

## Quick Start Page of Owner's Manual

### Introduction

The Echo is always fully assembled and ready to row within seconds. The new folding rigging is simple enough that operation should be apparent to most rowers. Even so, we suggest reviewing the following tips to get a feel for the possibilities. This exciting new design offers easier techniques for lifting, launching, and even boarding from swimming. Please take a creative approach to handling the Echo. You will soon discover what works best for you.

### Lifting and Carrying

The Echo design provides numerous secure hand holds. You can grab and lift the Echo by any hand hold that seems convenient except the seat and the elastic cargo net.

You can grip the rolled gunwale edge anywhere along its length. At each end and through the middle, the rolled edge is large enough to grip with gloves or mittens.

When you are lifting at the middle of the hull, use the folded rigger arms and oarlocks as handles.

The pin side of the oarlocks, standing 90° to the rigger arms, are useful when carrying the Echo on edge from the cockpit side. Allow your arm to hang straight down and hold the oarlock pin in your fingertips like a suitcase. This carry is easiest when you are facing the stern. When you have figured out which oarlock you will hold, fold that one in last so that it is uppermost.

### Unfolding the Outriggers

Unclip the rigger restraint strap. Note the orange part of the buckle doubles as a

**safety whistle.** Rotate each rigger up and over until seated with the bail protruding through the slot. Rotate the tongue of the E-clip through the bail to hold the rigger down. Fold the restraint straps down over their mounting screws to clear passage for the seat.

### Folding the Outriggers

Roll the seat to the aft end of the track and pull the rigger straps out of the foot well. Release the E-clips by rotating just far enough to clear the bail. You can fold either rigger first; however, if you find that one or the other folds lower, fold that one first. As the rigger arms come down, turn the locks toward the foot stretcher so they hang freely within the foot well with latches closed. Buckle the strap over the riggers making it "just snug". Avoid the temptation to reef on the strap to the point of bending the rigger arms.

### Advanced Tricks

With hinged riggers, you no longer have to reach way out to work the oarlock gates. In many situations when you are outside the boat, you will find it easier to swing a lock closer to yourself by rotating the rigger arm to a vertical position where you can work the latch to insert or remove an oar. For example, after disembarking, slide the outside oar inward until the blade is near the lock and then pull the rigger up with the oar.

You can fold the riggers without removing the oars. There are two methods: blades toward the stern and blades toward the bow. As you swing each rigger through vertical, rotate the oar parallel to the hull center line. Lengthen the hold-down strap to encircle the oars and riggers together. We have been car topping the

Echo right side up with the oars folded in this manner, using the neck yoke of a life jacket behind the stretcher to hold the oar handles.

### Transporting and Storing

For storage, the Echo can be set on a padded rack or in slings upside down or right side up. When the Echo is up side down, the ideal spacing for the supports is 6 feet. This spacing will support the boat near the stretcher and at the forward end of the cockpit. If your Echo will be stored upside down outdoors, the aft support should be about 4 inches higher to drain the rolled edge toward the bow.

Echo owners are successfully using Thule, Yakima and Saris racks made for supporting kayaks right-side up in saddles. (The Echo also fits the J-type racks that support boats on edge, but we find cross-wind forces can be excessive at highway speeds.). We also recommend the Riverside foam pad system that works with or without basic cross bar racks.

Whenever your Echo is left outside right-side up, be sure to open the self-bailer. Rain water in the cockpit over time will seep into the hull through the access ports. If you feel or hear water in the hull, remove the bow plug, raise the stern and roll the boat inverted to drain.

### Entering from Deep Water/Self-Rescue

The Echo was designed for easy entry from the water. The large rounded cockpit edges give extra buoyancy as well as providing a gentle contour and easy hand holds for climbing directly over the side.

Untrained children and adults have been able to board the Echo from a swimming

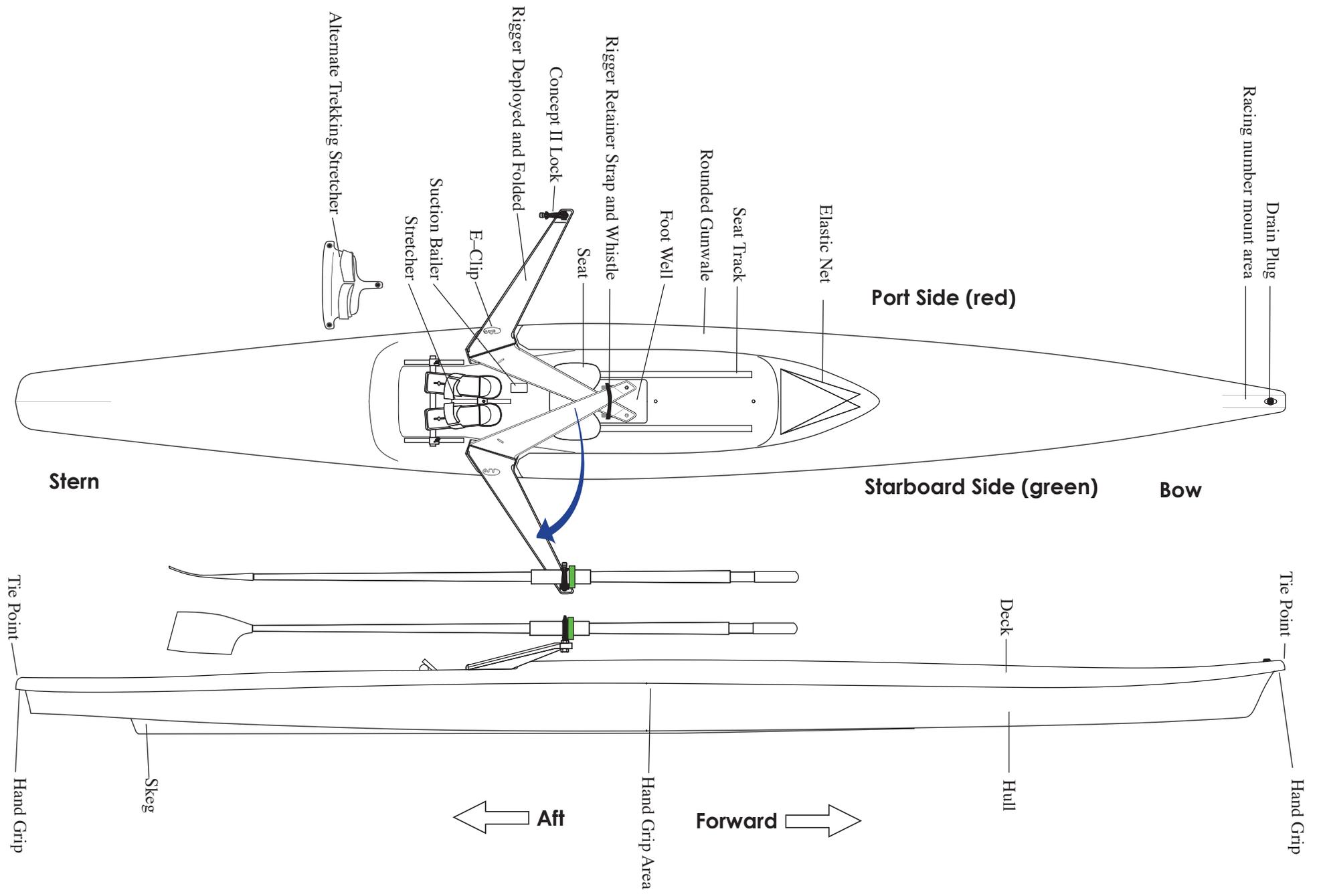
start on their first try, even while leaving the oars parallel to the boat. However, if you turn the nearest oar perpendicular to the boat, the oar handle will bear on the rigger arm or the gunwale and be close at hand once you are aboard.

Start opposite the midpoint of the seat track by pulling the near gunwale down. The Echo is stable even when rolled to a 45° angle. Then work across the cockpit until your hips are just inside the gunwale using whatever hand holds work for you. Then you can roll to a crosswise position seated partly on a seat track and partly on the gunwale with your feet in the water. This is a comfortable and safe position from which you can regain control of the oars and then swing your feet to the stretcher. It's ok if you miss the seat in these first moves. Once you are centered in the boat with oars in hand, you can shift onto the seat with good control.

We encourage you to gain the confidence afforded by practicing boarding your Echo from deep water and learning to sit on the cockpit edge with your legs in the water, Echo rolled up on edge.

# Echo Rowing Shell

## Overview of Terms and Features



## Echo Folding Rigger System Oarlock Adjustment

The Echo Folding Rigger System uses Concept 2 lock bodies mounted on a custom stainless steel pin. Oarlock height, width, and pitch can be adjusted by the user.

### Tools required:

Height and pitch—3/16" hex (Allen) wrench  
Width—9/16" open end wrench, or adjustable wrench.

### To adjust height:

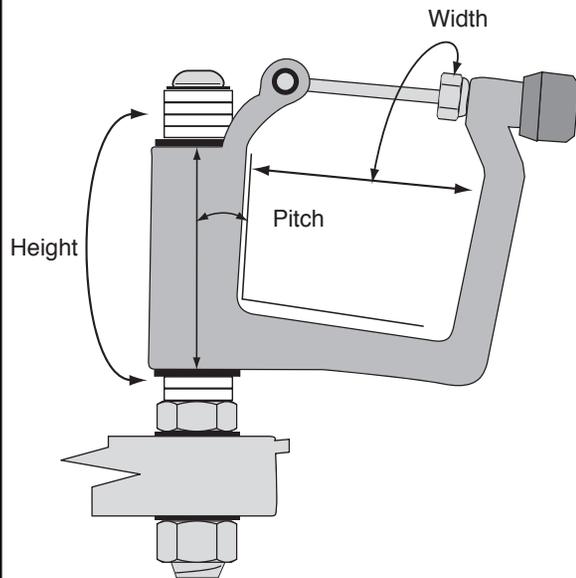
Remove top screw with hex wrench. Shift white nylon spacer washers above or below lock body, always keeping a total of six.

### To adjust pitch:

Remove top screw and lock. Insert matching pairs of bushing in opposite rotation. Range is from 1 to 7 degrees in 1 degree increments. Recommended pitch, set at factory is 4°. Lock pitch may vary from port to starboard to compensate for oar twist or variation in pin angle.

### To adjust width:

Turn the stop nut on the gate.  
Note: do not lubricate threads on hex socket screw.  
Tighten firmly and check often.



## Stacking the Pin

