the sole discretion of the modeler.
- Even minimal water contact can reduce the life of your motor if it has not been certified as water-resistant or waterproof. If the motor becomes excessively wet, apply very light throttle until the water is mostly removed from the motor. Running a wet motor at high speeds may rapidly damage the motor.

Wet Conditions Maintenance

- Drain any water that has collected in the hull by removing the drain plug or canopy and tilting the boat in the appropriate direction to drain the water.



CAUTION: Always keep hands, fingers, tools and any loose or hanging objects away from rotating parts.

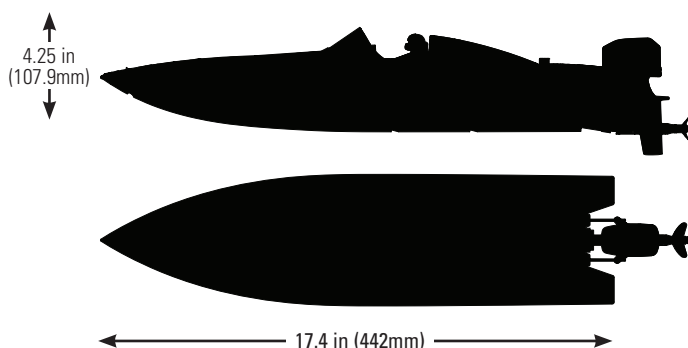
- Remove the battery pack(s) and disconnect the ESC and motor. Dry the contacts. If you have an air compressor or a can of compressed air, blow out any water that may be inside the recessed connector housings.
- Remove the drive shaft and all moving parts. Dry and lubricate parts after every 30 minutes of operation or if the boat becomes submerged.

NOTICE: Never use a pressure washer to clean your boat.

- Use an air compressor or a can of compressed air to dry the boat and help remove any water that may have gotten into small crevices or corners.
- Spray the bearings, fasteners and other metal parts with a water-displacing light oil or lubricant. Do not spray the motor.
- Let the boat air dry before you store it. Water (and oil) may continue to drip for a few hours.

Specifications

Length	17.4 in (442mm)
Beam	4.25 in (107.9mm)
Transmitter	2.4GHz 3-CH (HRZ00001)
Receiver	2.4GHz WP 3-CH (HRZ00006)
Hull Material	ABS
Motor	Dynamite® 8P BL 2950Kv Outrunner Marine Motor (DYNM3949)
ESC	30A BL Marine ESC 2-3S (DYNM3860)
Servo	13g Servo MG WP (HRZ00007)



Recommended Tools and Materials

- Needle nose pliers
- Paper towel
- Rubbing alcohol
- Nut driver: 4mm, 5.5mm (DYNT0502)
- Phillips screwdriver: #1
- Hex wrench: 1.5, 2, 2.5, 3mm (DYNT0502)
- Marine Grease & Gun (DYNE4200)

Table of Contents

Safety Precautions and Warnings.....	2
Water-Resistant Boat with Waterproof Electronics	2
General Precautions	2
Wet Conditions Maintenance.....	3
Specifications.....	3
Recommended Tools and Materials.....	3
Box Contents.....	4
Charging Warnings	4
Low Voltage Cutoff (LVC).....	4
Battery Chemistry	4
Charging the Battery.....	5
Installing the Battery Pack.....	5
Transmitter	6
Assembling and Disassembling Transmitter Handle	6
Installing Transmitter Batteries.....	6
Getting Started	6
Adjusting the Dual Rates.....	7
Control Check.....	7
Boating Tips	7
Self-Righting	8
When You Are Finished	8

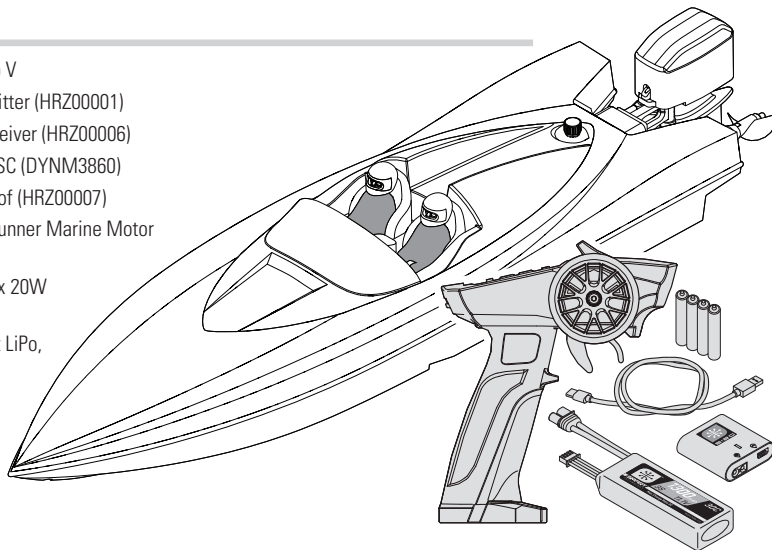
Product Inspection

Carefully remove the boat and radio transmitter from the box. Inspect the boat for damage. If your product is damaged, please contact the hobby shop where you purchased your boat, or contact Product Support. Refer to the Warranty and Service Contact Information section for more info.

Maintenance.....	9
Drivetrain Lubrication.....	9
Propeller Service.....	9
Rudder Service.....	9
Rudder Trim.....	10
Water Cooling System.....	10
Binding.....	10
ESC Programming with the Transmitter.....	10
Troubleshooting Guide.....	11
Limited Warranty	12
Warranty and Service Contact Information.....	13
FCC and IC Information	13
EU Compliance Statement.....	13
Instructions for Disposal of WEEE	13
Replacement Parts	54
Optional Parts	54

Box Contents

- Pro Boat® 17-Inch Power Boat Racer Deep V
- Horizon 3-Channel 2.4GHz Surface Transmitter (HRZ00001)
- Horizon 3-Channel 2.4GHz Waterproof Receiver (HRZ00006)
- Dynamite® 30A Brushless 2–3S Marine ESC (DYNM3860)
- Horizon® 13g Servo Metal Gear Waterproof (HRZ00007)
- Dynamite® 2950Kv 8-Pole Brushless Outrunner Marine Motor (DYNM3949)
- Spektrum™ S120 USB-C Smart Charger, 1 x 20W (SPMXC1020)
- Spektrum™ 11.1V 1300 mAh 3S 30C Smart LiPo, IC3 (SPMX13003S30)



Charging Warnings



CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

• NEVER LEAVE CHARGING BATTERIES UNATTENDED.

• NEVER CHARGE BATTERIES OVERNIGHT.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120° F (5–49° C). Do not store battery or aircraft in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.

- Always charge batteries away from flammable materials.
- Always inspect the battery before charging and never charge dead or damaged batteries.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always constantly monitor the temperature of the battery pack while charging.
- **ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTERIES.** Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never charge batteries outside recommended levels.
- Never attempt to dismantle or alter the charger.
- Never allow minors under the age of 14 to charge battery packs.
- Never charge batteries in extremely hot or cold places (recommended between 40–120° F or 5–49° C) or place in direct sunlight.

Low Voltage Cutoff (LVC)

Discharging a Li-Po battery below 3V per cell may damage the battery. The included ESC protects the boat battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor.

Power to the motor will be reduced significantly, showing that the batteries have reached the minimum LVC threshold. The ESC is programmed to allow enough battery power to drive back to shore from a maximum of 100 yards (45m), at no more than ¼ throttle.

Disconnect and remove the Li-Po battery from the boat after use to prevent trickle discharge. Charge your Li-Po battery to about half capacity before storage. During storage, make sure the battery charge does not fall below 3V per cell. LVC does not prevent the battery from over-discharge during storage.

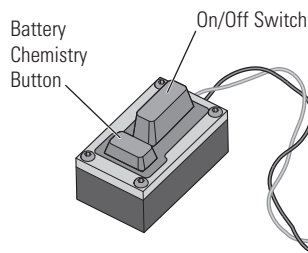
NOTICE: Repeated operation to LVC will damage the battery.

Tip: Monitor your boat battery's voltage before and after boating by using a Li-Po Cell Voltage Checker (EFLA111, sold separately).

Battery Chemistry

The ESC comes from the factory in Li-Po Mode. To change battery chemistry:

1. Keep the throttle at neutral and power ON the ESC.
2. Press and hold the Battery Chemistry Button on the power switch for 3 seconds. The LED flashes the current battery chemistry (red = Ni-MH or Ni-Cd; green = Li-Po).
3. Continue holding the Battery Chemistry Button for another 6 seconds. The ESC changes battery chemistry and the LED flashes the new battery chemistry.
4. Power OFF the ESC. The ESC saves the setting until it is changed.



Charging the Battery

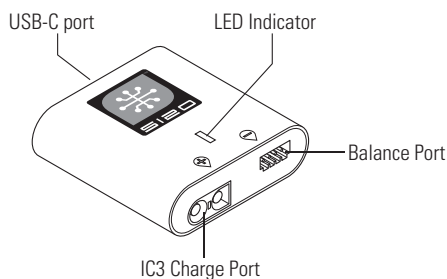
The recommended battery for the Pro Boat® 17 inch Power Boat Racer Deep V is an 11.1V, 1300mAh 3S 30C SMART Technology LiPo battery with an IC3™ connector (SPMX13003S30). If using a different battery, it should be of similar capacity, dimension and weight. Ensure the battery chosen is compatible with an IC3 connector. Follow the chosen battery and battery charger instructions to charge the battery.

SMART Technology Battery and Charger, Specifications and Operation

The included Spektrum S120 SMART Technology battery charger is compatible only with Spektrum SMART 2–3 cell LiPo batteries or 6–7 cell NiMH batteries. It is not compatible with any other battery chemistries or non-SMART batteries.

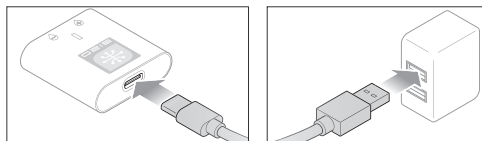
A USB power source is required for use. A USB-C QC type power source is recommended for the fastest charge times.

S120 Specifications	
Input	USB Type C, power source not included
Input Voltage	5V–12V
Charge Power	18W max (dependant on power supply)
Compatible USB Power Adaptor	5V/1A, 5V/2A, USB Quick Charge (QC) 2.0/3.0
Battery Connector	IC3™ and balance connector
Battery Types	LiPo, NiMH (Spektrum SMART Batteries only)
Cell Count	2–3 cell LiPo, 6–7 cell NiMH
Max Output Voltage	13.05V
Max Output Current	Up to 2A

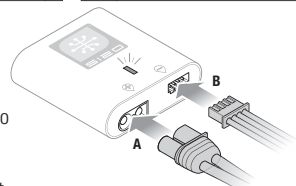


To charge the included battery:

1. Using the supplied Type-C USB cable, connect the charger to a USB power source (*not included*).



2. Insert the Spektrum™ SMART Battery IC3™ connector (A) into the charger IC3 port, and insert the battery balance lead (B) into the charger balance port. Both the IC3 and balance connectors must be connected for the charging process to begin. The battery may be disconnected from the charger at any time to stop the charging process.



IMPORTANT: NiMH batteries do not have a balance connector.

3. Disconnect the IC3 and balance connectors when the charge and balance cycles are complete, as indicated by the LED.
4. The LED indicator will glow solid red to indicate a charging error. Follow the operation steps to ensure proper connection is used to charge the battery.

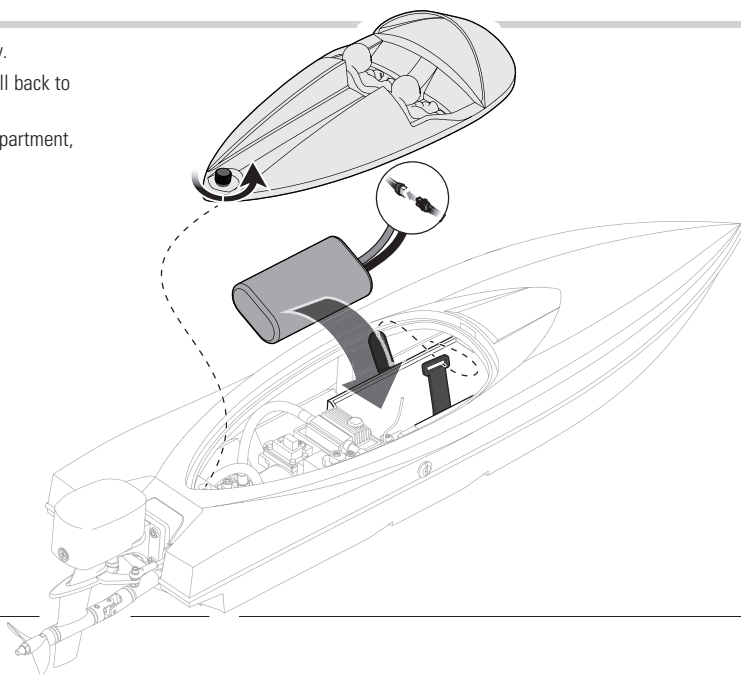
Refer to the LED indicator table for charger status.

IMPORTANT: Connecting a non-SMART battery will cause a charge error and the S120 will not recognize or charge the battery.

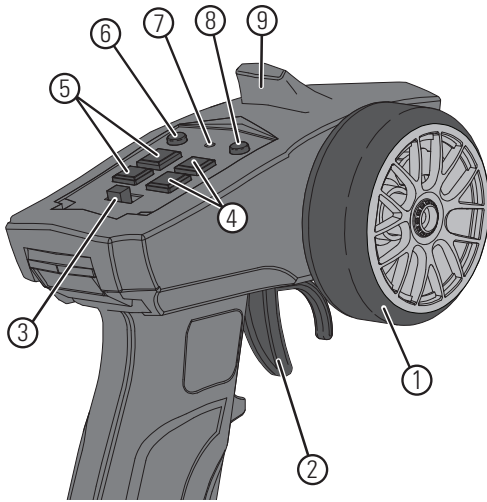
LED Indicator		
Power On	USB 5V: White LED	
	USB Quick Charge 2.0/3.0: Blue LED	
LiPo: Purple LED NiMH: Yellow LED	Battery Capacity	
	Less Than 25%	Single Flash
	25% – 75%	Double Flash
	76% – 99%	Triple Flash
Charge Complete	Green LED (Solid)	
Error	Red LED (Solid)	

Installing the Battery Pack

1. Loosen the screw at the rear of the canopy.
2. Carefully lift the rear of the canopy and pull back to disengage the canopy front from the hull.
3. Install the fully charged battery in the compartment, securing it with hook and loop tape.
4. Connect the battery to the ESC/Receiver.



Transmitter



1. **Steering Wheel** Controls direction (left/right) of the model
2. **Throttle Trigger** Controls speed and direction (forward/brake/reverse) of the model
3. **ON/OFF Switch** Turns the power ON/OFF
4. **TH DR/TH Trim** Adjusts the throttle trim/end points
5. **ST DR/ST Trim** Adjusts the steering trim/end points
6. **CH 3**
7. **Indicator Lights**
 - **Solid red light**—Indicates radio connectivity and adequate battery power
 - **Flashing blue light**—Indicates the battery voltage is critically low. Replace batteries
8. **REV** Reverses the steering wheel and throttle functions
9. **Antenna** Transmits the signal to the model

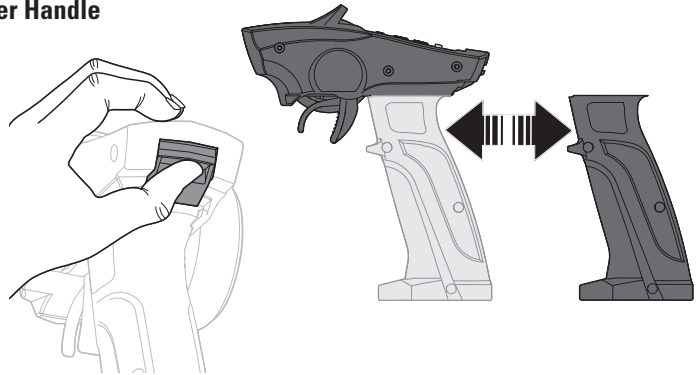
Assembling and Disassembling Transmitter Handle

Assemble

1. On the top transmitter portion, press the rear button.
2. Slide the transmitter handle into the track.

Disassemble

1. On the top transmitter portion, press the rear button.
2. Slide the transmitter handle out of the track.



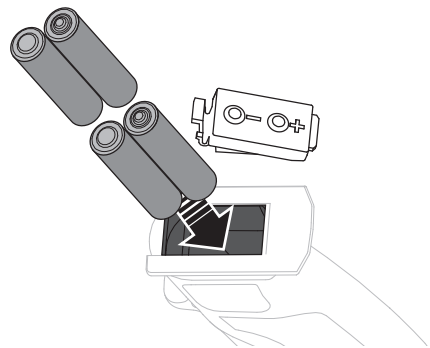
Installing Transmitter Batteries

This transmitter requires 4 AAA batteries.

1. Remove the battery cover from the transmitter.
2. Install the batteries as shown.
3. Install the battery cover.

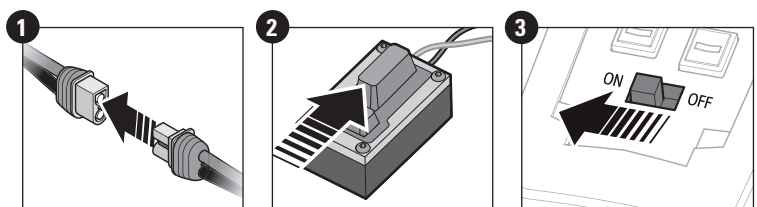
CAUTION: If using rechargeable batteries, charge only rechargeable batteries. Charging non-rechargeable batteries may cause the batteries to burst, resulting in injury to persons and/or damage to property.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to national regulations.



Getting Started

1. Connect the battery to the ESC.
2. Power on the ESC switch.
3. Power on the transmitter.

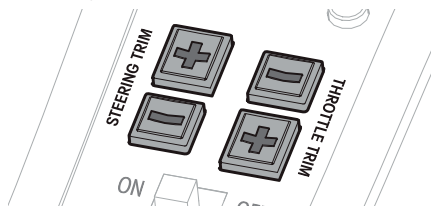


Adjusting the Dual Rates

The transmitter allows you to adjust steering and throttle dual rates.

Steering Dual Rate

1. Power ON the transmitter.
2. Power ON the boat.
3. Apply either the left or right steering input on the transmitter and hold that position.
4. To add or remove steering throw input, hold the steering input button and press the (+) or (–) ST DR button.



Throttle Dual Rate

1. Turn ON transmitter.
2. Turn ON the boat.
3. Apply either forward or reverse throttle input on the transmitter and hold that position.
4. To add or remove throttle input, hold the steering input button and press the (+) or (–) ST DR button.

NOTICE: Adjusting the throttle input will negatively affect the self righting feature as it relies on the motor RPM.

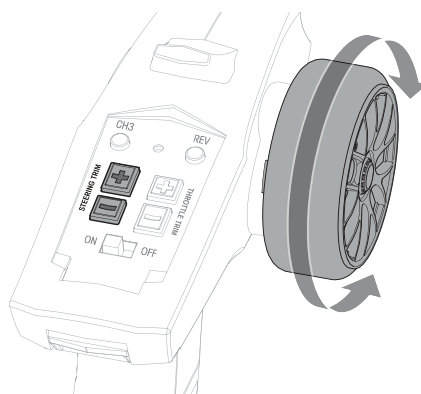
NOTICE: Do not adjust the throttle dual rate while the boat is powered on and resting on a stand. Adjusting the throttle dual rate may power the motor, which could cause damage to property or personal injury.

Control Check

IMPORTANT: Perform a control check at the beginning of each boating session, after repair or after installation of a new battery.

Ensure that the battery is fully charged.

1. With the transmitter and boat powered ON, place the boat on the boat stand.
2. Turn the transmitter STEERING WHEEL to the LEFT and to the RIGHT to verify the jet nozzle is in sync with the steering input.
3. Pull the THROTTLE TRIGGER. The coupler should rotate to the left. Air will flow from the jet nozzle.



Boating Tips

When running your boat for the first time, we recommend calm wind and water conditions so that you can learn how the boat responds to your control.

Consult local laws and ordinances before choosing a location to pilot your boat.

1. Carefully place the boat in the water.
2. Operate the boat at slow speeds near the shoreline. Avoid objects in the water at all times. When the boat is moving forward, ensure water flows out of the coolant outlet.
3. Once you are comfortable operating the boat at slow speeds, it is safe to operate the boat farther from the shore at higher speeds.
4. When making turns, decrease the throttle to reduce the probability of flipping the boat over.
5. Bring the boat back to shore when the motor starts to pulse.

CAUTION: Never operate your boat in less than 12 inches (30.5 cm) of water.

CAUTION: Never attempt to retrieve a downed boat by swimming. If you need to retrieve your boat from the water, use fishing equipment or another boat.

WARNING: Never adjust or remove the prop with the boat powered on. Always remove the battery and shutdown the boat before making adjustments. Failure to follow this warning could result in serious injury.

Avoid boating near:

- watercraft
- people (swimming areas, fishing areas)
- stationary objects
- waves, wakes
- rapidly moving water
- wildlife
- floating debris
- overhanging trees
- vegetation

NOTICE: If the propeller and rudder are blocked with debris or vegetation, remove the boat from the water and remove the debris before continuing operation. Remove any blockage from the coolant system or the motor and ESC (electronic speed control) may overheat.

NOTICE: When running at full speed in choppy waters, the prop may exit and re-enter the water repeatedly and very quickly, subjecting the propeller and drive shaft to some stress. Frequent stress may damage the propeller and drive shaft.

Self-Righting

If the boat turns over, release the throttle to stop the motor. Return the boat to upright by applying a short throttle burst.

The boat sitting in the water normally leans to the battery side. Apply throttle to level the boat. No weight adjustment is necessary.

IMPORTANT: The included weighted bell coupler aids self-righting after the boat has flipped and full throttle is applied. This bell is intended for use with the included battery or other batteries with a 1300mAh maximum capacity.

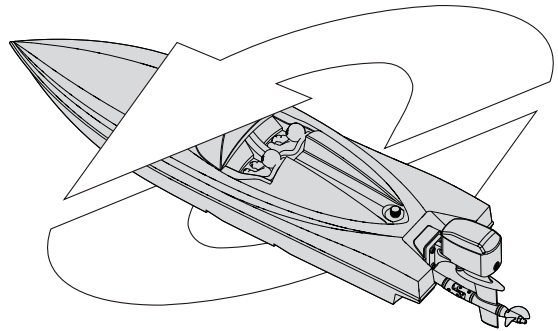
To self-right the boat in calm water:

1. Apply a burst of reverse.
2. Continuously apply a burst of full throttle until the boat rocks and rights itself.

To self-right the boat in rough water:

1. Release the throttle.
2. Apply a burst of forward, reverse and forward throttle. The boat should rock and right itself.

Tip: The boat may not self-right in extremely rough water. Proceed to calmer water and follow the self-righting steps.



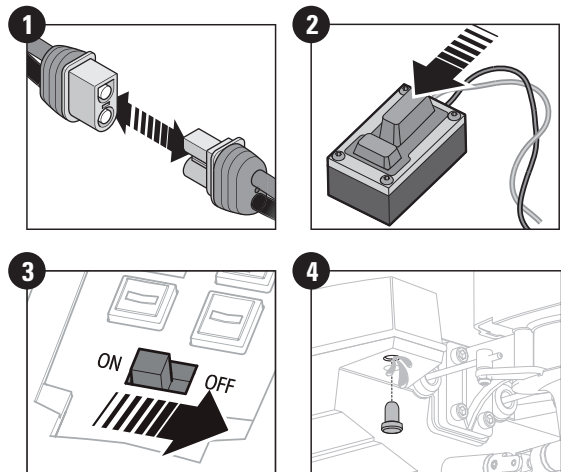
When You Are Finished

1. Power off the receiver.
2. Power off the transmitter.
3. Disconnect and remove the battery from the boat.
4. Drain water from inside the hull using the drain plug.

Tip: Always remove the canopy before storage or moisture may allow mold and mildew to grow in the boat.

- Fully dry the inside and outside of the boat, including the water cooling lines and jacket around the motor
- Remove the hatch before storing your boat
- Repair any damage or wear to the boat
- Lubricate the drive shaft using Dynamite Marine Grease (DYNE4200)
- Make note of lessons learned from the trimming of your boat, including water and wind conditions

NOTICE: When you are finished boating, never leave the boat in direct sunlight or in a hot, enclosed area such as a car. Doing so can damage the boat.



Maintenance

Drivetrain Lubrication

Always replace the drivetrain parts when they are damaged or show visible wear or injury and damage may result.

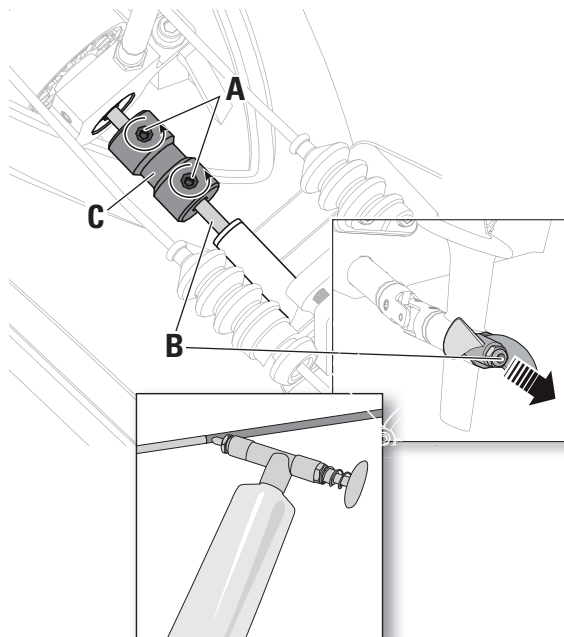
Lubricating the drive shaft is vital to the life of the drivetrain. The lubricant also acts as a water seal, keeping water from entering the hull through the stuffing tube.

Lubricate the drive shaft, propeller strut and all moving parts after 30 minutes of operation.

1. In the hull, use a 2mm hex driver to loosen the setscrew (**A**) holding the drive shaft (**B**) in the motor coupling (**C**).
2. Remove the drive shaft by sliding it from the back of the boat.
Tip: Use paper or cloth when handling the flex shaft and other lubricated parts.
3. Wipe the old lubricant and material from the drive shaft.
4. Lubricate the full length of the drive shaft assembly up to the drive dog using marine grease (DYNE4200).
5. Carefully reinstall the drive shaft, ensuring that there is a 1 mm gap between the stuffing tube and the drive dog.
6. Align the flat spot on the drive shaft with the set screw in the coupling. Apply threadlock to the coupling setscrew and tighten it with a 2mm hex driver.

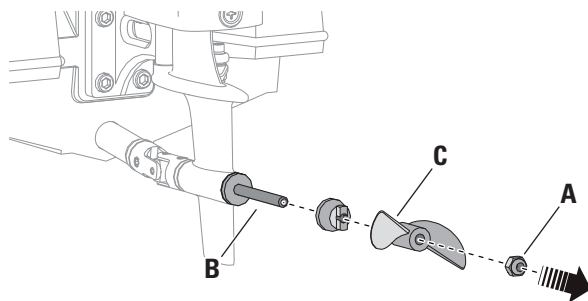
NOTICE: Running the boat in saltwater could cause some parts to corrode. If you run the boat in saltwater, rinse it thoroughly in freshwater after each use and lubricate the drive system.

NOTICE: Because of its corrosive effects, running RC boats in saltwater is at the discretion of the modeler.



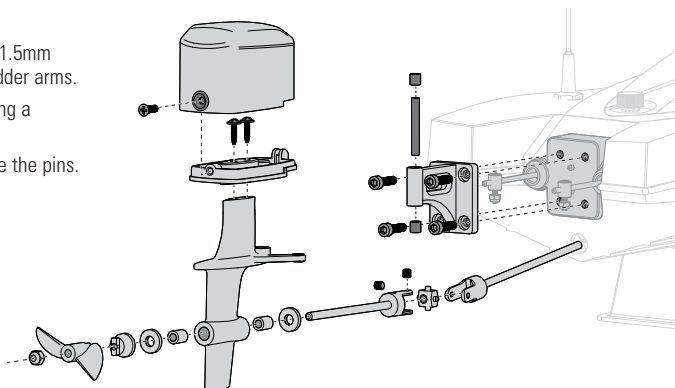
Propeller Service

1. Use an 5.5mm nut driver to loosen the nut (**A**) from the driveshaft (**B**).
2. Remove the nut and propeller (**C**) from the driveshaft.
3. Assemble in reverse order. Correctly align the propeller with the drive dog on the driveshaft.



Rudder Service

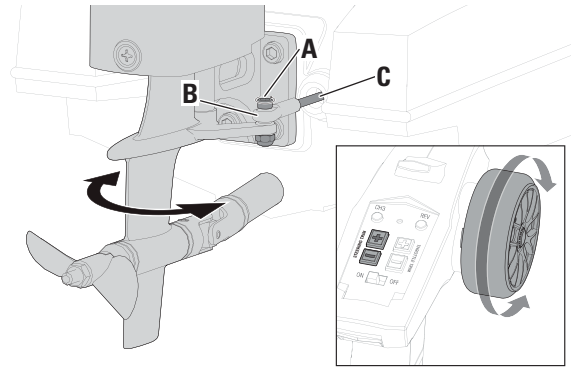
1. Loosen each setscrew (**A**) on the rudder arms using a 1.5mm hex wrench, then remove the linkages (**B**) from the rudder arms.
2. Loosen each setscrew (**C**) from the rudder pins (**D**) using a 1.5mm hex wrench.
3. Turn over the boat and lightly tap the rudder to remove the pins.
4. Assemble in reverse order.



Rudder Trim

If the boat does not go straight, adjust the ST TRIM buttons on the transmitter.

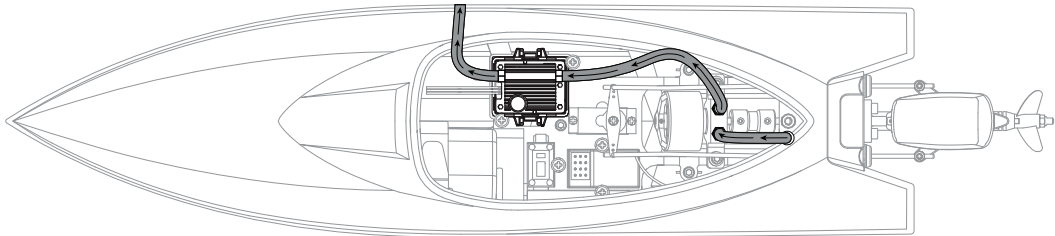
If you are using all the steering trim on your transmitter to make the boat drive straight, return the trim to neutral and mechanically center the rudder. To do this, loosen the two set screws (A) from the rudder horn (B), then adjust the linkages (C) until the rudder is properly centered.



Water Cooling System

If water does not stream out of the water outlet while the boat is moving forward, immediately stop the boat and clean any obstruction from the water cooling system.

1. Disassemble and clean the water cooling system to remove blockage and prevent overheating.
2. Replace any damaged parts.



Binding

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. **The transmitter and receiver are bound at the factory.** If you need to rebind, follow the instructions below:

1. Connect a fully charged battery to the receiver.
2. Insert a pin into the BIND port of the receiver and remove it immediately.
3. Power on the receiver. The receiver LED flashes, indicating the receiver is in bind mode.
4. Power ON the transmitter. The receiver LED goes solid.

5. Remove the pin from the BIND port of the receiver.
6. Power OFF the receiver to save the settings.
7. Power OFF the transmitter.

You must rebind when:

- When you want different failsafe positions (e.g. when throttle or steering reverse has been changed).
- Binding the receiver to a different transmitter.

NOTICE: Do not attempt to bind the transmitter and receiver if there are other compatible transmitters in bind mode within 400 feet. Doing so may result in unexpected binding.

ESC Programming with the Transmitter

1. Pull and hold the Throttle Trigger to full throttle and turn the ESC on.
2. After 2 seconds a “-B-B” will sound. Wait another 5 seconds and the ESC will give a rising tone to indicate you have entered **Programming Mode**.
3. After entering Programming Mode, you will hear 4 tones in a loop indicating **Programmable Items**. Push the Throttle Trigger to full brake within 3 seconds after the tone sounds matching the programmable item you want to select.
4. After selecting a programmable item, you will hear several tones in a loop indicating **Programmable Values**. Pull Throttle Trigger to full throttle to select the value matching the tone. The ESC will give an alternating tone to indicate the item is selected.
5. Keep the trigger in Full Throttle to return to **Step 3** and continue item selection. Move the throttle stick to full brake position within 2 seconds to exit the Program Mode.

The black-shaded setting is the factory default

Programmable Items	Programmable Value				-B Single Beep B— Long Beep			
	-B	-B-B	-B-B-B	-B-B-B-B	B—	B— -B	B— -B-B	B— -B-B-B
Running Mode -B	Forward Only	Forward/ Backward						
Li-Po Cells -B-B	Auto Calc.	2s	3s	4s	5s	6s		
Low Voltage Cutoff -B-B-B	None	2.8V/Cell	3.0V/Cell	3.2V/Cell	3.4V/Cell			
Timing -B-B-B-B	0.00°	3.75°	7.50°	11.25°	15.00°	18.75°	22.50°	26.25°

Troubleshooting Guide

Problem	Possible Cause	Solution
Boat will not respond to throttle but responds to other controls	Throttle channel is reversed	Reverse throttle channel on transmitter
Extra noise or extra vibration	Damaged propeller, shaft or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
Reduced runtime or boat underpowered	Boat battery charge is low	Completely recharge battery
	Boat battery is damaged	Replace boat battery and follow battery instructions
	Blocking or friction on shaft or propeller	Disassemble, lubricate and correctly align parts
	Boat conditions may be too cold	Make sure the battery is warm (above 10° C [50° F]) before use
	Battery capacity may be too low for conditions	Replace battery or use a larger capacity battery
	Drive dog is too near the stuffing tube	Loosen drive shaft side of the motor coupling and move drive shaft small amount back
	Too little lubrication on drive shaft	Fully lubricate drive shaft
Boat will not Bind (during binding) to transmitter	Vegetation or other obstacles block the rudder or propeller	Remove vegetation or obstacles from rudder or propeller
	Transmitter is too near boat during binding process	Move powered transmitter a few feet from boat, disconnect and reconnect battery to boat
	Boat or transmitter is too close to large metal object, wireless source or another transmitter	Move the boat and transmitter to another location and attempt binding again
	Another compatible transmitter is powered on within range of the receiver	Power off all compatible transmitters except the one you are trying to bind
	Boat battery/Transmitter battery charge is too low	Replace/recharge batteries
Boat will not connect (after binding) to transmitter	ESC switch is off	Power on ESC switch
	Transmitter is too near boat during connecting process	Move powered transmitter a few feet from boat, disconnect and reconnect battery to boat
	Boat or transmitter is too close to large metal object, wireless source or another transmitter	Move boat or transmitter to another location and attempt to connect again
	Boat battery/transmitter battery charge is too low	Replace/recharge batteries
Boat tends to dive in the water or takes on water	ESC switch is off	Power on ESC switch
	The boat hull is not completely closed	Dry out the boat and ensure the hatch is fully closed on the hull before returning the boat to the water
	Center of gravity is too far forward	Move batteries back in the hull
Boat tends to turn one direction	Trim tabs are angled incorrectly	Angle each trim tab up a small amount to lift the bow or down a small amount to lower the bow
	Rudder or rudder trim is not centered	Repair rudder or adjust rudder and rudder trim for straight running when control is at neutral
Rudder does not move	Vertical fins are angled incorrectly	Adjust the right or left fin angle for straight running when control is at neutral
	Rudder, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Steering servo wire is damaged or connections are loose	Do a check of steering servo wires and connections, connect or replace as needed
	Transmitter is not bound correctly	Re-bind
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
Controls reversed	ESC switch is off	Power on ESC switch
	Transmitter settings are reversed	Do the Control Direction Test and adjust controls on transmitter appropriately
Motor overheats	Blocked water cooler tubes	Clean or replace water tubes
Motor power pulses then motor loses power	Weather conditions might be too cold	Postpone until weather is warmer
	Battery is old, worn out or damaged	Replace battery

Limited Warranty

What this Warranty Covers

Horizon Hobby, LLC, (Horizon) warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship for a period of 2 years from the date of purchase.

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations or (vii) use that violates any applicable laws, rules, or regulations. OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. 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 the Product, purchaser is advised to return the 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). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES

Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product

has been started, you must contact your local distributor or 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 visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. 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. An Online Service Request is available at http://www.horizonhobby.com/content/service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship Li-Po batteries to Horizon. If you have any issue with a Li-Po battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service

Should your service not be covered by warranty, service 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 service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

10/15

Warranty and Service Contact Information

Country of Purchase	Horizon Hobby	Contact Information	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	2904 Research Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 877-504-0233	
	Sales	websales@horizonhobby.com 888-338-4639	
European Union	Horizon Technischer Service	service@horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

FCC Information

FCC ID: 2ARE7-91803

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.

Supplier's Declaration of Conformity

FRB Miss Geico and Lucas Oil 17' Power Boat Racer Deep V with SMART Charger and Battery (PRB08044T1 / PRB08044T2)

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Horizon Hobby, LLC
2904 Research Rd.
Champaign, IL 61822
Email: compliance@horizonhobby.com
Web: HorizonHobby.com

IC Information

IC: 20264-91803RX46

CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Compliance Information for the European Union



EU Compliance Statement: Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED and EMC Directives.

A copy of the EU Declaration of Conformity is available online at: <http://www.horizonhobby.com/content/support-render-compliance>.



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 / Ersatzteile / Pièces de rechange / Pezzi di ricambio

Part #	English	Deutsch	Français	Italiano
DYN3915	Mini Servo, Waterproof	Dynamite Mini Servo Wassergeschützt	Mini-servo étanche	Servo mini, impermeabile
DYNN3860	30A BL Marine ESC 2-3S	30 A bürstenloser Boots-Geschwindigkeitsregler 2-3S	Variateur ESC marin 30 A BL 2-3 S	ESC marino 30A BL 2-3S
DYNN3949	8P 2850kv 28.5 x 31 Outrunner	8P 2850 kV 28,5 x 31 Außenläufer	Moteur à cage tournante 8P 2 850 kv 28,5 x 31	8P 2850 Kv 28.5 x 31 Outrunner
HRZ00006	2.4GHz WP 3-CH Receiver	2,4 GHz WP Empfänger mit 3 Kanälen	Récepteur 3 canaux 2,4 GHz WP	Ricevente 2,4 GHz impermeabile 3 CH
HRZ00001	2.4GHz 3-CH Surface Transmitter	2,4 GHz Oberflächensender mit 3 Kanälen	Émetteur de surface 3 canaux 2,4 GHz	Trasmittente di superficie 2,4 GHz 3 CH
PRB281089	Hull: 17 Power Boat Racer	Rumpf: Rennboot Racer 431,8 (17)	Coque : Bateau de course électrique de 43 cm	Scafo: Power Boat Racer 43 cm
PRB281090	Canopy: 17 Power Boat Racer	Verdeck: Rennboot Racer 431,8 (17)	Verrière : Bateau de course électrique de 43 cm	Capottina: Power Boat Racer 43 cm
PRB281091	Struder and Mount: 17 Power Boat Racer	Strebe/Ruder und Halterung: Rennboot Racer 431,8 (17)	Gouvernail « Struder » et support : Bateau de course électrique de 43 cm	Struder e supporto: Power Boat Racer 43 cm
PRB282068	Motor Coupler: 17 Power Boat Racer	Motorkupplung: Rennboot Racer 431,8 (17)	Coupleur du moteur : Bateau de course électrique de 43 cm	Accoppiamento motore: Power Boat Racer 43 cm
PRB282069	Drive Shafts: 17 Power Boat Racer	Antriebswellen: Rennboot Racer 431,8 (17)	Arbres de transmission : Bateau de course électrique de 43 cm	Alberi di trasmissione: Power Boat Racer 43 cm
PRB282070	Universal Coupler: 17 Power Boat Racer	Universalkupplung: Rennboot Racer 431,8 (17)	Coupleur universel : Bateau de course électrique de 43 cm	Accoppiamento universale: Power Boat Racer 43 cm
PRB282071	Stuffing Tube: 17 Power Boat Racer	Füllrohr: Rennboot Racer 431,8 (17)	Tube de remplissage : Bateau de course électrique de 43 cm	Tubo ingrassatore: Power Boat Racer 43 cm
PRB282072	Motor Mount: 17 Power Boat Racer	Motorhalterung: Rennboot Racer 431,8 (17)	Support du moteur : Bateau de course électrique de 43 cm	Supporto motore: Power Boat Racer 43 cm
SPMX13003S30	1300mah 3S 11.1V Smart 30C, IC3	1300 mAh 3S 11,1 V Smart 30C; IC3	1 300 mAh 3S 11,1 V Smart 30 C ; IC3	1300 mAh 3S 11,1 V Smart 30C, IC3

Optional Parts / Diverse Teile / Pièces optionnelles / Pezzi opzionali

Part #	English	Deutsch	Français	Italiano
DYN2819	Hex Wrench 1.5mm, 2mm, 2.5mm, 3mm	Inbuschlüsselsatz 1.5-4mm 5Stk metrisch	Clés BTR 1.5mm, 2mm, 2.5mm et 3mm	Chiavetta esagonale 1.5mm, 2mm, 2.5mm, 3mm
DYN2828	Phillips screwdriver #1	Schraubenzieher Kreuz #1	Tournevis cruciforme #1	Cacciavite Phillips #1
DYN2950	8-in-1 Hex Wrench Kit	8-in-1 Sechskantschlüsselsatz	Kit de clés hexagonales 8-en-1	Kit chiave esagonale 8 in 1
DYN4401	GPS Speed Meter	GPS-Tachometer	Indicateur de vitesse GPS	Tachimetro GPS
DYNE4200	Grease Gun with Marine Grease (5 oz.)	Fettpresse mit Marine Grease (140 g)	Pistolet graisseur avec graisse marine (140 g)	Ingrassatore a pressione con grasso marino (140 g)
DYNE4201	Marine Grease 5 oz.	Proboat Marine Fett m. Applikator 5 oz	Graisse marine	Grasso marino
DYNN0102	Waterproof Tape	Dynamite transparentes Marineklebeband (18m)	Adhésif transparent résistant à l'eau	Nastro impermeabile
DYNT0502	Start Up Tool Set: Pro Boat	Dynamite Startup Werkzeugset: Pro Boat	Pro Boat - Set d'outils de démarrage	Start Up Tool Set: Pro Boat
PRB0314	Antenna Tube: MG17, IM17	Antennenrohr: MG17, IM17	Tube d'antenne : MG17, IM17	Tubo antenna: MG17, IM17
SPMXC1000	Smart S1200 DC Charger, 1 x 200W	Smart S1200 Gleichstrom-Ladegerät, 1 x 200 W	Chargeur CC Smart S1200, 1 x 200 W	Caricabatterie Smart S1200 DC, 1x200 W
SPMXC1010	Smart S2100 AC Charger, 2x100W	Smart S2100 Wechselstrom-Ladegerät, 2x100 W	Chargeur CA Smart S2100, 2 x 100 W	Caricabatterie Smart S2100 AC, 2x100 W
SPMXC10201	30A 540W Power Supply	30 A 540 W Netzteil	Alimentation électrique 30 A 540 W	Alimentatore 30 A 540 W
SPMXCA304	IC3 Device Charge Lead 6", 13 AW	IC3 Gerät Ladeleitung 152,4 mm (6"), 13 AW	Câble de charge de l'appareil IC3 de 152,4 mm, 13 AW	Cavo di carica dispositivo IC3, 155 mm, 13 AW
XBC100	Smart Checker	Smart Prüfer	Contrôleur SMART	Smart Checker

60232 Created 08/2019
©2019 Horizon Hobby, LLC.

Pro Boat, the Pro Boat logo, the Smart Technology logo, Dynamite, IC3, Prophet, EC3, STX2 and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachmann Industries, Inc. The Miss Geico and Lucas Oil names and logos are used with permission. All other trademarks, service marks and logos are property of their respective owners. Patents pending.

PRB08044