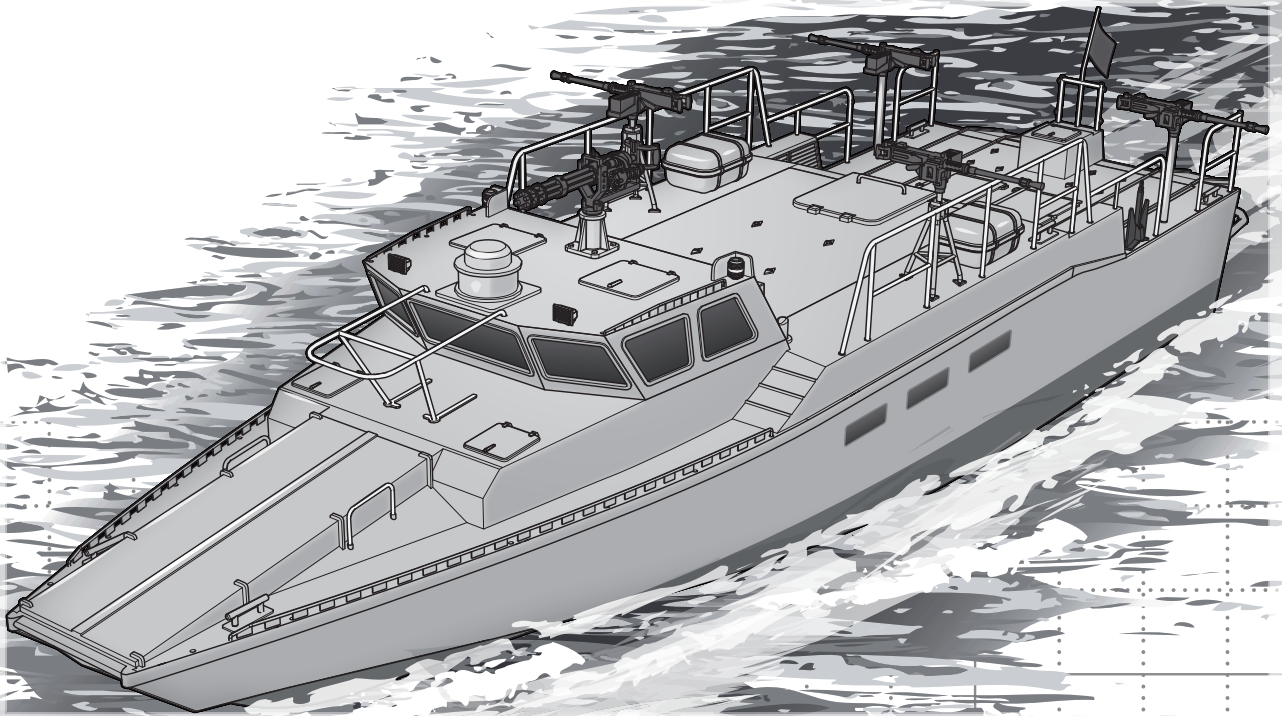


# Riverine

22-INCH PATROL BOAT RTR

*PRB08035*

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



**Battery and Charger Not Included**

## 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 <http://www.horizonhobby.com> and click on the support 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 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. 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.

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

## Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating 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 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 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 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. Caution should be taken 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 when lightning is 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 each use. Operating your boat in salt water is at the sole discretion of the modeler.

## Wet Conditions Maintenance

- Drain any water that has collected in the hull by removing the 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 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 all moving parts. Dry and lubricate parts after every 30 minutes of operation or if the boat becomes submerged.

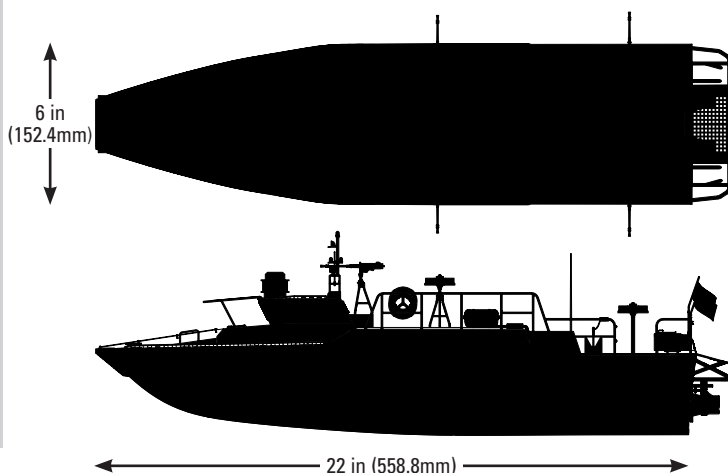
**NOTICE:** Never use a pressure washer to clean your boat.

- 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.
- Let the boat air dry before you store it. Water (and oil) may continue to drip for a few hours.

## Specifications

<b>Length</b>	22 in (558.8mm)
<b>Beam</b>	6 in (152.4mm)
<b>Transmitter</b>	STX2® 2CH (SPMSTX200)
<b>Receiver</b>	SRX200 2CH (SPMSRX200)
<b>Hull Material</b>	ABS
<b>Motor</b>	Dynamite® Tazer™ 390 22T (DYNS1210)
<b>ESC</b>	60A Marine ESC, WP (DYNAM2210)
<b>Servo</b>	3KG, Plastic Gear Servo, WP, 23T (SPMS603)

**Tip:** 4 AA batteries (sold separately) are required to operate the boat and transmitter.



## Table of Contents

Water-Resistant Boat with Waterproof Electronics .....	2
General Precautions.....	3
Wet Conditions Maintenance .....	3
Specifications .....	3
Product Inspection.....	3
Box Contents.....	4
Recommended Tools and Materials .....	4
Boat Stand Assembly .....	4
Battery and Charger .....	4
Gun Accessory Installation .....	4
Low Voltage Cutoff (LVC) .....	5
Battery Installation.....	5
Transmitter Controls .....	6
Installing Transmitter Batteries .....	6
Binding.....	7
Failsafe.....	7
Getting Started .....	7
Range Check .....	7
Testing Your Boat in the Water .....	8
Boating Tips .....	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.

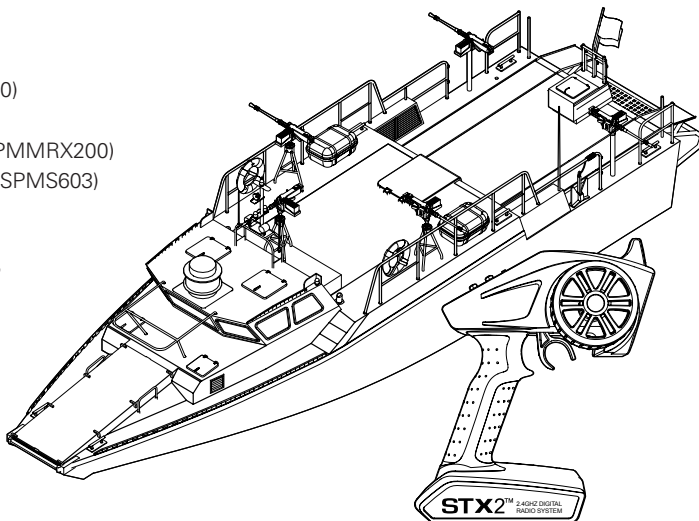
Motor Care .....	8
When You Are Finished .....	9
After Boating and Maintenance.....	9
Troubleshooting Guide.....	11
Limited Warranty .....	12
Warranty and Service Contact Information .....	13
FCC Information .....	13
IC Information.....	13
Compliance Information for the European Union.....	13
Instructions for Disposal of WEEE .....	13
Replacement Parts .....	50
Optional Parts .....	50

## Box Contents

- Pro Boat® Riverine 22-Inch Patrol Boat RTR
- Dynamite® 60A Marine ESC, Waterproof (DYNM2210)
- Dynamite® Tazer 390 Motor, 22T (DYNS1210)
- Spektrum™ Marine 2-CH 2.4 GHz FHSS Receiver (SPMMRX200)
- Spektrum™ 3KG Waterproof Plastic Gear Servo, 23T (SPMS603)
- Spektrum™ STX2 2-CH Radio (SPMSTX200)

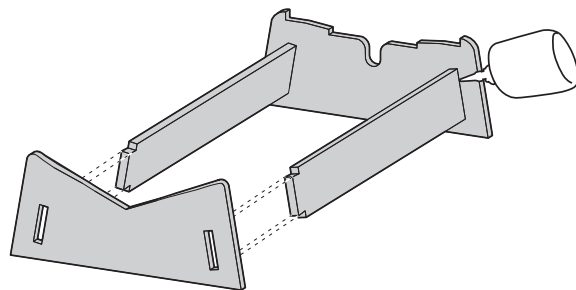
## Recommended Tools and Materials

- Needle nose pliers
- Paper towel
- Rubbing alcohol
- Phillips screwdriver: #1
- Hex wrench: 1.5mm, 2mm, 2.5mm, 3mm
- Clear tape (DYNM0102)
- Pro Boat® Marine Grease and Gun
- Hook and Loop Tape Set, WP 4pcs



## Boat Stand Assembly

1. Attach the side stand pieces to the end pieces as shown.
2. Use medium CA or epoxy adhesive to secure the side stand to the ends.
3. Allow the adhesive to dry before placing your boat on the stand.



## Battery and Charger

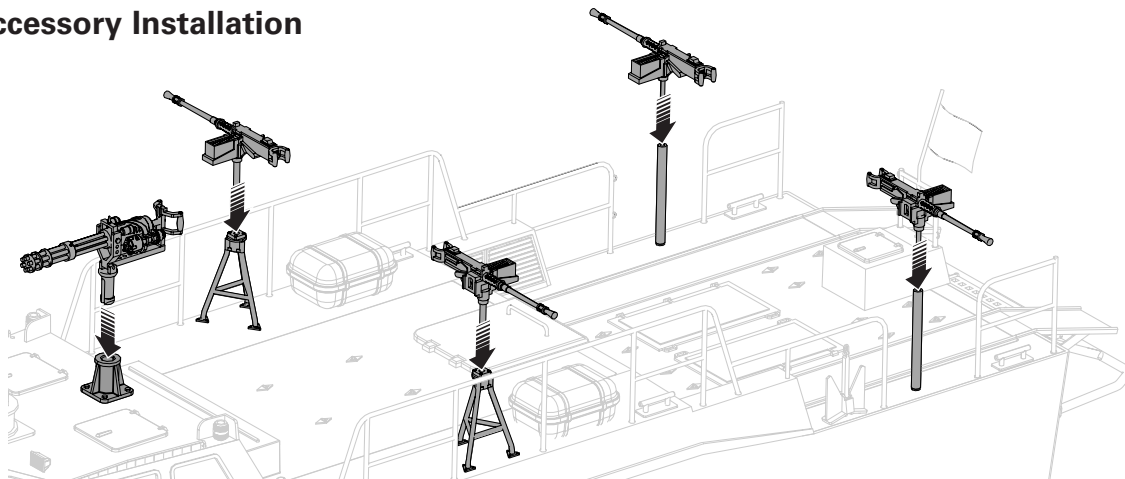
Choose a charger designed to charge the recommended Dynamite® Reaction® 7.4V 4000mAh 2S 50C Li-Po battery with EC3™ connectors (**DYNB3800EC**) or the Dynamite® Speedpack® 7.2V 3300mAh NiMH 6-Cell battery with EC3™ connectors (**DYN1070EC**).

We recommend the Dynamite® Prophet™ Sport LiPo 35W AC Charger (**DYNC2005CA**) or the Dynamite® Prophet™ Sport NiMH 35W AC Charger (**DYNC2000CA**).

Refer to your charger manual for charging instructions and safety information.

**NOTICE:** Never charge a battery in the boat or damage may result.

## Gun Accessory Installation



## Low Voltage Cutoff (LVC)

The factory default setting for the LVC in the ESC included with your boat is set at 3.2V per cell. Discharging a Li-Po battery below 3V per cell may damage your 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.

The boat drastically slows or stops completely once LVC is activated. Releasing the throttle and reapplying it will provide a limited amount of power to safely return the boat to shore. If you are far from shore, release the throttle every time the motor stops and then reapply throttle to continue the trip back to shore. Repeated use after LVC is activated will damage the batteries.

Once LVC has been activated, the ESC status light will flash red continuously, indicating that the ESC is in LVC mode.

**NOTICE:** Repeated operation to LVC will damage the battery.

LVC can activate prematurely if you use (1) low C-rated batteries or (2) old, worn, and/or weak batteries.

The average run time—using the recommended batteries (**DYNB3800EC** or **DYN1070EC**)—is between 8–12 minutes at non-stop, open throttle. Limited run time may indicate worn or weak batteries.

**Tip:** If you've installed freshly charged batteries and LVC activates within the first minute of operation, replace your worn or weak batteries with the recommended batteries.

**Tip:** Monitor your boat battery's voltage before and after boating by using a Li-Po Cell Voltage Checker (DYN4071, sold separately).

Disconnect and remove the Li-Po battery from the boat after use to prevent trickle discharge. Charge your Li-Po battery to 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.

## Battery Installation

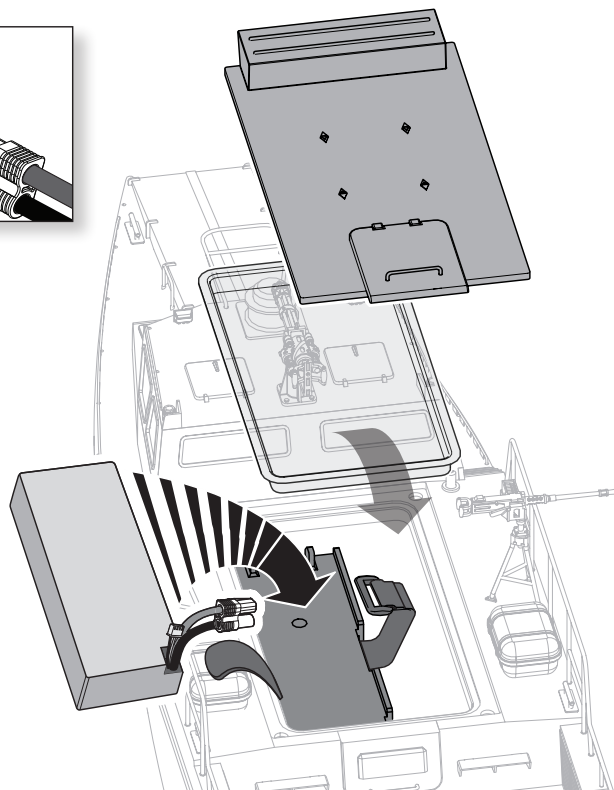
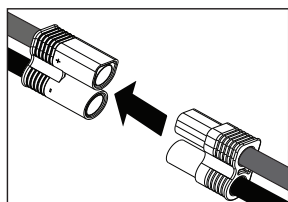
The battery hatch, located on the upper deck by the bridge, provides access to the battery, servo, ESC and receiver.

1. Remove the battery hatch using the scale handle.
2. Remove the clear hatch cover.
3. Install the battery, and secure it using the hook and loop straps.
4. Connect the battery EC3™ connectors to the ESC.
5. Reinsert the plastic electronic protector.

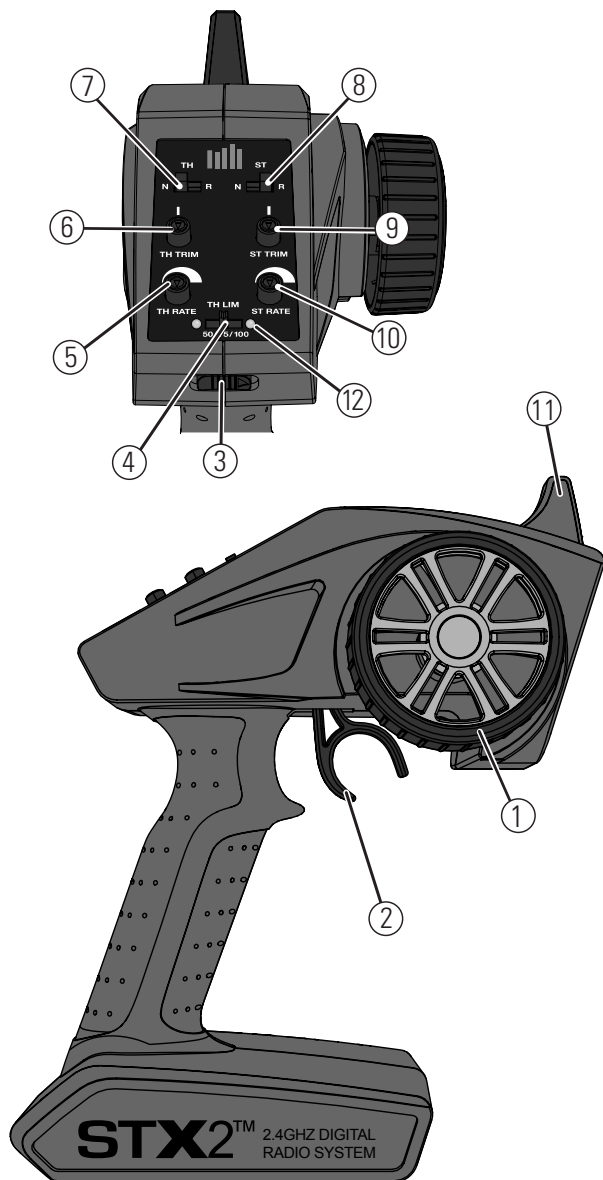
**Tip:** Apply waterproof tape around the clear hatch to keep water out of the hull.

6. Reattach the battery hatch.
7. Follow the **Getting Started** instructions to power on your boat. Install all boat hatches before operating it in water.

**IMPORTANT:** Always remove the battery from the boat for transport and storage.

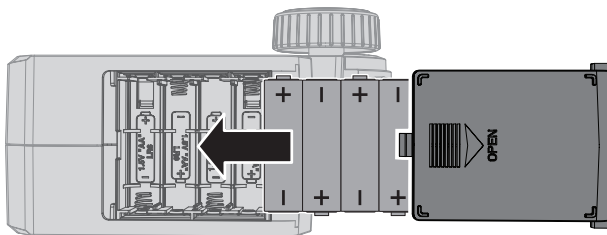


## Transmitter Controls



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. **Throttle Limiting Switch** Adjusts the throttle limit from 50%, 75%, and 100%
5. **TH Rate** Adjusts the end point of the throttle
6. **TH Trim** Adjusts the throttle neutral point
7. **TH REV** Reverses the function of the speed control when pulled back or pushed forward
8. **ST REV** Reverses the function of the steering when the wheel is turned left or right
9. **ST Trim** Adjusts the steering center point
10. **ST Rate** Adjusts the end point of the steering
11. **Antenna** Transmits the signal to the model
12. **Indicator Lights**
  - **Solid red lights**—Indicates radio connectivity and adequate battery power
  - **Flashing red lights**—Indicates the battery voltage is critically low. Replace batteries

## Installing Transmitter Batteries



This transmitter requires 4 AA batteries.

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

**CAUTION:** Never remove the transmitter batteries while the model is powered ON. Loss of model control, damage, or injury may occur.

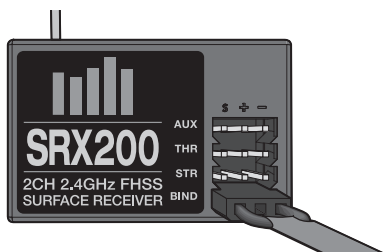
**CAUTION:** If using rechargeable batteries, charge only rechargeable batteries. Charging non-rechargeable batteries may cause the batteries to burst, resulting in injury to persons and/or damage to property.

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



## Binding

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. The STX2® transmitter and SPMSRX200 receiver are bound at the factory. If you need to rebind, follow the instructions below.



1. Insert the Bind Plug in the BIND port of the receiver.
2. Connect a fully charged battery to the receiver.
3. Power on the receiver. The red LED flashes, indicating the receiver is in bind mode.
4. Center the **ST TRIM** and **TH TRIM** dials on the transmitter.
5. Turn the Steering Wheel to Full Right. Power ON the transmitter while holding the Steering Wheel to the Right.
6. Release the Steering Wheel when the receiver LED stops flashing.

7. Remove the Bind Plug, then power OFF the receiver to save the settings.
8. Power OFF the transmitter.
9. Remove the Bind Plug and store it in a convenient place.

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.

## Failsafe

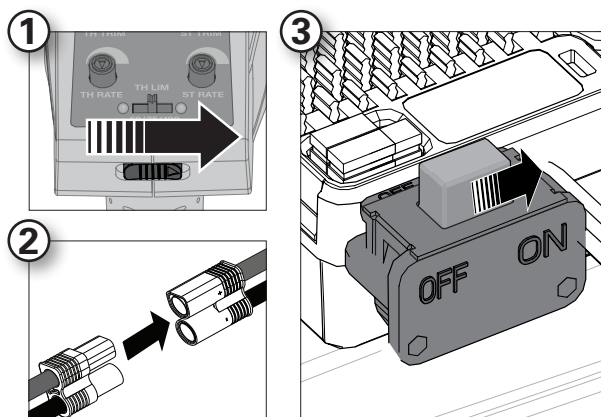
In the unlikely event that the radio connection is lost during use, the receiver will drive the servos to their pre-programmed failsafe positions (normally no throttle and straight steering).

If the receiver is powered on before powering on the transmitter, the receiver enters Failsafe mode. When the transmitter is powered on, normal control is resumed.

**IMPORTANT:** Failsafe activates only in the event that signal is lost from the transmitter. Failsafe will NOT activate in the event that receiver battery power decreases below the recommended minimums or power to the receiver is lost.

## Getting Started

1. Power on the transmitter.
2. Connect the battery to the EC3™ connector on the ESC.
3. Power on the ESC switch. The ESC arming tone will sound.
4. Test the transmitter's control of the boat with the boat on the display stand.

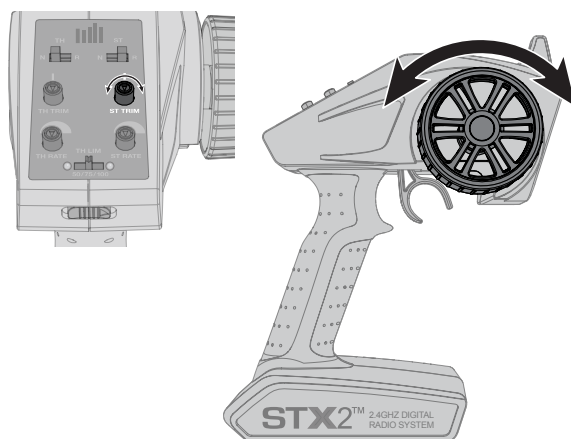


## Range Check

**IMPORTANT:** Perform a range 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 radio system powered on and connected, walk away from your boat 90 feet (32 m).
2. Have an assistant remain with the boat to check for proper control movement of the steering mechanism in response to your transmitter input.
3. If everything appears to be operating correctly, prepare to operate the boat in the water.



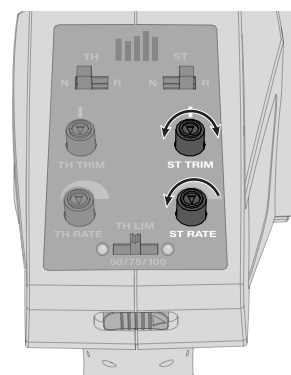
## Testing Your Boat in the Water

**Tip:** Before placing your boat in the water, secure the canopy and access hatch on the hull. Apply clear tape (DYNAM0102), if desired.

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. Once you are comfortable operating the boat at slow speeds, it is safe to operate the boat farther from the shore.
3. If the boat does not go straight, adjust the **ST TRIM** dial on the transmitter.

**NOTICE:** Ensure that the steering servo is not operating the boat's steering mechanism farther than physically possible or damage may occur to the servo and moving parts.

4. Turn down the **ST RATE** on the transmitter if you want to reduce steering throw while you get used to your model. Jet boats are prone to spinning out when too much steering is applied at full throttle.
5. Bring the boat back to shore when you notice the boat starting to lose speed.
6. Power off the ESC and disconnect the battery.



7. Allow the motors, ESC and battery to cool before charging the battery or operating the boat again.

**NOTICE:** Do not turn off the transmitter first or the receiver may pick up stray signals and run out of control.

**IMPORTANT:** Inspect the moving parts for signs of wear.

## 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.

Maximum speeds are only achieved when the water conditions are smooth and there is little wind. A sharp turn, wind or waves can turn over a boat when it is moving quickly. Always pilot your boat for the wind and water conditions so that the boat does not turn over.

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

### Avoid boating near:

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

## Motor Care

- Prolong motor life by preventing overheating conditions. Undue motor wear results from frequent turns, stops and starts, pushing objects, boating in rough water or vegetation and boating continuously at high speed.
- Over-temperature protection is installed on the ESC to prevent circuit damage but cannot protect the motor from pushing against heavy resistance.

Unlike rudder steerable boats, jet boats must have power applied to the motors in order for the boat to turn. When making turns, decrease the throttle to reduce the probability of flipping the boat over. The boat will not steer when coasting off power.

Never operate your boat in less than 3 inches (7.6 cm) of water.

**NOTICE:** Running your boat in shallow water increases the chance of debris entering the jet pump. Verify that the jet pumps are free of debris, as operating the boat with a blocked jet drive for a prolonged period will damage the motor and ESC.

If you need to retrieve your boat from the water, use fishing equipment or another boat.



**CAUTION:** Never operate your boat in extreme temperatures or turbulent water.



**CAUTION:** Never attempt to retrieve a downed boat by swimming to retrieve it.

- Lubrication is important to prevent motor damage. If your motors get wet, lubricate the bushings supporting the motor shaft with light duty machine oil. Failure to do so can cause the motor shaft to seize against the motor bushings.



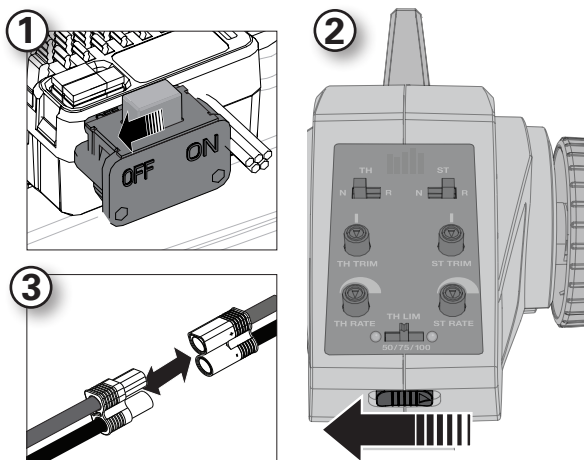
**WARNING:** Do not touch the motors until they have had time to cool. They can become extremely hot when in use.



## When You Are Finished

1. Power off the receiver.
2. Power off the transmitter.
3. Disconnect and remove the battery from the boat.

**Tip:** Always remove the canopies before storage or moisture may allow mold and mildew to grow in the boat. If you wish to display your boat, you can reinstall the canopies once it is dry.



## After Boating and Maintenance

- Repair any damage or wear to the boat
- Lubricate the driveshaft using Pro Boat Marine Grease (PRB0100)
- Make note of lessons learned from the trimming of your boat, including water and wind conditions

**Tip:** The hook and loop strips in the boat retain water. To dry them, press on them with a dry cloth.

**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.

## ESC Calibration Procedure

Ensure proper ESC function by calibrating the ESC to your transmitter inputs.

1. Power OFF the ESC.
2. Ensure your transmitter is powered ON, the throttle is not reversed, the throttle trim is neutral and the throttle travel range is at 100%. Disable any special functions such as ABS, etc.

3. Keep the throttle at neutral and power ON the ESC.
4. The ESC automatically calibrates the throttle range after 3 seconds.
5. One long beep will sound when the ESC is ready to run.

## ESC Programming Procedure

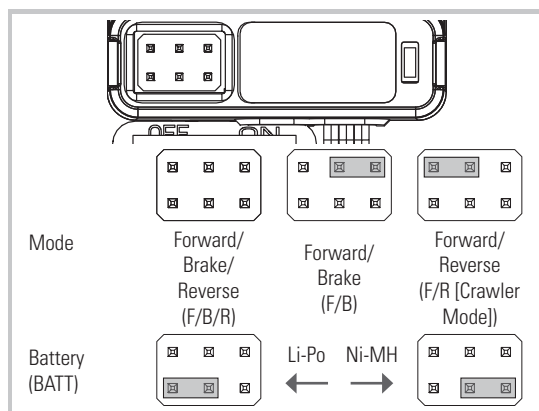
The ESC comes with two jumpers pre-installed in the MODE: F/B (forward/brake) and BATT: Li-Po configurations.

To change the mode to F/B/R (forward/brake/reverse) or F/R (forward/reverse) or change the battery type to Ni-MH:

1. Power OFF the ESC.
2. Disconnect the jumper from the default port and connect it to the desired port.
3. Power ON the ESC.

If the jumpers are lost or not installed, the ESC will default to MODE: F/B/R and BATT: Li-Po.

**NOTICE:** Do not connect bind plugs or receiver servo leads into the ESC programming port. Doing so may damage the ESC and/or components.



## Drivetrain Lubrication

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

Lubricating the driveshaft 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.

1. Use a #1 Phillips screwdriver to remove the 4 screws from the **LEFT** side jet pump nozzle.
2. Hold the jet pump nozzle at the base and gently pull it away from the hull to unhook it from the steering link.
3. Use a #1 Phillips screwdriver to remove the 4 screws from the **RIGHT** side jet pump nozzle.

**Tip:** When removing the right side jet pump nozzle, move the servo arm so that it provides slack to the steering link and allows you to pull the nozzle away from the boat. You do not need to completely remove the steering links from the right side jet pump nozzle to service the propeller shaft.

4. Remove the rear hatch.
5. Remove the clear cover found under the rear hatch.
6. Use a 2mm driver to remove the grub screw from the shaft side of the motor coupler. You do not need to remove the grub screw from the motor end of the coupler unless you are removing the motor or replacing the coupler.
7. Free the propeller drive shaft from the motor coupling and gently grip the shaft to pull it away from the motor coupler.
8. Lubricate the half of the propeller shaft that inserts into the motor coupling with marine grease (DYNE4200 or DYNE4201).

**Tip:** There is no need to lubricate more than half of the length of the propeller shaft because only half of the propeller shaft is contained in the jet pump housing.

**IMPORTANT:** Excessively greasing the shaft can cause grease accumulation in the jet pump housing, which can cause water-flow restriction through the jet pump. This will not cause damage to the drive system, but it may

decrease water flow through the jet pump, or attract debris causing it to stick to the grease.

9. Reinsert the propeller shafts into the pump housing using the hole on the motor coupler where the grub screws thread as a guide to find the flat spot on the drive shaft. You can also use this hole as a guide as to how far to insert the shaft into the coupler.

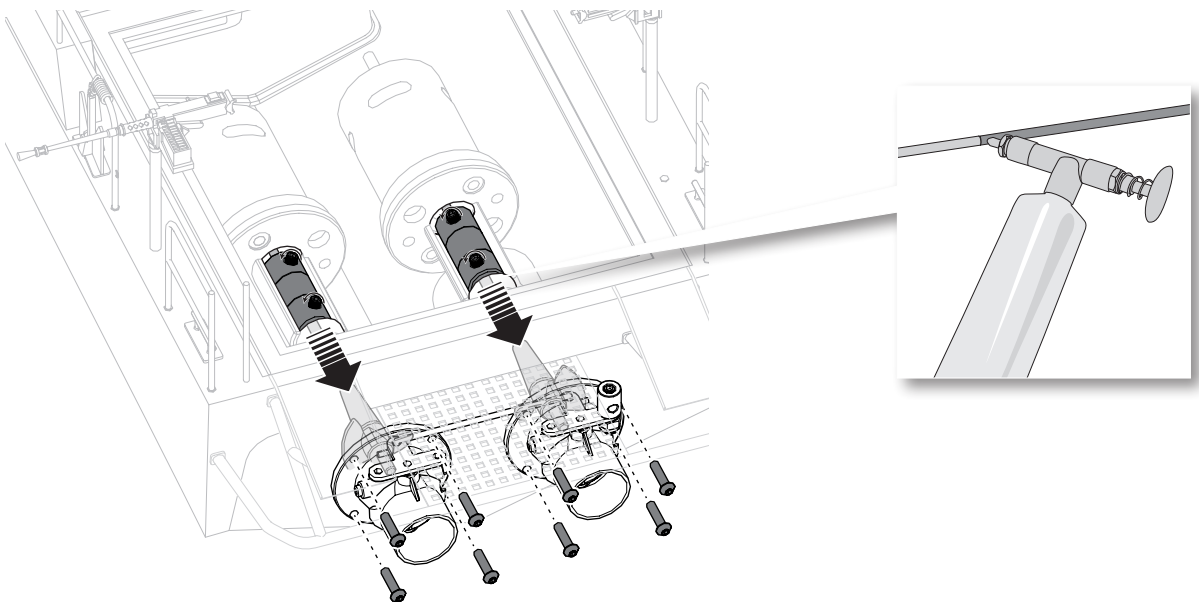
**IMPORTANT:** Ensure that the flat spot on the shaft is oriented correctly. Do not screw in the motor coupler grub screw until Step 12.

**NOTICE:** Do not push the propeller shaft too far into the coupling or it can bind against the jet pump housing, causing damage.

10. Lubricate the jet pump nozzle bushing with a small dab of marine grease. This metal bushing supports the rear end of the driveshaft.
11. Use a #1 Phillips screwdriver to carefully reinstall each jet pump nozzle.
12. Use a 2mm hex driver to install and tighten the motor coupler grub screws.
13. Power the boat and apply a small amount of throttle to ensure the shafts are inserted properly.  
**Do not touch the pump housing.**
14. Replace the clear cover and secure it to the hull with waterproof tape (DYNM0102).
15. Replace the rear hatch verifying the magnets secure the hatch to the hull.

**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. You can also use water displacement spray to help prevent the parts from corroding.

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



## 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 prop strut	Loosen motor coupling on flex shaft and move flex shaft a small amount
	Too little lubrication on driveshaft	Fully lubricate driveshaft
Boat will not Bind (during binding) to transmitter	Vegetation or other obstacles block the propeller	Remove vegetation or obstacles from 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
Boat tends to turn one direction	Center of gravity is too far forward	Move batteries back in the hull
	Debris is blocking a jet pump	Remove the debris from the jet pump
Controls reversed	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	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge boat battery or replace battery that is no longer performing
	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 at 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 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](http://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](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](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.

## 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/	1608 Interstate Dr. Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com	
		877-504-0233	
	Sales	websales@horizonhobby.com	
800-338-4639			
EU	Horizon Technischer Service	service@horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

\*For the most up-to-date customer service contact information, please visit: [www.horizonhobby.com/content/service-center-render-service-center](http://www.horizonhobby.com/content/service-center-render-service-center)

## FCC Information

**FCC ID: 2A13D-SS0001** This equipment has been tested and found to comply with the limits for 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 to 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.

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.

**NOTICE:** Modifications to this product will void the user's authority to operate this equipment.

## IC Information

**IC: 21682-SSTC9202** 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, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

**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
DYNAM2210	WP 60A Brushed Marine ESC	WP 60 A Mariner ESC	Contrôleur 60A brushed étanche	ESC a spazzole waterproof 60A
DYNS1211	Tazer 390 Motor 22T	Tazer 390 Motor 22T	Moteur Tazer 390 22T	Motore 390 Tazer 22T
PRB281071	Hull, Assembled: Riverine	Rumpf, montiert: Riverine	Coque, assemblée : Riverine	Scafo, assemblato: Riverine
PRB281072	Hatches: Riverine	Abdeckungen: Riverine	Trappes : Riverine	Sportelli: Riverine
PRB282043	Impeller shaft	Lauftradwelle	Arbre turbine	Albero elica intubata
PRB286040	Motor Coupler 2.3mm x 3mm	Motorkupplung 2,3 mm x 3 mm	Accouplement moteur 2,3mm x 3mm	Accoppiatore motore 2,3 mm x 3 mm
PRB286057	Accessories: Riverine	Abdeckungen: Riverine	Trappes : Riverine	Sportelli: Riverine
SPMSRX200	SRX200 2CH 2.4 GHz FHSS Rx	SRX200 2CH 2.4 GHz FHSS Rx	Récepteur FHSS 2,4 GHz 2 canaux SRX200	SRX200 2CH 2,4 GHz FHSS Rx
SPMSTX200	STX2 2Ch 2.4GHz FHSS Radio System	STX2 2 Kanal 2,4 GHz FHSS-Funksystem	Émetteur STX2 2 voies 2,4GHz FHSS	Sistema radio STX2 2 canali 2,4 GHz FHSS

## Optional Parts / Diverse Teile / Pièces optionnelles / Pezzi opzionali

Part #	English	Deutsch	Français	Italiano
DYN2814	Hex Driver: 1.5mm	Sechskantschlüssel: 1,5 mm	Tournevis hexagonal: 1,5mm	Chiave a brugola: 1,5 mm
DYN2815	Hex Driver: 2mm	Sechskantschlüssel: 2 mm	Tournevis hexagonal: 2mm	Chiave a brugola: 2 mm
DYN2816	Hex Driver: 2.5mm	Sechskantschlüssel: 2,5 mm	Tournevis hexagonal: 2,5mm	Chiave a brugola: 2,5 mm
DYN2819	5 pc. Metric Hex Driver Assortment	5-teiliger metrischer Sechskantschlüsselsatz	Assortiment de 5 tournevis hexagonaux métriques	Assortimento chiavi a brugola metriche, 5 pz.
DYN2828	Phillips Screwdriver: #1	Schraubendreher Kreuz #1	Tournevis cruciforme #1	Cacciavite Phillips: #1
DYN4401	GPS Speed Meter	GPS Tachometer	Tachymètre GPS	Misuratore di velocità GPS
DYN1070EC	Speedpack 3300mAh Ni-MH 6-Cell Flat: EC3	Speedpack 3300 mA Ni-MH 6 zelliger Akku: EC3	Batterie Ni-MH Speedpack 6 éléments 7,2V 3300mA avec prise EC3	Pacco batteria NiMH piatto 6 celle Speedpack 3300 mAh: EC3
DYNB3800EC	Reaction 7.4V 4000mAh 2S 50C LiPo, Hardcase: 96mm	Reaction 7.4V 4000mAh 2S 50C LiPo, Hardcase: 96mm	Batterie Reaction Li-PO 2S 7,4V 4000mA 50C, coque rigide, prise 96mm	Batteria LiPo Reaction 7,4V 4000mAh 2S 50C, Contenitore rigido: 96mm
DYNC2000CA	Prophet Sport NiMH 35W AC Charge	Prophet Sport NiMH 35 W Wechselstrom-Ladegerät	Chargeur CA NiMH 35 W Prophet Sport	Caricabatterie Prophet Sport NiMH 35W CA
DYNC2005CA	Prophet Sport LiPo 35W AC Charge	Prophet Sport LiPo 35 W Wechselstrom-Ladegerät	Chargeur CA NiMH 35 W Prophet Sport	Caricabatterie Prophet Sport NiMH 35W CA
DYNE4200	Grease Gun with Marine Grease 5 oz	Fettpresse mit Marine Grease 142 g (5 oz)	Pistolet avec graisse marine 142g	Pistola sparagraso con grasso marino, 5 oz
DYNF1055	Infrared Temp Gun w/ Laser	Infrarotmesspistole mit Laser	Détecteur infrarouge de température avec laser	Misuratore temperatura a infrarossi a pistola con puntamento laser
DYNK0300	Hook and Loop Tape Set, WP 4pcs	Klettband Set	Bande auto - agrippante adhésive, résistante à l'eau (4)	Set nastro a strappo. WP (4)
DYNM0102	Waterproof Tape	transparentes Marineklebeband	Adhésif transparent résistant à l'eau	Nastro impermeabile
DYNT0502	Start Up Tool Set: Pro Boat	Anfänger-Werkzeugsatz: Pro Boat	Pro Boat - Set d'outils de démarrage	Set attrezzi completi: Pro Boat
EFLA111	LiPo Cell Voltage Checker	LiPo Cell Voltage Checker	Contrôleur de tension pour cellule Li-Po	Verificatore di tensione celle batteria LiPo
PRB0100	Marine Grease	Proboat Marine Fett m.	Graisse marine	Grasso marino
SPMS605	9KG Servo, WP, Metal, 23T	9KG Servo, WP, Metall, 23T	Servo 9Kg à pignons métal, étanche, tête 23T	Servo 9 kg, waterproof, metallo, 23 denti



57053 Created: 06/2018

©2018 Horizon Hobby, LLC.

Pro Boat, the Pro Boat logo, Dynamite, Reaction, Speedpack, Prophet, EC3, STX2, Tazer 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. All other trademarks, service marks and logos are property of their respective owners.

**PRB08034**