



**SETUP MANUAL - ROWING BOAT**

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## I. Components / fittings delivered with your rowing boat (standard equipment)

### Standard elements fixed to the boat :

- Adjustable footstretcher with velcro straps (flexfeet)
- 1 pair of seat rails
- 1 stern drain plug (barton bung)
- 1 bow textile padeye (not installed on the LiteRiver)
- Pair of quick release channel inserts
- Rear storage net (not available for LiteRiver)

### Standard elements that needed to be assembled on the boat (included in the bag provided with the boat):

- Fin (a fixed fin already installed on the LiteRiver model)
- Pair of oarlocks
- Pair of oarlocks pins and washers
- Bag(s) of bushings
- Rigger(s) with Quick Release system
- Water bottle exclusively with LS1X model
- Carbon or foam seat(s)
- Hatch(es)
- 1 spare barton bung



Hatch(s)



Sliding seat(s)



Fin (not on LiteRiver)



Barton bung



Oarlocks



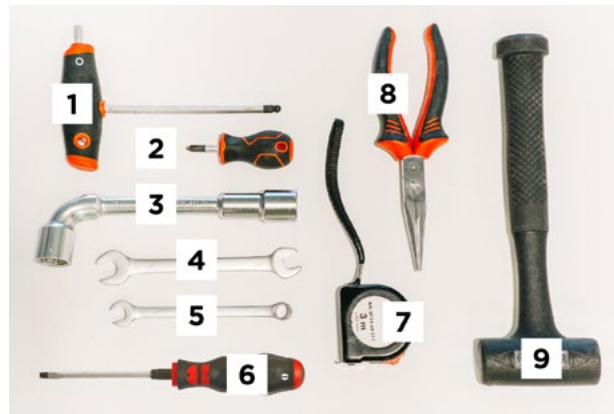
Oarlocks bushings



Complete oarlocks axles

## II. Tools needed for the assembly / setting of your boat

- (1) 5mm Allen key
- (2) Phillips screwdriver
- (3) Socket wrench 19mm
- (4) Flat wrench 12-13mm
- (5) Flat wrench 10mm



- (6) Flathead screwdriver
- (7) Tape measure
- (8) Pliers
- (9) Rubber mallet

## III. Delivery of your rowing boat

If your Liteboat is delivered in a box, please follow the instructions below.

Otherwise, please go directly to the next chapter: Assembly of components/ fittings.

Your boat has been carefully packed in a specialized box to ensure safe transport and protection from damage.

As the crate can easily reach 50kg with the accessories, we recommend you to handle the crate with at least two people.

First, remove the lid of the box, then separate the sides of the box from the cardboard cradles.

Carefully remove the boat out from the box by lifting the boat at the bow and stern.

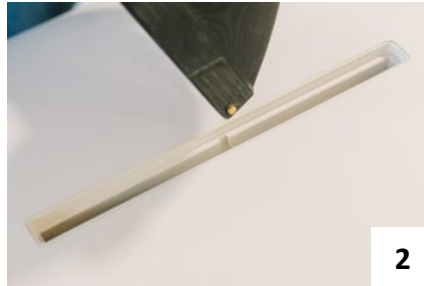


## IV. Assembly of components / fittings

### 1. Fin (not available for the LiteRiver)

Most Liteboat models come with a removable fin that will need to be installed on the boat (a fixed fin is already installed on the LiteRiver). For those boats with a removable fin, the retaining screw and a square brass screw plate are already fixed in the fin box. To install your fin :

- Slide the screw plate towards the stern end of the fin box and remove the screw (1)
- Insert the locator pin through the center of the fin box (2), push the fin towards the front of the fin box, then fold the fin into the fin box. (3)
- Slide the square screw plate under the fin (4), insert the screw through the hole in the fin and tighten. (5)



### 2. Hatch and barton bung (drain bung)

Before launching your boat, make sure that the hatch cover (1) and barton bung (2) are properly installed and tightened.

We recommend that you put silicone grease on the thread of your hatch. This will ensure smoother operation and a more watertight fit.

NB: once your outing is over, it is important to remove the hatch cover and the barton bung, to allow for good air circulation inside your boat.



### 3. Slide (rowing seat)

Whether you have a foam seat or a carbon seat, we recommend that you install the seat by first removing the plastic end caps from the stern end of the seat rails. Using a Phillips screw driver, loosen the screws of the end caps (1), then remove them from the rail with the help of a small wooden block if necessary (2).

Insert the rowing seat (3), reposition the plastic rail end caps (4) and screw them in. Do not overtighten.

You can leave the seat permanently on the rails. However, to transport your boat, we recommend that you attach your seat to the footstretcher with a bungee rope.



### 4. Riggers (Quick release system)

Liteboat's innovative Quick Release system allows for quick and easy installation of the rigger. The aim is to insert the underside of the rigger to the channel attached to the boat.

NB: The quick release pivot bolt should be loose. Do not tighten it.

The rigger has been adjusted to fit your boat and should not need to be adjusted; however, expansion of the rigger because of temperature changes may require periodic adjustment of the channel inserts on the rigger so that they align with the rigger aluminum channel on the boat.

*Proceed with the assembly :*

- 1- Place the rigger vertically (1), with the groove of the quick release channel insert facing downwards.
- 2- Insert the groove of the channel insert onto the pivot bolt (2) and lower the rigger into the aluminum channel, making sure to leave the pins towards the inside of the boat.
- 3- Insert the pin to secure the system. The pin must be placed in the correct position (3); and not in the incorrect position (4).

## 5. Pins and oarlocks



NB: It helps to have a second person to help you with the measurements.

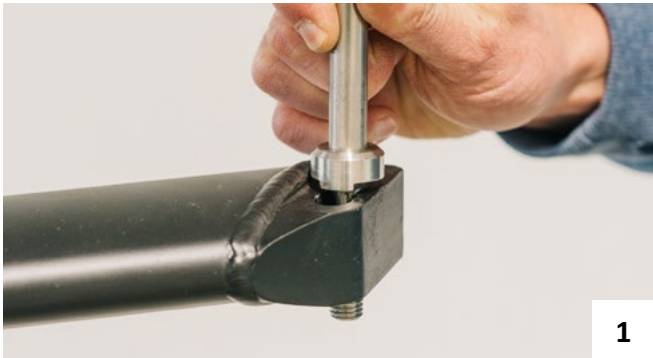
The assembly of the pins and oarlocks will be easier with the rigger attached to the boat.

List of items (in order) to be included when installing the pins and oarlocks:



*Proceed to the pin assembly:*

- 1- Unscrew the nuts on the top and bottom of the oarlock pin.
- 2- Remove all washers and clips
- 3- Place each pin (port and starboard sides) in the oblong hole of the rigger. (1)
- 4- Tighten the bottom nut by hand only. (2)



*Set the pins*

- a. With a tape measure, measure the distance between the centre of the two oarlock pins. (1)  
(2) (3) We recommend starting with 160 cm between the centre of the pins.
- b. To ensure that the pins are equidistant from centre of the boat, measure from the rail on the opposite side of each pin.
- c. Make sure that the distance to each pin is the same on both sides and check again that the distance between the pins is still 160 cm.
- d. Once the distances are checked, tighten the 19 mm nut on the bottom of the pin with a wrench (4) and install the plastic cap (5).





## 6. Assembly and setting of the oarlocks

During the rowing stroke, most rowers row left-over-right, so that the right hand passes under the left hand as the oar handles overlap. As a result, the starboard (left hand) oarlock will need to be mounted 8 mm to 15 mm higher than the port (right) oarlock.

The black washers are used to adjust the height of the oarlocks. Before mounting the oarlock, add three washers to the pin on the port side (right hand) and six washers on the starboard side (left hand).

A coloured plastic speed clip washer will also allow you to quickly refine the height adjustment without having to unscrew the oarlock pin retainer bolt.



### a) Bushings

Each Liteboat is delivered with a bag of pitch bushings for the oarlocks. These bushings allow you to adjust the pitch of your oarlock thereby changing the angle at which oar blade enters the water. We recommend that you install the neutral bushings (called 4/4) as a first step. If you are having difficulties with your rowing stroke we recommend that you seek guidance before adjusting pitch as this can be complex to understand and requires some experience and practice.

- Insert the bushings into the top and bottom of the oarlock.
- Position the oarlock and complete with the remaining black washers and/or the colored speed clip.
- Add the stainless steel flat washer and lock washer, then tighten the retaining nut with a 13 mm wrench and replace the protective plastic cap.

### b) Adjustment of the oarlock gate

The oarlock gate closes the oarlock and helps to keep the oar in the oarlock. During the rowing stroke, if it feels difficult to feather your oar it may be necessary to adjust the small metal nut (oarlock gate adjusting nut) to increase the width of the gate; use a 10 mm wrench for adjusting the width of gate.



## 7. Footstretchers

### a) Flexfoot adjustment

Adjust the tab either upwards for a small foot size or downwards for larger sizes. The velcro tabs should cover the widest part of your foot.

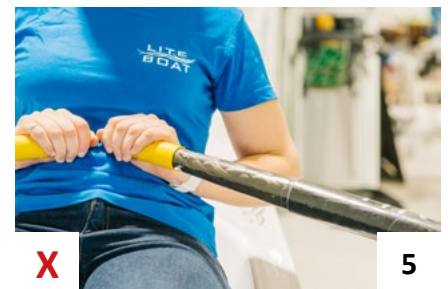
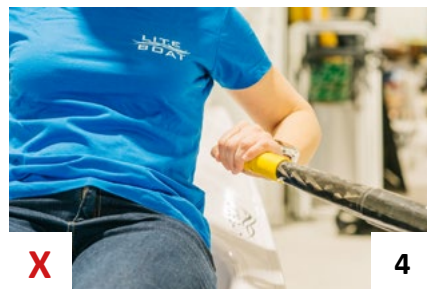
## b) Adjusting the footstretcher position

This setting determines the proper position of the rower in relation to the oars. As a general rule, a shorter person will move the foot stretcher closer to the rowing seat (toward the bow of the boat). A tall person will move it further away (toward the stern of the boat).

*Procedure* : Loosen the three footstretcher nuts at the level of the channels allowing you to move the footstretcher.

Sit with your legs stretched out while leaning your trunk slightly backwards. Pull the oars towards your chest, keeping them tucked in (1).

The grips of the oars should just reach the ribs, towards the side and you should be able to pass a hand width between your torso and the end of the grips. Position (2) & (3) illustrate the correct position. Position(4) & (5) are incorrect.



## c) Adjusting the footstretcher angle

It is important to properly adjust your footstretcher to increase the comfort and efficiency of your rowing stroke. Liteboat offers height adjustable footstretcher.

### *Setting tips:*

Sitting at the catch (just as oars go into the water), legs are bent, oars are out of the water (1). Your shins should be vertical. Do not go beyond vertical as you will lose efficiency in your stroke and risk injury to your knees and ankles. Raising the foot stretcher may help.

If you are having trouble getting your shins vertical, try lowering your footstretcher. This adjustment will increase the comfort and efficiency of your stroke.

You can also adjust the angle of the footstretcher. The standard footstretcher inclination is between 40 degrees and 45 degrees.

For more comfort and better propulsion of the boat, you can change this tilt angle as follows:

- Unscrew the three footstretcher nuts
- Loosen the screws (2) to allow you to tilt the footstretcher to the desired angle, then retighten the screws



## 8. Adjustment of the rails

With your legs fully extended, the seat wheels should not touch the bow end of the rails. In the catch position with legs fully bent, the seat wheels should not touch the stern end of the rails.

If in either case, the seat touches the rail stop, you can adjust the rails by shifting them either towards the bow or stern. (or you may want to adjust position of foot stretcher)



**Procedure :** Unscrew the hatch cover and reach under to loosen the three wingnuts for each rail. Slide the rails forwards or backwards as required and retighten the wingnuts. Close the hatch.

## 9. Adjustment of the oars

### *Oars crossing principle*

The oar handles should overlap when the oars are perpendicular to the boat.

As a reminder, the starboard hand (your left hand) should be above the port hand (your right hand) when the oar handles overlap during the rowing stroke; the right hand will also be slightly closer to the body than the left. (1) The measurement corresponding to the overlap of the two handles should be between 16 and 22 cm. (2)



### a) Inside lever (inboard)

The lever (inboard) is the distance from the end of the handle to the collar in contact with the oarlock. This length of the inboard also determines the orientation of the arms relative to the handle of the oar.

The inboard is adjusted by moving the oar collar. The smaller the inboard the greater the force exerted with each stroke (more length of oar going through the water).

The measurement from the end of the handle to the collar (the part in contact with the oarlock) should be between 83 cm and 89 cm.

### b) Assembly and adjustment of the oars

If you have purchased Liteboat (Braca Sport) oars and the collars are not already installed, loosen the screws on the collars (do not remove them completely) and slide them on over the oar handle. As they are asymmetrical they will only fit on one way – you may need to rotate collar until it slides on easily.

To start, we recommend setting inboard to 88.5 – 89cm, corresponding to “9” marking on the sleeve for Liteboat oars.

Once the collar is in place on the sleeve, tighten the collar.

You are now ready to go rowing. Enjoy yourself on the water!

## V. Reminder & practical information

### Maintenance of your boat

Rinse your boat with clean fresh water after each trip, whether it is used on the lake, river or sea.

Use a microfiber cloth to clean your boat.

Never use an aggressive or abrasive product which could damage your boat and fittings. Waxing your boat once or twice a year with a good quality marine paste wax will help maintain and protect the gelcoat finish.

### Storage

Empty any water that may have accumulated in the hull of your boat with the help of the barton bung (drain plug). After using your boat, remove the access hatch to promote good ventilation inside your boat.

Never store your boat outside in direct sunlight for a prolonged period.

We recommend that you cover your boat with a protective cover.

Store your boat upside down (hull side up).

Do not store or transport your boat on the quick release rigger.

*Do you have questions, or want to contact us?*

*We are at your disposal to advise you and answer your questions*

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