

# How to Align the Skimmer 45® Runners

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Iceboats do not sail well when the runners are out of alignment. All runners should face 0° when properly aligned. If toed out, 350° for example, or toed in, 10° for example, your boat will not sail. These instructions will help you

check your alignment, and then correct it if needed. Happy Sailing!

## **Check Alignment**

# **Tools Needed:**

- 1. Two large Carpenter Squares (24" x 16")
- 2. Yardstick or other straight edge

#### **Procedure:**

- 1. Assemble and set the Skimmer® on a flat surface with the runners mounted [without the mast and sail].
- 2. Place the short [16"] side of one carpenter square on the ground inside the right runner as shown in photo 1.
- 3. Place the short side of the other carpenter square on the ground inside the left runner as shown in photo 2.
- 4. Place the straight edge against the long edges of both carpenter squares.
  - a. If the edge is flush, as shown below, the runners are in alignment go have fun as shown in photo 3.
  - b. If the edge is not flush follow the alignment directions on the next page.



Photo 1



# **Alignment Directions**

### **Tools Needed:**

- 1. Two large Carpenter Squares (24" x 16")
- 2. Yardstick or other straight edge
- 3. Your favorite welder\*

#### **Procedure:**

1. Measure the gap between the straight edge and the end of the long edge of the carpenter's square as shown below.





- 2. Weld\* a small piece of metal to the front or back of the chock to align the runner. The thickness of the welded piece should match the gap measured in step 1 of this process.
  - a. If the runner is toed in, add metal to the front of the chock until the runner is square (photo 3).



- b. b. If the runner is toed out, add metal to the back of the chock until the runner is square.
- \* You can drill a hole in the chock, insert a screw and then ground the end to the correct distance in lieu of welding.