



HELION

Instruction Manual

Quick Start Guide



Specifications

Hull Width	135 mm (5.3")
Hull Length	650 mm
Mast Height	950 mm (37.4")
Total Height	1365 mm (53.75")
Weight	1.35 kg (47.62 oz.)
Servos	Sail winch servo and rudder servo
Batteries	8 AA (included)

Introduction

Whether you're an experienced RC skipper or new to the hobby, the Helion Aura 650 is the sailboat for you. The Aura 650's hull is made from durable blow-molded ABS for added strength and has an attractive pre-applied trim on both the hull and sail that lets it stand out on the water like a full-size sailboat. It also comes pre-assembled and partially pre-rigged to help make it easy to get on the water. Plus, the Aura is the ideal size for sailing on nearly any body of water and small enough to transport back and forth in either the back seat or trunk of your car.

The Aura 650 is a RTR boat, so everything you need to get started is included in the box - including a 2.4GHz radio system, a 17 gram "drum style" sail winch servo, and rip-stop nylon sails that provide durability and great performance. Even the 8 AA batteries (4 for the transmitter and 4 to power the servos) that you need to operate the boat are included so you won't have long to wait before you're tacking your new Aura 650 across a local pond or lake!

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.

- Always keep a safe distance 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 follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always avoid exposing the electronic parts of this model to water. Moisture causes damage to electronics.
- Never operate your model with low transmitter batteries.
- Always keep your model in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while vehicle is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.

Distributed and Serviced by:

Distributed in the US by:
Firelands Customer Service/Product Support
1133 Libra Drive, Lincoln, NE 68512
www.firelandsgroup.com
1-800-205-6773
customerservice@firelandsgroup.com

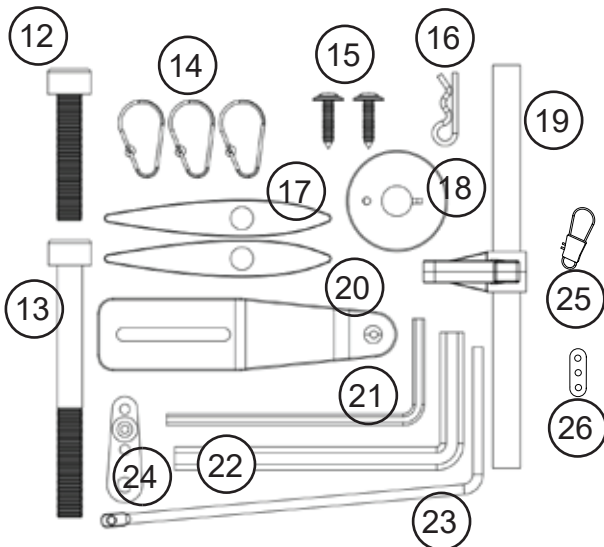
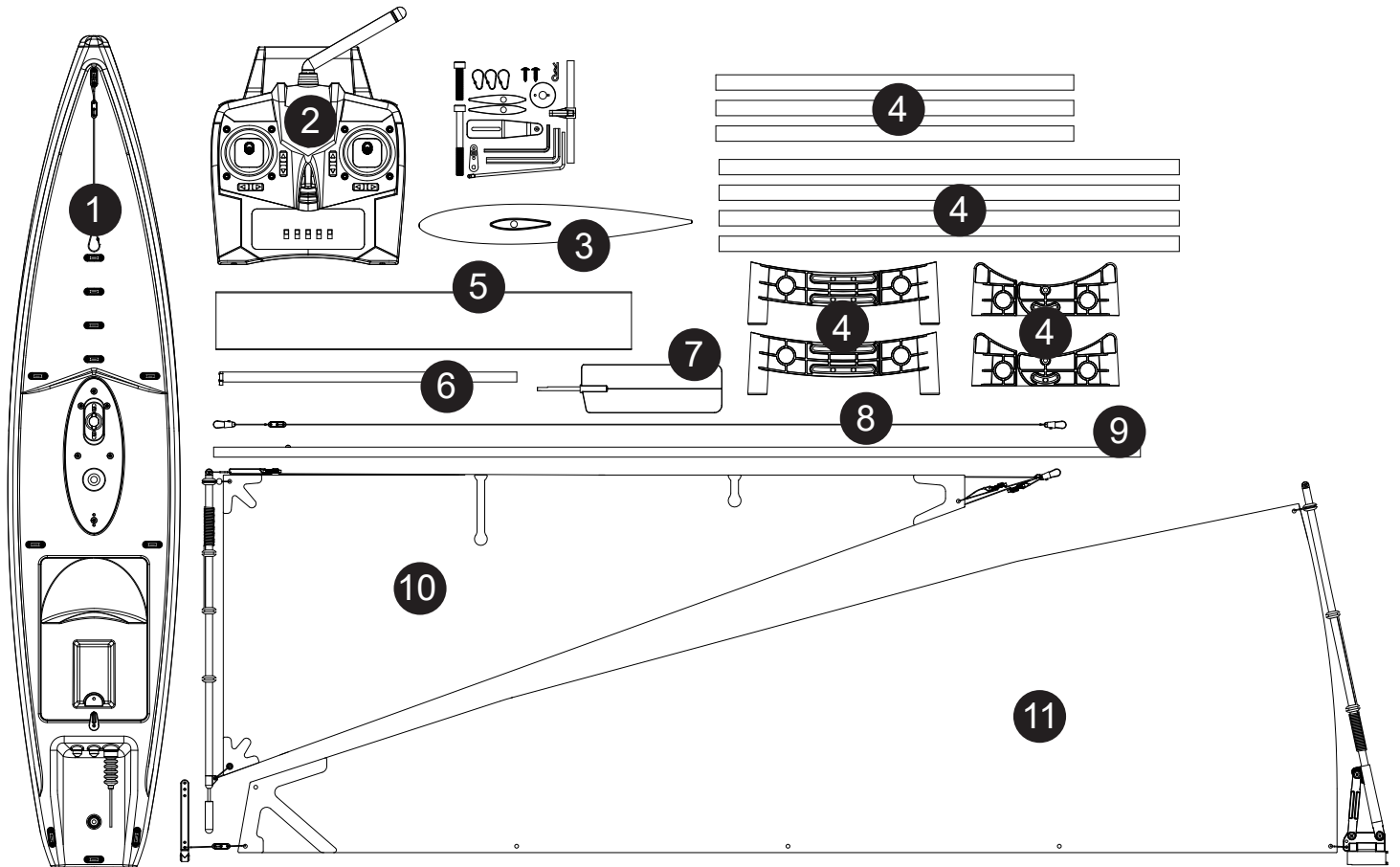
Distributed in the UK by:
J Perkins Distribution Ltd,
Lenham,
Kent, UK
ME17 2DL
www.jperkins.com

Distributed in Australia by:
Model Engines (Aust.) Pty. Ltd.,
Unit 1, 158-168 Browns Road,
Noble Park,
Victoria,
3174,
Australia.
www.modelengines.com.au
Ph (03) 8793 5555
warranties@modelengines.com.au

 
MADE IN CHINA



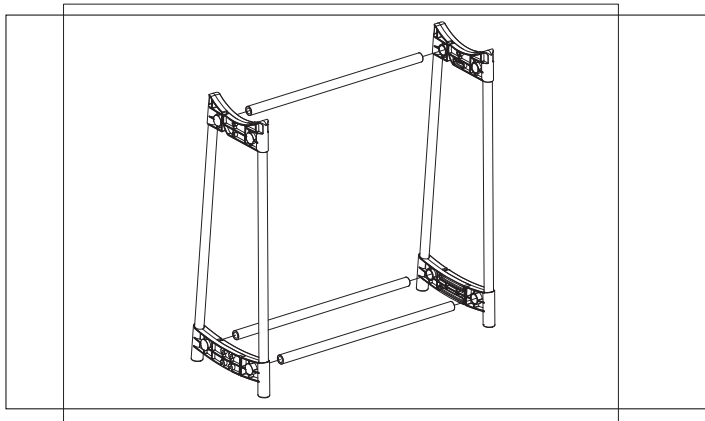
Box Contents



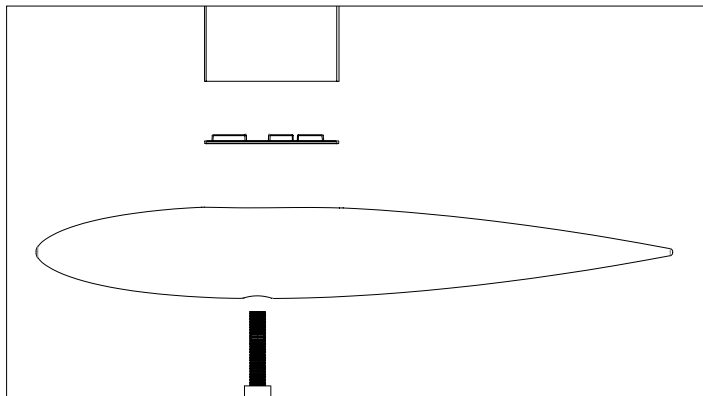
1. Hull
2. Transmitter
3. Ballast
4. Display Base
5. Keel
6. Short Mast
7. Rudder
8. Backstay Rigging
9. Long Mast
10. Jib Sail w/Boom
11. Main Sail w/Boom

12. HM5x25mm Screw
13. HM5x50mm Screw
14. Luff Rings (3)
15. PWA 2x10x8mm (2)
16. Clip (Rudder)
17. Rubber Gaskets (2)
18. Dyneema Cord
19. Forestay Fitting
20. Cord Holder
21. H2.0mm Allen Key
22. H4.0mm Allen Key
23. Metal Backstay Crane
24. Rudder Arm
25. Clevises (pre-installed)
26. Bowsies (pre-installed)

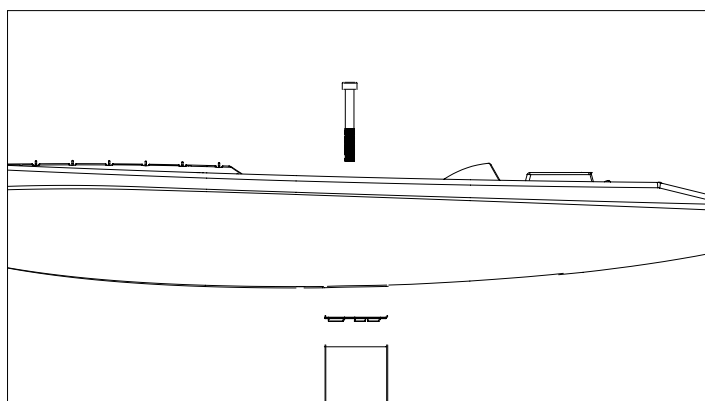
Installation and Rigging Guide



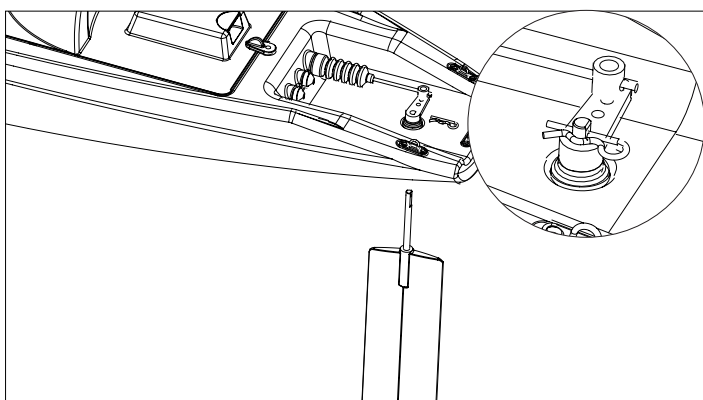
1. Setup the display base as shown in picture. Insert the tubes into the sockets, no gluing is required.



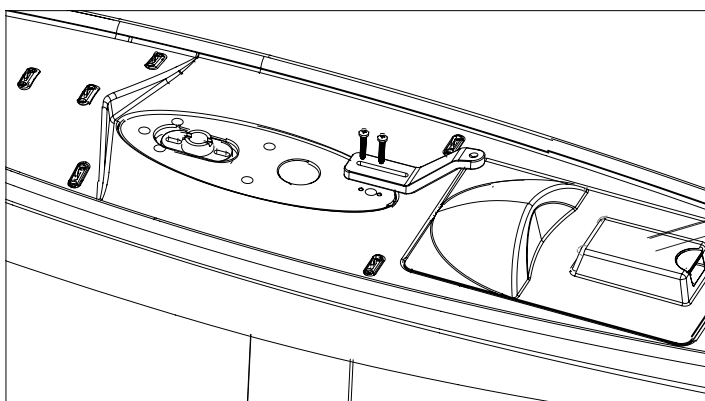
2. Setup the keel, water-proof rubber piece and ballast by HM 5x25mm screw, using a H 4.0mm allen key.



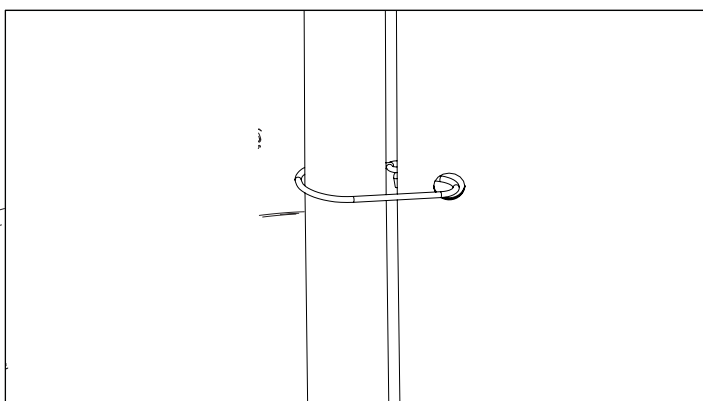
3. Setup the keel, water-proof rubber piece into hull by HM 5x50mm screw, using a H 4.0mm allen key.



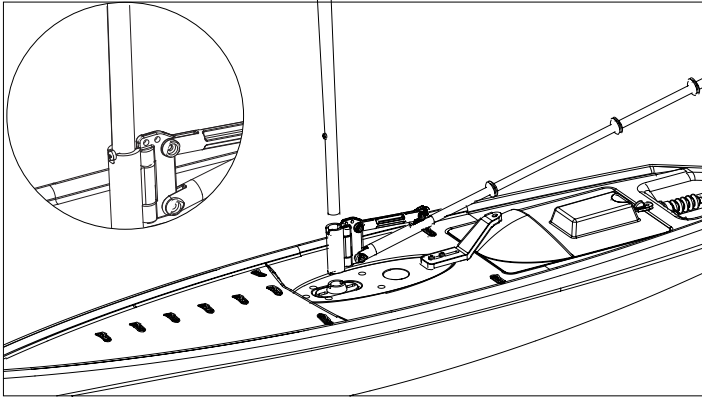
4. Insert the rudder from hull bottom to deck through a rudder arm, connected with a clip, make sure rudder is able to rotate freely. Then insert push rod through the connector on rudder arm, rudder in center position and tighten the allen screw with a H 2.0mm allen key.



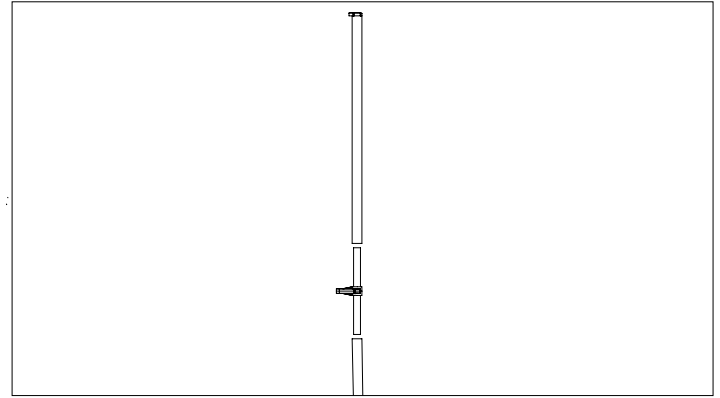
5. Install the cord holder to hull deck with two PWA 2x10x8mm screws.



6. Unroll main sail and install 1 Luff ring in each of the three grommets. Slide the long mast through the Luff rings.



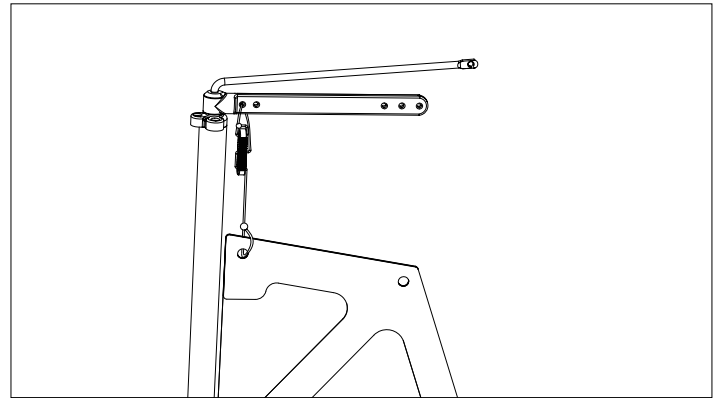
7. Insert long mast through main boom and into the hull. Ensure the mast screw engages the main boom slot.



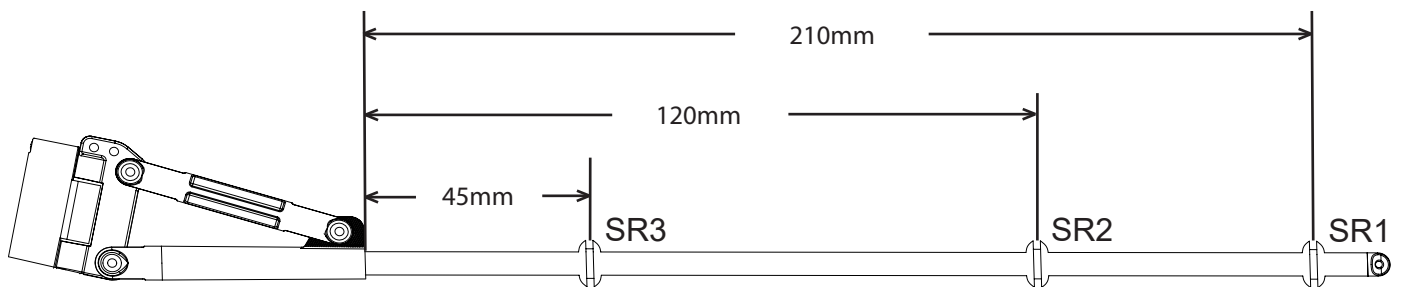
8. Connect long mast, forestay fitting part and short mast together.



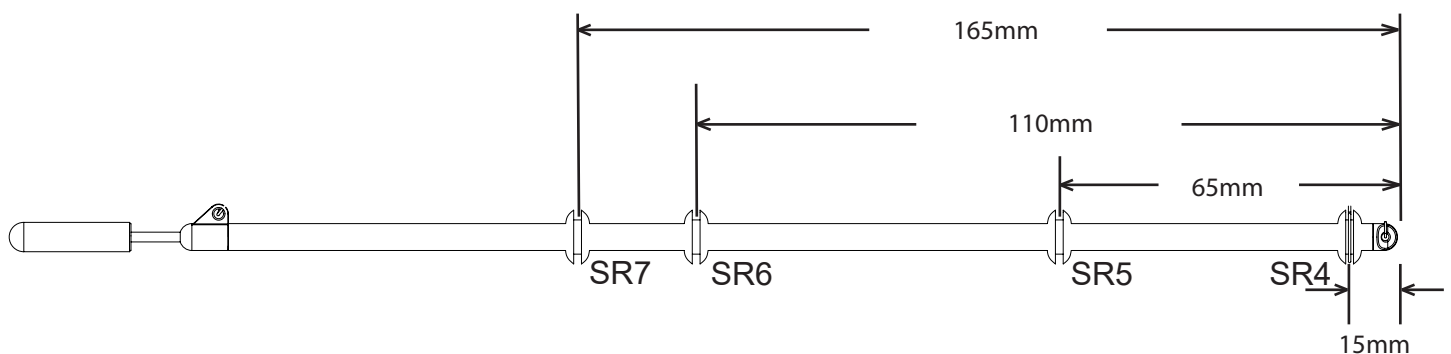
9. Raise the sail and place the plastic swivel on top of the short mast. Insert the metal backstay crane through the swivel and into the mast.

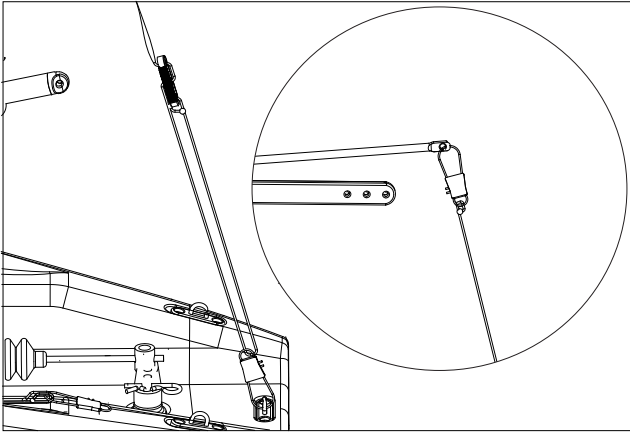


10. Assembly should look like drawing above, please note that the sail does not need to be connected to the rear mounts of the swivel.

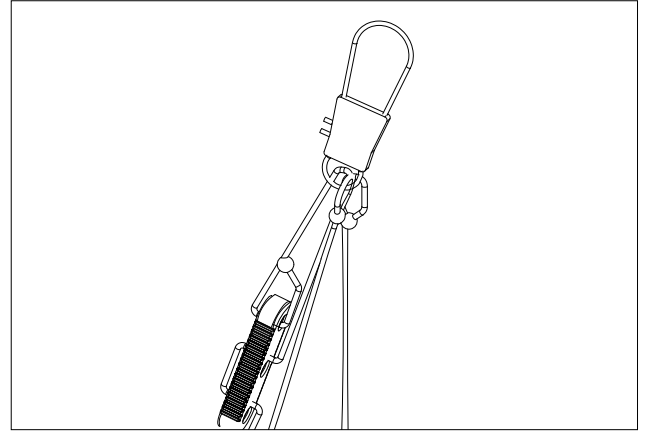


Your Aura sailboat comes with the sails already attached to the main and jib boom, these drawings are only a reference as to the approximate location of the silicone rings.

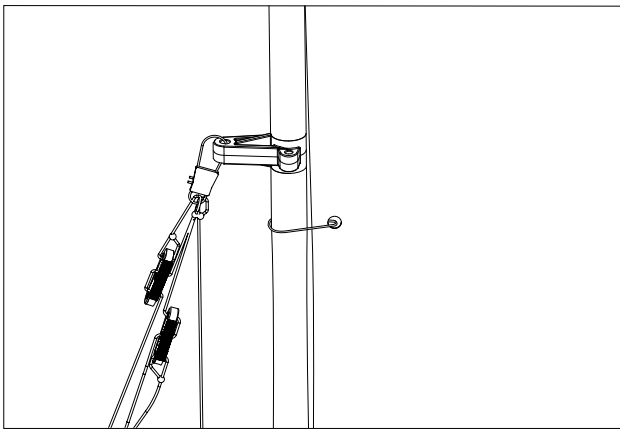




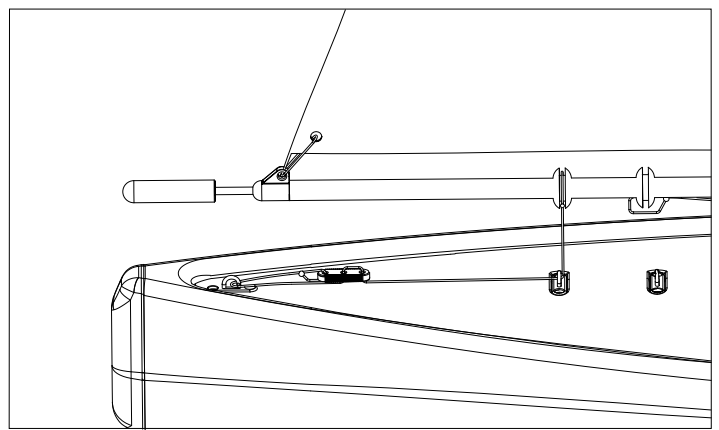
11. Locate the approx. 40" long length of rigging. Attach the clevis to the metal backstay crane and the other end to the rear eyelet on the hull. The end with the adjustment bowsie should be closer to the hull.



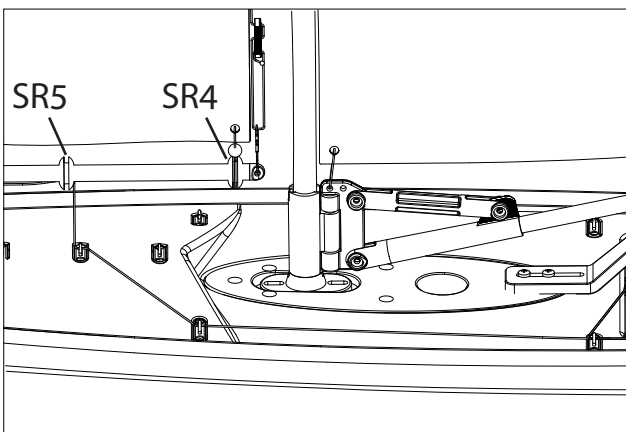
12. Unroll the jib sail and untape the clevis from the top of the sail.



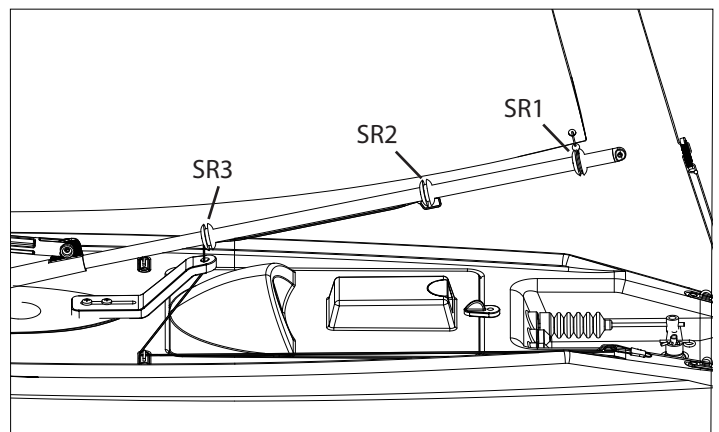
13. Unroll the jib sail and untape the clevis from the top of the sail. Hook the clevis to the forestay fitting keeping the eyelet pointing toward the bow of the boat.



14. Unhook the eyelet from the deck hook and attach it to the front silicone ring on the jib boom. Slide the bowsie to tighten the line in order to position the jib in front of the main mast.



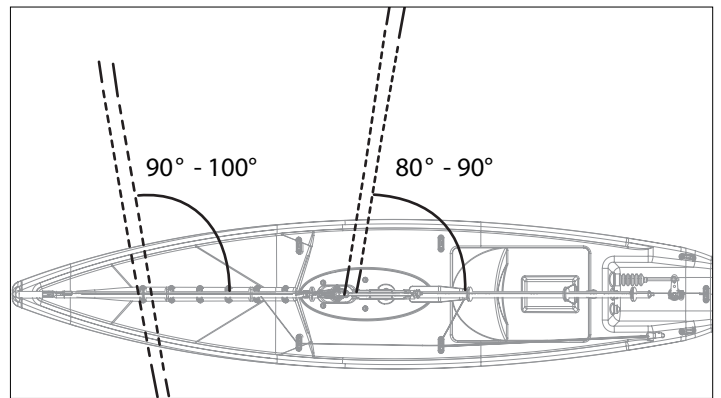
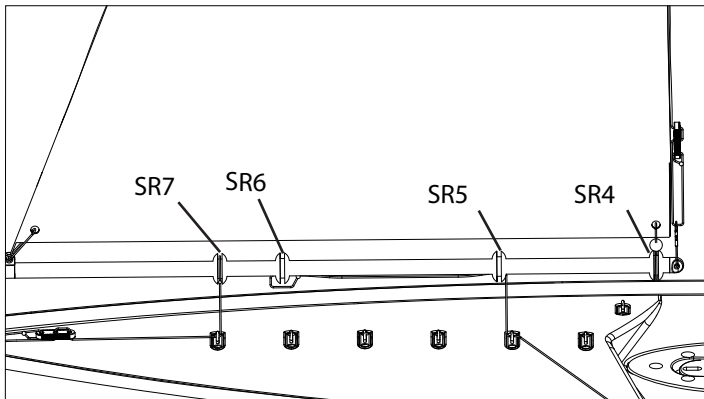
15. Untape the line from the jib and thread it through the 3 deck eyelets as shown in the drawing above. Slip the loop at the end of the line onto the clevis that is pre-installed by the rear hatch and is attached to the winch servo.



16. Untape the line from the main sail and thread it through the cord holder and 1 deck eyelet as shown in the drawing above. Slip the loop at the end of the line onto the same clevis as the previous step.

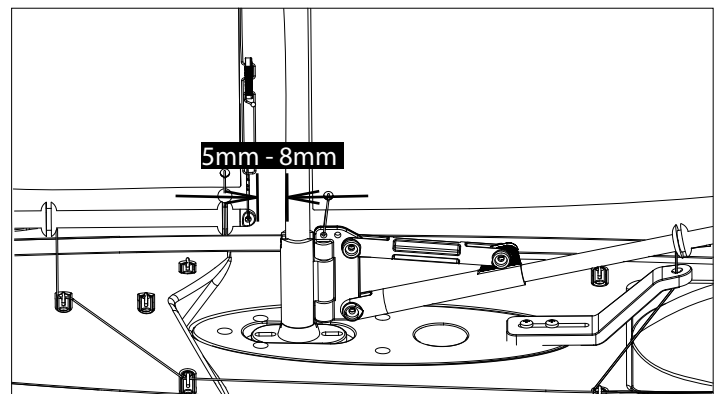
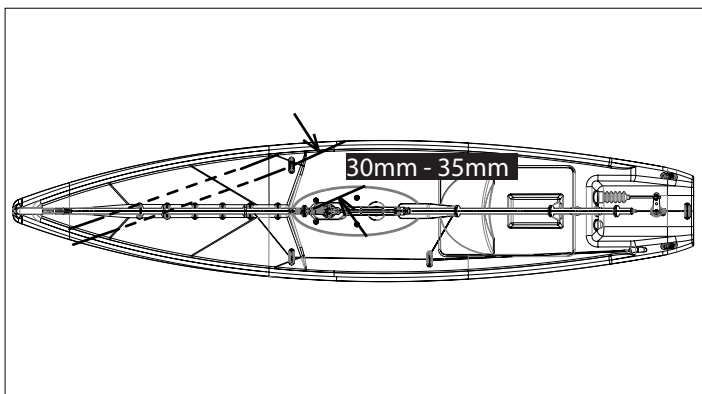
17. Now that you have completed the basic assembly of your sailboat, some adjustment of the rigging may be necessary. Please refer to the instructions below.

- (1) Silicone ring 1 on the main boom can be adjusted to tighten the main sail. Leave a little slack in the sail so that it can catch the wind. Generally, in strong wind conditions the sail needs more slack and in gentle conditions it can be tighter.
- (2) Silicone ring 2 is used to adjust the line length to keep the main boom in center position. If it is too tight, move it toward SR3. If too loose, move it toward SR1.
- (3) Normally SR3 will not need to be moved, it should stay in position over the cord holder.

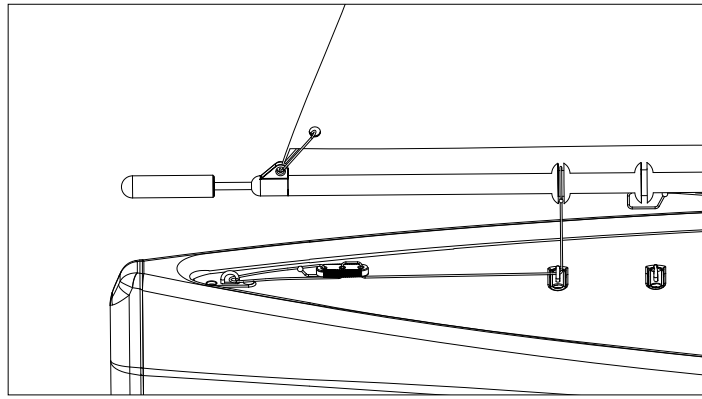


18. Some adjustment of the Jib boom rigging may be necessary. Please refer to the instructions below.

- (1) Silicone ring 4 on the jib boom can be adjusted to tighten the jib sail. Leave a little slack in the sail so that it can catch the wind. Generally, in strong wind conditions the sail needs more slack and in gentle conditions it can be tighter.
- (2) Silicone ring 5 is used to adjust the angle that the jib extends to when the sail winch is all the way out. Make sure that the jib sail can travel a larger angle than the main sail. Normally the jib sail travels about 90°-100° while the main sail travels 80°-90°. If the angle is too small, move SR5 toward SR4. If the angle is too large, move SR5 toward SR6.

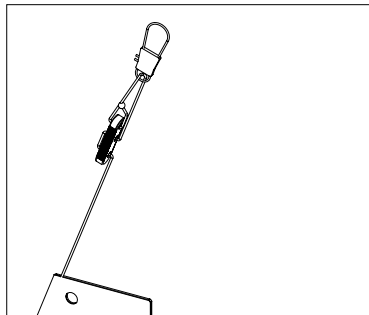


- (3) If the jib rigging to the winch is too tight move SR6 toward SR5, if too loose move toward SR7. The jib boom should be able to move about 30-35° when the main sail is fully hauled in and the sail stick on the transmitter is in its lowest position.
- (4) To adjust the distance between the jib boom and the main mast, move SR7. If too large a gap move toward the counterweight, if too small a gap move toward SR6. There should be about 5mm-8mm gap between jib boom and mast.

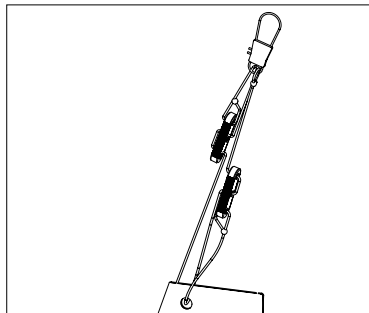


19. The counterweight on the front of the jib boom is to adjust its balance. It should balance with the CG (center of gravity) on SR7. Move the counterweight either in or out to make the boom feel neutrally balanced and moves to either side equally easily.

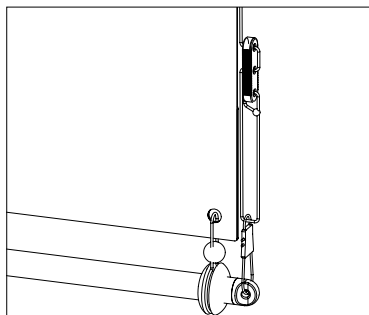
20. Move bowsie on front jib sail rigging to maintain a slight bend in the mast. The dotted line in the drawing to the right is an exaggerated example of the concept the bow that you will create will be less pronounced than the drawing shows.



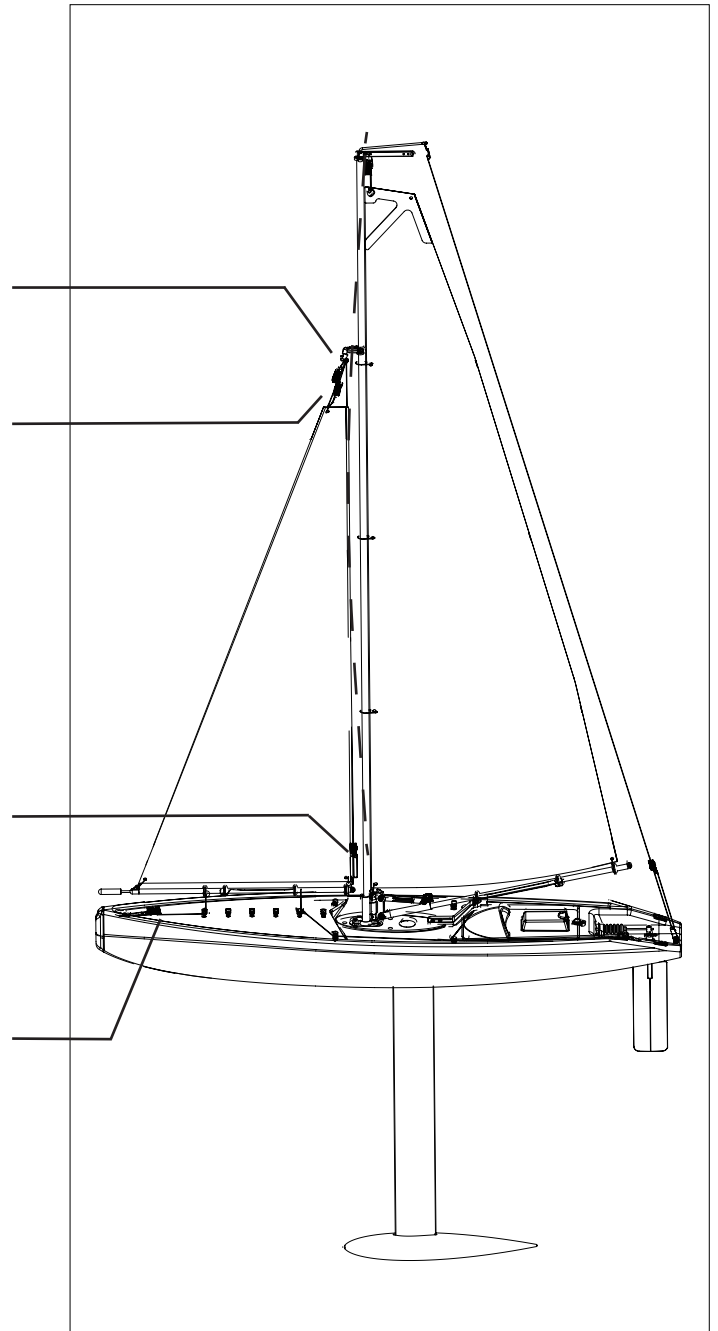
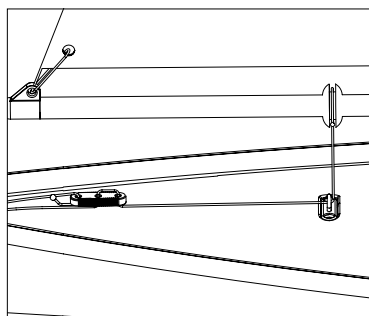
21. Move bowsie attached to the jib sail grommet to tighten or loosen the jib sail sheet.

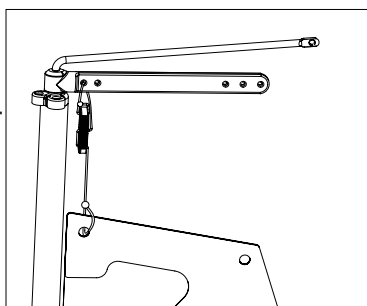
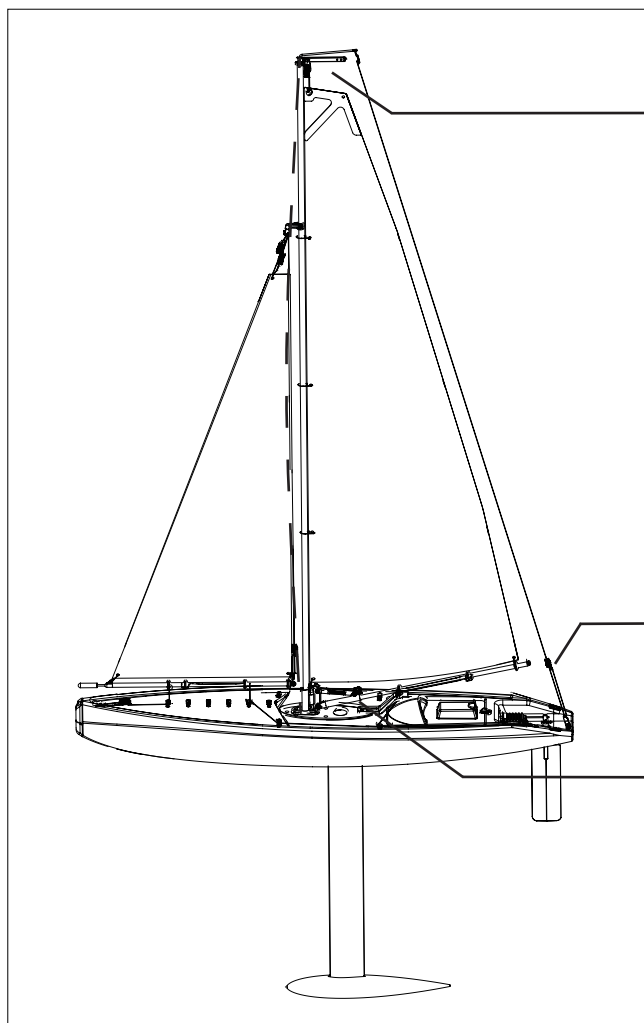


22. Move bowsie at rear of jib sail to tighten or loosen the jib sail leg.

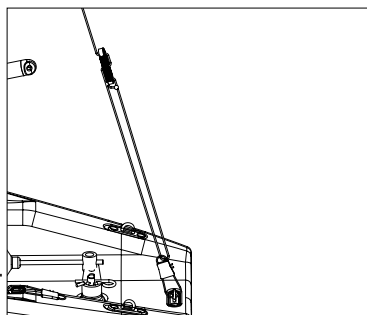


23. Move bowsie on foredeck to adjust the distance between jib boom and deck.

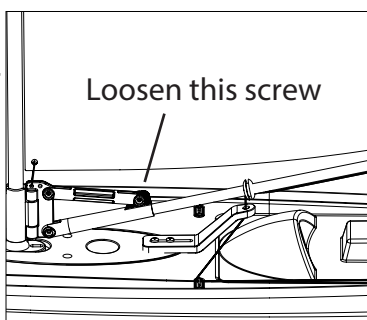




24. Move bowsie attached to the main sail grommet to tighten or loosen the main sail sheet.

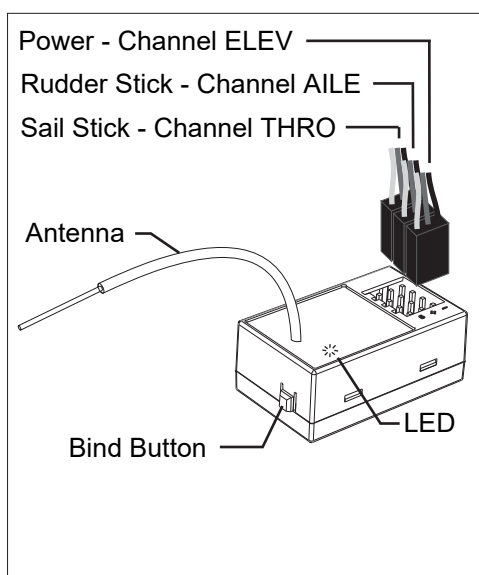


25. Move bowsie on main sail backstay rigging to maintain a slight bend in the mast. The dotted line in the drawing to the left is an exaggerated example of the concept the bow that you will create will be less pronounced than the drawing shows.



26. Loosen the screw on the arm of the main boom to adjust the height of main boom. This adjustment is rarely needed.

Pair Transmitter and Receiver



Pairing (or binding) is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. When a receiver is bound to a transmitter, the receiver will only respond to that specific transmitter.

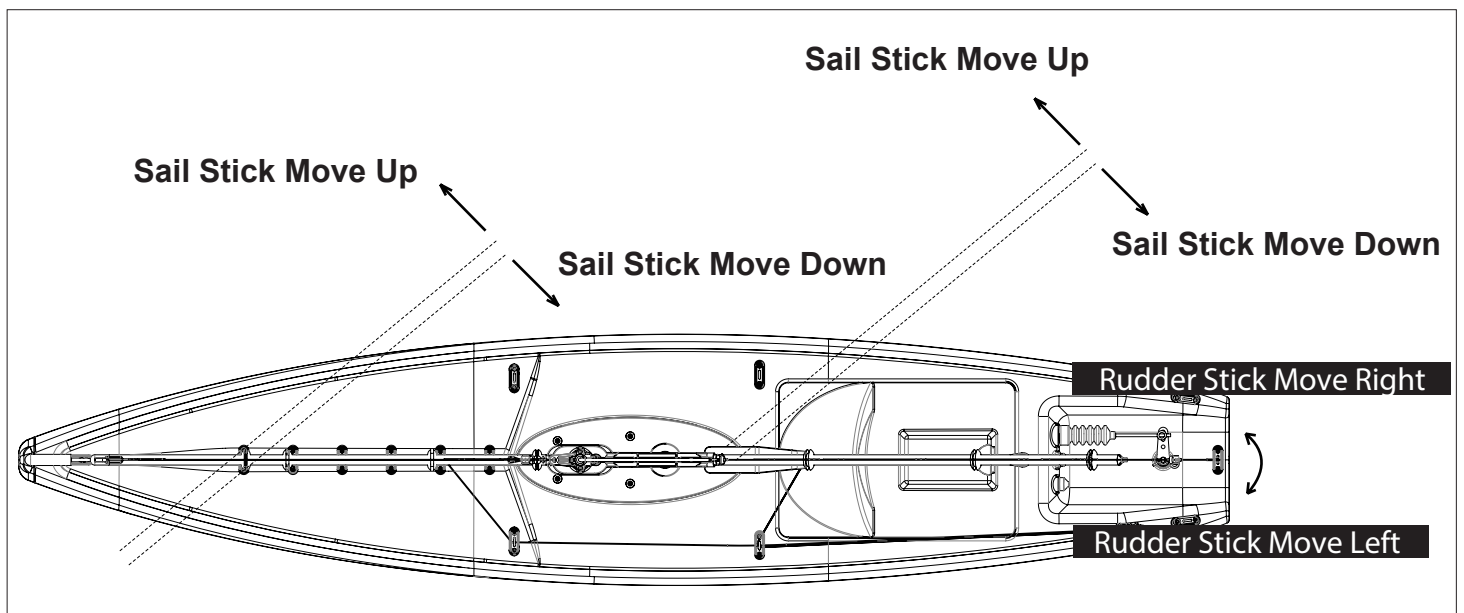
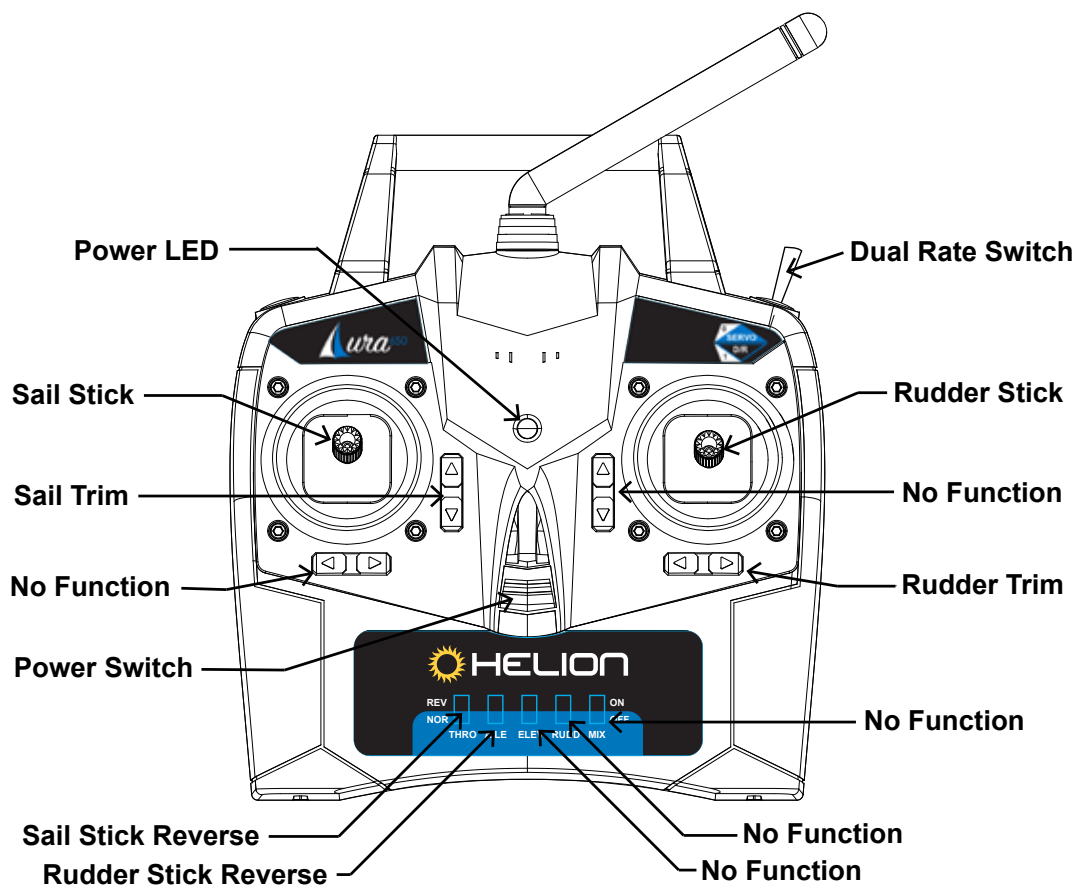
The yacht normally comes with the receiver paired to the transmitter. If you need to repeat this pairing process for any reason, please follow these steps:

1. With the transmitter switched ON
2. Power on the receiver, then press the pairing button several times within 5 seconds.
3. After the receiver LED stops flashing the pairing process is complete.
4. You are now ready to sail.

Transmitter Functions

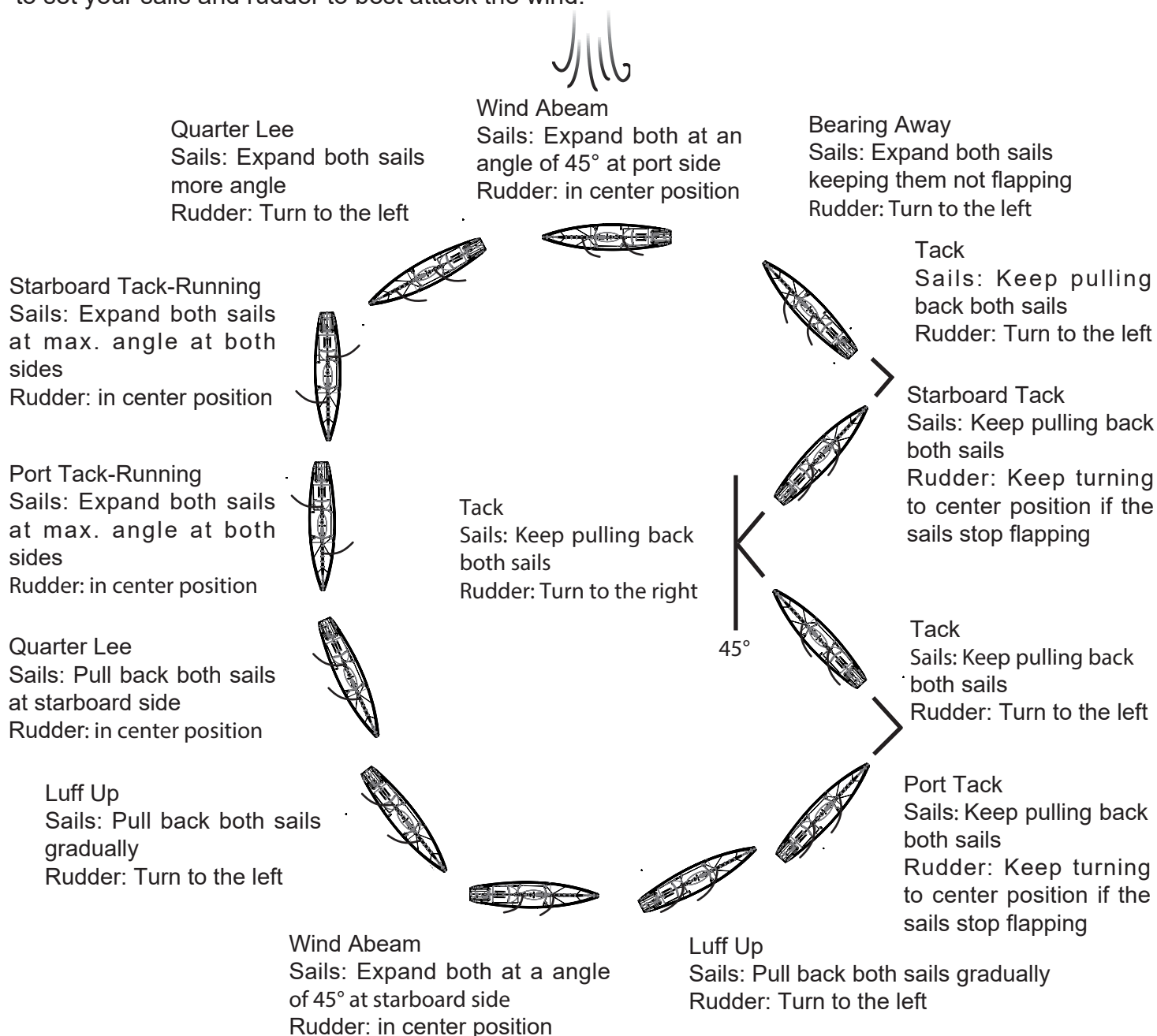
The yacht comes with a 2.4GHz 4-channels radio system. For sailing you will only need 2 channels.

1. The sail stick controls the angle of the main and jib sails in relation to the hull. When you move the sail stick up, both sails will be allowed to expand forward to catch the wind. Both sails can expand to the left or right depending on the direction of the wind.
2. The rudder stick controls the direction of the rudder, left or right.
3. Sail trim/Rudder trim allows adjustment of the neutral position of sail/rudder if needed.
4. Reverse function switches allow individual channels to be reversed. Because a sailing yacht needs only 2 channels, the reverse switches for channels 3,4 and 5 are not used.



How-to-sail Instruction

Sailing presents a more interesting set of challenges than power boating, it requires a constant reaction to water movement and wind conditions. These reactions require adjustments of both rudder and sails in order to find the best possible setting for speed and course. There is not substitute for actual “on-the-water” experience. After a couple of outings you may want to read through the manual again as you get a better understanding of the art of sailing. While you are learning it is a good idea to gain some experience with sailing terminology as this will make it easier to understand the concepts required to master sailing. Study the chart below to understand how wind affects the sailboat and how to set your sails and rudder to best attack the wind.



IMPORTANT NOTICE:

1. Never sail your boat in running water such as streams or rivers, as it is easy to lose control.
2. Never swim after a stalled or stuck boat. Wait patiently for the wind to change or increase to free the boat.
3. After running, remove the hatch allowing the interior of the boat to dry out completely. If you fail to do this, it may result in corrosion of the electronic components.

Sailing Checklist

NOTE: This checklist is NOT intended to replace the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

1. Always turn transmitter on first.
2. Check that the sails, fittings and rigging are properly installed and adjusted.
3. Sail the boat in an appropriate body of water.
4. Switch the dual rates to 100%
5. After sailing, turn receiver power off.
6. Always turn transmitter off last.
7. Drain any water that may have entered the hull. There is a drain plug on the transom.
8. Allow interior of boat to dry prior to storage.

Troubleshooting Guide

Problem	Possible Causes	Solutions
The system is not connected	Your transmitter and receiver are too close	Take transmitter 1 to 3 meters away from receiver
	You are around metal objects	Try in an area with less metal objects near by
	The receiver is not paired to the transmitter	Repeat the pairing process
The receiver not responding to the transmitter	Low battery voltage	Replace your batteries with new ones
	Loose or damaged wires between batteries and receiver	Check the wires and connection between the battery and receiver. Repair or replace wires and/or connectors
Boat tends to turn one direction	Rudder or rudder trim is not centered	Repair or adjust rudder and rudder trim till the boat is running straight when rudder stick is in neutral position

Aura Spare Parts

Firelands Item Number	Item Description
HLNB0100	Aura 650 RTR sailboat
HLNB0101	Painted Hull - White: Aura 650
HLNB0102	Hatch Set: Aura 650
HLNB0103	Pre-Printed Full Sail: Aura 650
HLNB0104	Jib Spare Parts Set: Aura 650
HLNB0105	Main Sail Parts Set: Aura 650
HLNB0106	Electronic Mount Sets: Aura 650
HLNB0107	Dyneema Cord, 5M (2): Aura 650
HLNB0108	Metal Backstay Crane: Aura 650
HLNB0109	Rudder Arm Set: Aura 650
HLNB0110	Rudder & Circlip: Aura 650
HLNB0111	Bowsie (20): Aura 650
HLNB0112	Deck Eyelets & Screws (20): Aura 650
HLNB0113	Mast Full Set: Aura 650
HLNB0114	Clevis (20); Aura 650
HLNB0115	Luff Ring (10): Aura 650
HLNB0116	Silicone Ring (2): Aura 650
HLNB0117	Keel Full Set: Aura 650
HLNB0118	Ballast (Zinc): Aura 650
HLNB0119	Winch Servo Set: Aura 650
HLNB0120	Rudder Push Rod: Aura 650
HLNB0121	Silicon Lead Collar (2): Aura 650
HLNB0122	17g Waterproof Rudder Servo: Aura 650
HLNB0123	Rudder Pushrod Tube (2): Aura 650
HLNB0124	Water Drain Plug (2): Aura 650
HLNB0125	2.4GHz Transmitter: Aura 650
HLNB0126	2.4GHz Receiver: Aura 650



© 2015 Helion
Rev. 1.0 09/15